



Tennessee Department of Environment and Conservation,  
Division of Water Resources  
William R. Snodgrass-Tennessee Tower  
312 Rosa L. Parks Avenue, 11<sup>th</sup> Floor, Nashville, TN 37243  
(615) 532-0625

**CONCENTRATED ANIMAL FEEDING OPERATION (CAFO)  
STATE OPERATING PERMIT (SOP)  
NOTICE OF INTENT (NOI)**

Type of permit you are requesting: ☐ SOPCD0000 (designed to discharge) ☒ SOPC00000 (no discharge) ☐ Unknown, please advise  
Application type: ☐ New Permit ☒ Permit Reissuance ☐ Permit Modification  
If this NOI is submitted for Permit Modification or Reissuance provide the existing permit tracking number: SOPC002

**OPERATION IDENTIFICATION**

|                                                                                                                                                                                                                                   |                                                                                   |                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Operation Name: <b>Tosh Cottage Grove</b>                                                                                                                                                                                         |                                                                                   | County: <b>Henry</b>                                                      |
| Operation Location/ Physical Address: <b>Cold Corners Road, Henry Tn</b>                                                                                                                                                          |                                                                                   | Latitude: <b>36.452205</b>                                                |
|                                                                                                                                                                                                                                   |                                                                                   | Longitude: <b>-88.514894</b>                                              |
| Name and distance to nearest receiving water(s): <b>820 feet to tributary of Norht Fork Obion River</b>                                                                                                                           |                                                                                   |                                                                           |
| If any other State or Federal Water/Wastewater Permits have been obtained for this site, list those permit numbers:<br><b>SOPC00216</b>                                                                                           |                                                                                   |                                                                           |
| Animal Type: <input type="checkbox"/> Poultry <input checked="" type="checkbox"/> Swine <input type="checkbox"/> Dairy <input type="checkbox"/> Beef <input type="checkbox"/> Other _____                                         |                                                                                   |                                                                           |
| Number of Animals: <b>5200</b>                                                                                                                                                                                                    | Number of Barns: <b>2</b>                                                         | Name of Integrator: <b>Tosh Pork</b>                                      |
| Type of Animal Waste Management: (check all that apply)<br><input type="checkbox"/> Dry<br><input type="checkbox"/> Liquid<br><input checked="" type="checkbox"/> Liquid, Closed System (i.e. covered tank, under barn pit, etc.) |                                                                                   |                                                                           |
| Attach the NMP <input checked="" type="checkbox"/> NMP Attached                                                                                                                                                                   | Attach the closure plan <input checked="" type="checkbox"/> Closure Plan Attached | Attach a topographic map <input checked="" type="checkbox"/> Map Attached |

**PERMITTEE IDENTIFICATION**

|                                                 |                                    |                                 |                   |                                                                             |
|-------------------------------------------------|------------------------------------|---------------------------------|-------------------|-----------------------------------------------------------------------------|
| Official Contact (applicant): <b>James Tosh</b> |                                    | Title or Position: <b>Owner</b> |                   | <input type="checkbox"/> Correspondence<br><input type="checkbox"/> Invoice |
| Mailing Address: <b>PO Box 308</b>              | City: <b>Henry</b>                 | State: <b>Tn</b>                | Zip: <b>38231</b> |                                                                             |
| Phone number(s): <b>731-243-4863</b>            | E-mail: <b>jtosh@toshfarms.net</b> |                                 |                   |                                                                             |
| Optional Contact:                               |                                    | Title or Position:              |                   | <input type="checkbox"/> Correspondence<br><input type="checkbox"/> Invoice |
| Address:                                        |                                    | City:                           | State:            |                                                                             |
| Phone number(s):                                |                                    | E-mail:                         |                   |                                                                             |

**APPLICATION CERTIFICATION AND SIGNATURE** (must be signed in accordance with the requirements of Rule (400-40-05-.14))

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

|                                                    |                                                                                                   |                        |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------|
| Name and title; print or type<br><b>James Tosh</b> | Signature<br> | Date<br><b>8-18-15</b> |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------|

**STATE USE ONLY**

|               |                           |                    |                     |              |
|---------------|---------------------------|--------------------|---------------------|--------------|
| Received Date | Reviewer                  | EFO                | T & E Aquatic Fauna | Tracking No. |
|               | Impaired Receiving Stream | High Quality Water |                     | NOC Date     |

## Declarations to Nutrient Management Plan:

By my signature below, I affirm that I have read, understand, and will comply with the following stipulations from Tennessee's CAFO regulations that apply to my CAFO operation:

- 1) All animals in confinement are prevented from coming in direct contact with waters of the state.
- 2) All chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.
- 3) Pesticide-contaminated waters will be prevented from discharging into waste retention structures. Waste from pest control and from facilities used to manage potentially hazardous or toxic chemicals shall be handled and disposed of in a manner that will prevent pollutants from entering waste retention structures or waters of the state.
- 4) Chemicals, manure/litter, and process wastewater will be managed to prevent spills. Spill clean-up plans will be developed and any equipment needed for spill clean-up will be available to facility personnel.
- 5) All sampling of soil and manure/litter is conducted according to protocols developed by UT Extension.
- 6) All records outlined in the permit that I am applying for will be maintained and available on-site.
- 7) Any confinement buildings, waste/wastewater handling or treatment systems, lagoons, holding ponds, and any other agricultural waste containment/treatment structures constructed or modified after April 13, 2006, are or will be located in accordance with NRCS Conservation Practice Standard 313.
- 8) A copy of the most recent Nutrient Management Plan will be kept as part of the farm records and will be maintained and implemented as written.
- 9) If applicable, all waste directed to under floor pits shall be composed entirely of wastewater (i.e. washwater and animal waste).
- 10) The Tennessee Department of Environment and Conservation Division of Water Resources will be notified of any significant wildlife mortalities near retention ponds or following any land application of animal wastes to fields.
- 11) All employees involved in work activities that relate to permit compliance will receive regular training on proper operation and maintenance (O&M) of the facility and waste disposal. Training shall include appropriate topics, such as land application of wastes, good housekeeping and material management practices, proper O&M of the facility, record keeping, and spill response and clean up. The periodic scheduled dates for such training shall be identified in the current Nutrient Management Plan.
- 12) There shall be no land application of nutrients within 24 hours of a precipitation event that may cause runoff. The operator shall not land apply nutrients to frozen, flooded, or saturated soils.

  
Signature of CAFO Owner/Operator

8-18-15  
Date

**RECEIVED**

**AUG 18 2015**

# Closure Plan

In the event that Swine production at this location ceases, the following will be done within 360 days:

- All manure in all animal use areas will be removed and spread on the farm or spread elsewhere according to my current Nutrient Management Plan.
- The most current manure analysis will be provided to anyone removing manure from the farm.
- Any dead pigs on the farm will be disposed of at the time of closure according to methods outlined in my current Nutrient Management Plan and or allowable by Tennessee Law.
- Any manure which is land applied will be done so according to the rates discussed in my most recent Nutrient Management Plan.

The following will be completed within a reasonable period as allowable by law using Tennessee Natural Resources Conservation Service (NRCS) Standard Code 360- Closure of Waste Impoundments:

- Any manure storage facility (lagoon) located on the swine farm will be properly decommissioned.
- Any manure currently in storage at the time of closure will be removed and spread on the farm or spread elsewhere according to my current Nutrient Management Plan.
- The lagoon will be breached and backfilled and or converted to freshwater storage according to NRCS standards.



Date: 8-18-15

**RECEIVED**

**AUG 18 2015**



# Comprehensive Nutrient Management Plan (CNMP) (Version 2, 9/14/2011 Format)

The Comprehensive Nutrient Management Plan (CNMP) is an important part of the conservation management system (CMS) for your Animal Feeding Operation (AFO). This CNMP documents the planning decisions and operation and maintenance for the animal feeding operation. It includes background information and provides guidance, reference information and Web-based sites where up-to-date information can be obtained. Refer to the Producer Activity Document (PAD) for information about day-to-day management activities and recordkeeping. Both this CNMP document and the PAD document shall remain in the possession of the producer/landowner.

**Farm/Facility:** Tosh Cottage Grove  
Cold Corner Rd  
Henry, TN

**Owner/Operator:** James A Tosh

**Farm Headquarters Latitude/Longitude:** 36.452205, -88.514894

**Plan Period:** Oct 2015 - Sep 2020

## **Certified Conservation Planner**

As a Certified Conservation Planner, I certify that I have reviewed both the *Comprehensive Nutrient Management Plan* and *Producer Activity Document* for technical adequacy and that the elements of the documents are technically compatible, reasonable and can be implemented.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Name: J.T. Workman IV  
Title: Workman Consulting LLC Certification Credentials: TSP 10-6884

## **Conservation District**

As a Soil and Water Conservation District employee, I have reviewed both the *Comprehensive Nutrient Management Plan* and *Producer Activity Document* and concur that the plan meets the District's conservation goals.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

### Owner/Operator

As the owner/operator of this CNMP, I, as the decision maker, have been involved in the planning process and agree that the items/practices listed in each element of the CNMP are needed. I understand that I am responsible for keeping all the necessary records associated with the implementation of this CNMP. It is my intention to implement/accomplish this CNMP in a timely manner as described in the plan.

Signature: \_\_\_\_\_  
Name: \_\_\_\_\_

Date: 8-18-15

### Section 2. Manure and Wastewater Handling and Storage

Signature: \_\_\_\_\_

Name: J.T. Workman IV

Title: Workman Consulting LLC

Date: 8-18-15

Certification Credentials: TSP 10-6884

### Sections 4. Land Treatment

Signature: \_\_\_\_\_

Name: J.T. Workman IV

Title: Workman Consulting LLC

Date: 8-18-15

Certification Credentials: TSP 10-6884

### Section 6. Nutrient Management

The Nutrient Management component of this plan meets the Tennessee Nutrient Management 590 and Waste Utilization 633 Conservation Practice Standards.

Signature: \_\_\_\_\_

Name: J.T. Workman IV

Title: Workman Consulting LLC

Date: 8-18-15

Certification Credentials: TSP 10-6884

### Section 7. Feed Management (if applicable)

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Certification Credentials: \_\_\_\_\_

### Section 8. Other Utilization Options (if applicable)

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Certification Credentials: \_\_\_\_\_

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## Section 1. Background and Site Information

### 1.1. General Description of Operation

Tosh Cottage Grove is a 2 barn wean to finish hog operation with up to 2,600 pigs per building. All manure is applied to the fields in this plan on a 2 year phosphorus application. Manure can be applied spring or fall prior to corn or wheat. Manure application just cannot exceed 2 yr phosphorus needs or 1 year Nitrogen. All manure remains under roof in an under floor pit. Normal deaths are transferred to Tosh Gilkey. The closest house is 2,500 feet away and the closest stream is 820 feet away.

### 1.2. Sampling, Calibration and Other Statements

- Manure sampling frequency  
Manure will be sampled each time it is applied and sent to an accredited lab.
- Soil testing frequency  
All fields in this document shall be tested at least every three years by an accredited lab.
- Equipment calibration method and frequency  
Application Equipment will be calibrated each time manure is applied.
- Clean water diversion  
No clean water will enter pit. It is sealed off from outside water.
- Measures to prevent direct contact of animals with water  
All animals will remain inside above the under floor pit.

### 1.3. Natural Resource Concerns

If checked, the indicated resource concerns have been identified and have been addressed in this plan.

#### Soil Quality Concerns

|  | <i>Soil Quality Concern</i> | <i>Activities to Address Concern</i> |
|--|-----------------------------|--------------------------------------|
|  | Ephemeral Gully Erosion     |                                      |
|  | Gully Erosion               |                                      |
|  | Sheet and Rill Erosion      |                                      |
|  | Stream/Ditchbank Erosion    |                                      |
|  | Wind Erosion                |                                      |
|  |                             |                                      |
|  |                             |                                      |

## Water Quality Concerns

|   | <i>Water Quality Concern</i>      | <i>Activities to Address Concern</i>    |
|---|-----------------------------------|-----------------------------------------|
| X | Facility Wastewater Runoff        | Manure is in concrete pit under a roof. |
| X | Manure Runoff (Field Application) | Manure injected                         |
|   | Manure Runoff (From Facilities)   |                                         |
|   | Nutrients in Groundwater          |                                         |
|   | Nutrients in Surface Water        |                                         |
|   | Silage Leachate                   |                                         |
| X | Excessive Soil Test Phosphorus    | Some fields are high but not excessive  |
|   | Tile-Drained Fields               |                                         |
|   |                                   |                                         |
|   |                                   |                                         |

## Other Concerns Addressed

|   | <i>Other Concern</i>                   | <i>Activities to Address Concern</i>                       |
|---|----------------------------------------|------------------------------------------------------------|
| X | Acres Available for Manure Application | All acres in plan                                          |
|   | Aesthetics                             |                                                            |
| X | Maximize Nutrient Utilization          | Manure applied on a 2 yr P with Nitrogen supplemented      |
|   | Minimize Nutrient Costs                |                                                            |
| X | Neighbor Relations                     | Setbacks in place                                          |
|   | Profitability                          |                                                            |
|   | Regulations                            |                                                            |
|   | Soil Compaction                        |                                                            |
| X | Time Available for Manure Application  | Manure can be applied prior to wheat or corn planting      |
|   | Odors                                  |                                                            |
| X | Air Quality                            | Air quality does not seem to be affected by this operation |
| X | Biosecurity                            | Plan in place                                              |
|   |                                        |                                                            |
|   |                                        |                                                            |

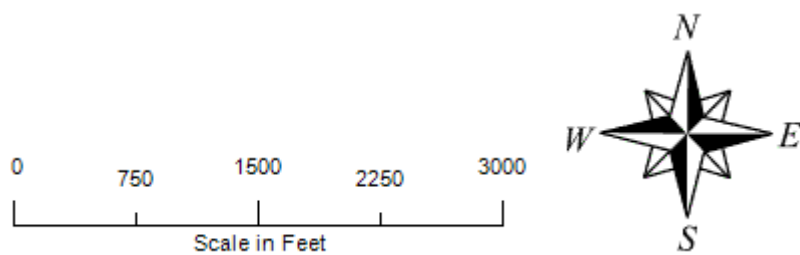
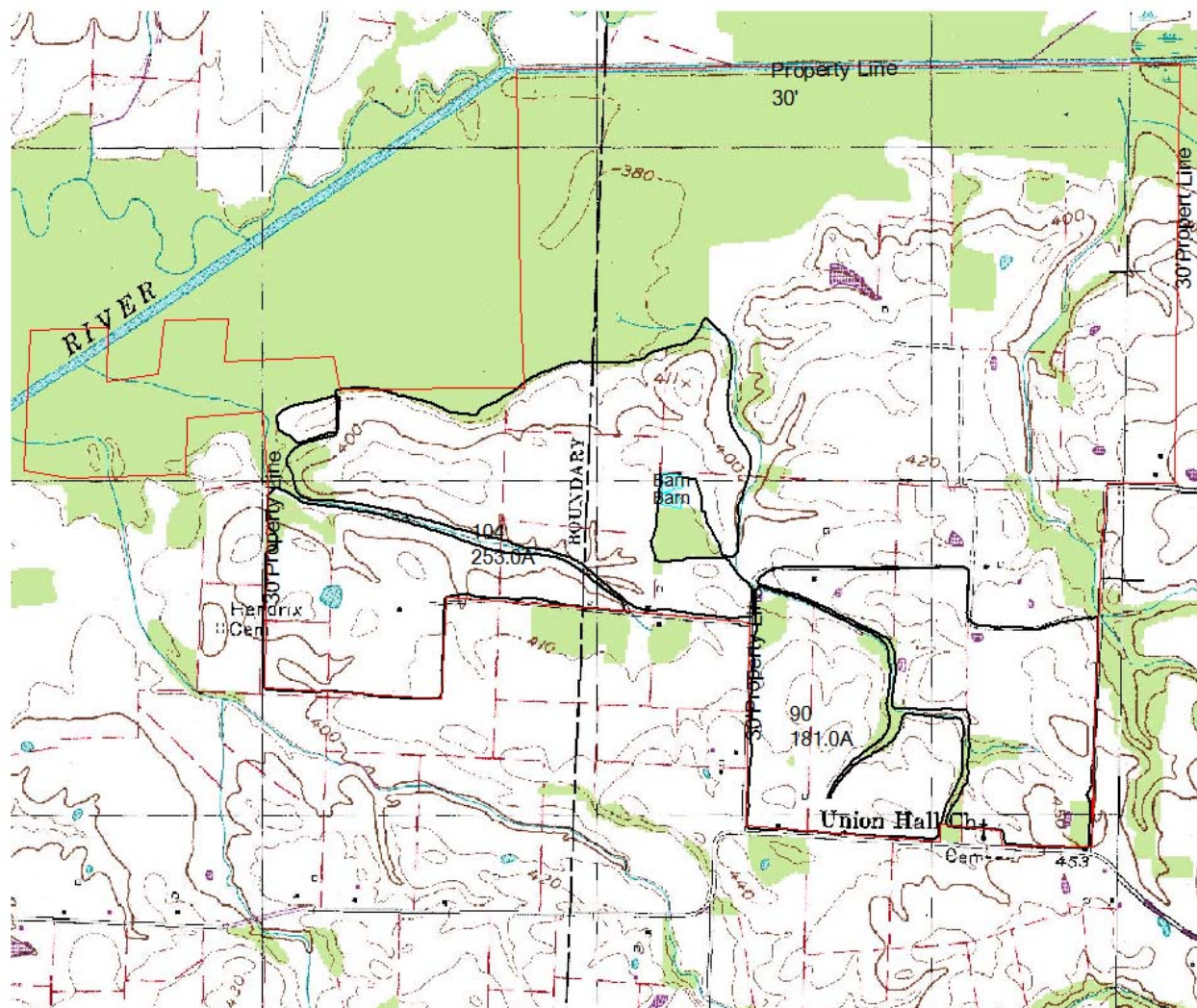
## Section 2. Manure and Wastewater Handling and Storage

### 2.1. Map(s) of Production Area

Closest Stream

Barns





## 2.2. Production Area Conservation Practices

### Heavy Use Area Protection (561)

| Barn(s) | Planned amount (No.) | Month | Year | Amount Applied | Date |
|---------|----------------------|-------|------|----------------|------|
| 2       | 2                    | 7     | 2015 |                |      |
| Total   | 2.0                  |       |      |                |      |

Protect heavily used areas by providing soil protection with vegetation, surfacing material or mechanical structures.

### Access Road (560)

| Road(s) | Planned amount (No.) | Month | Year | Amount Applied | Date |
|---------|----------------------|-------|------|----------------|------|
| 1       | 1.0                  | 7     | 2015 |                |      |
| Total   | 1.0                  |       |      |                |      |

A travel lane will be constructed according to NRCS plans and specifications to provide access for proper operation, maintenance, and management of this farm. Maintenance: This practice will be maintained for the 10 year life span of the practice.

|                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| All NRCS conservation practices shall be installed, operated and maintained according to NRCS conservation practice standards and associated technical specifications. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 2.3. Manure Storage

| Storage ID | Type of Storage      | Pumpable or Spreadable Capacity | Annual Manure Collected | Maximum Days of Storage |
|------------|----------------------|---------------------------------|-------------------------|-------------------------|
| Barn 1     | In-house storage pit | 1,092,596 Gal                   | 630,000 Gal             | 633                     |
| Barn 2     | In-house storage pit | 1,092,596 Gal                   | 630,000 Gal             | 633                     |

Last years annual report was 1.2 million gallons for 4980. There is a possibility of having up to 5,200. Therefore  $1.2 \text{ divided by } 4980 \text{ times } 5200 = 1,253,012.(626,506)$  So manure production rounded up for this plan will be 630,000 gallons per building.

### 2.4. Animal Inventory

| Animal Group | Type or Production Phase | Number of Animals | Average Weight (Lbs) | Confinement Period   | Manure Collected (%) | Storage Where Manure Will Be Stored |
|--------------|--------------------------|-------------------|----------------------|----------------------|----------------------|-------------------------------------|
| Pigs 1       | Wean-to-finish pig       | 2,600             | 140                  | Jan Early - Dec Late | 100                  | Barn 1                              |
| Pigs 2       | Wean-to-finish pig       | 2,600             | 140                  | Jan Early - Dec Late | 100                  | Barn 2                              |

(1) Number of Animals is the average number of animals that are present in the production facility at any one time.

(2) If Manure Collected is less than 100%, this indicates that the animals spend a portion of the day outside of the production facility or that the production facility is unoccupied one or more times during the confinement period.

## 2.5. Normal Animal Mortality Management

To decrease non-point source pollution of surface and ground water resources, reduce the impact of odors that result from improperly handled animal mortality, and decrease the likelihood of the spread of disease or other pathogens, approved handling and utilization methods shall be implemented in the handling of normal mortality losses. If on-farm storage or handling of animal mortality is done, NRCS Standard 316, Animal Mortality Facility, will be followed for proper management of dead animals.

### Plan for Proper Animal Mortality Management

The following narrative describes how normal animal mortality will be managed in a manner that protects surface and ground water quality.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Normal animal mortalities will be taken to the Tosh Farms Gilkey Site and composted. |
|--------------------------------------------------------------------------------------|

## 2.6. Planned Manure Exports off the Farm

| Month-Year | Manure Source | Amount | Receiving Operation | Location |
|------------|---------------|--------|---------------------|----------|
|------------|---------------|--------|---------------------|----------|

(None)

## 2.7. Planned Manure Imports onto the Farm

| Month-Year | Manure's Animal Type | Amount | Originating Operation | Location |
|------------|----------------------|--------|-----------------------|----------|
|------------|----------------------|--------|-----------------------|----------|

(None)

## 2.8. Planned Internal Transfers of Manure

| Month-Year | Manure Source | Amount | Manure Destination |
|------------|---------------|--------|--------------------|
|------------|---------------|--------|--------------------|

(None)

## Section 3. Farmstead Safety and Security

### 3.1. Emergency Response Plan

#### In Case of an Emergency Storage Facility Spill, Leak or Failure

**Implement the following first containment steps:**

- Stop all other activities to address the spill.
- Stop the flow. For example, use skid loader or tractor with blade to contain or divert spill or leak.
- Call for help and excavator if needed.
- Complete the clean-up and repair the necessary components.
- Assess the extent of the emergency and request additional help if needed.

#### In Case of an Emergency Spill, Leak or Failure during Transport or Land Application

**Implement the following first containment steps:**

- Stop all other activities to address the spill and stop the flow.
- Call for help if needed.
- If the spill posed a hazard to local traffic, call for local traffic control assistance and clear the road and roadside of spilled material.
- Contain the spill or runoff from entering surface waters using straw bales, saw dust, soil or other appropriate materials.
- If flow is coming from a tile, plug the tile with a tile plug immediately.
- Assess the extent of the emergency and request additional help if needed.

#### Emergency Contacts

| Department / Agency     | Phone Number        |
|-------------------------|---------------------|
| Fire                    | 911 or 731-243-4091 |
| Rescue services         | 911                 |
| State veterinarian      | 615-837-5183        |
| Sheriff or local police | 911 or 731-642-1672 |

#### Nearest available excavation equipment/supplies for responding to emergency

| Equipment Type     | Contact Person | Phone Number |
|--------------------|----------------|--------------|
| Trackhoe and Dozer | Jamie Tosh     | 731-694-8792 |
|                    |                |              |
|                    |                |              |

#### Contacts to be made by the owner or operator within 24 hours

| Organization                 | Phone Number                                  |
|------------------------------|-----------------------------------------------|
| EPA Emergency Spill Hotline  | 1-800-424-8802                                |
| County Health Department     | 731-642-4025                                  |
| Other State Emergency Agency | 1-888-891-8332 TDEC's Water Pollution Control |

**Be prepared to provide the following information:**

- Your name and contact information.
- Farm location (driving directions) and other pertinent information.
- Description of emergency.
- Estimate of the amounts, area covered, and distance traveled.
- Whether manure has reached surface waters or major field drains.
- Whether there is any obvious damage: employee injury, fish kill, or property damage.
- Current status of containment efforts.

### 3.2. Biosecurity Measures

Biosecurity is critical to protecting livestock and poultry operations. Visitors must contact and check in with the producer before visiting the operation or entering any production or storage facility.

The following narrative describes how animal veterinary wastes (including medical equipment, empty containers, sharps and expired medications) will be managed at the operation.

Medicine will be disposed to as directed on label. Needles and other sharps will be put in to a sharps container. If any medicine is left it shall remain in the control rooms or in a building that is protected from outside environment and stored according to label.

### 3.3. Catastrophic Animal Mortality Management

Refer to NRCS standards, or state guidance, regarding appropriate catastrophic animal mortality handling methods.

#### Plan for Catastrophic Animal Mortality Management

The following narrative describes how catastrophic animal mortality will be managed in a manner that protects surface and ground water quality. All national, state and local laws, regulations and guidelines that protect soil, water, air, plants, animals and human health must be followed.

#### ap — Catastrophic Mortality, Large Animal Disposal, Pit





Burial Location



### Warning: Soil Ratings Map may not be valid at this scale.

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soil at this particular scale. The soil surveys that comprise your AOI were mapped at 1:24,000. The design of map units and the detail shown in the resulting soil map are dependent on that map scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and line placement. The maps do not show the small areas of contrasting soils that could have been shown at a smaller scale.

## Tables — Catastrophic Mortality, Large Animal Disposal, Pit — Summary By Map Unit

### Summary by Map Unit — Weakley County, Tennessee (TN183)

| Map unit symbol | Map unit name                                                                 | Rating       | Component name (percent) | Rating reasons (numeric values)  | Acres in AOI | Percent of AOI |
|-----------------|-------------------------------------------------------------------------------|--------------|--------------------------|----------------------------------|--------------|----------------|
| Ce              | Center silt loam                                                              | Very limited | Center (100%)            | Wetness (1.00)                   | 21.2         | 12.1%          |
|                 |                                                                               |              |                          | Dusty (0.05)                     |              |                |
|                 |                                                                               |              |                          | Unstable excavation walls (0.01) |              |                |
| Fb              | Falaya silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration | Very limited | Falaya (90%)             | Flooding (1.00)                  | 50.5         | 28.7%          |
|                 |                                                                               |              |                          | Wetness (1.00)                   |              |                |
|                 |                                                                               |              |                          | Water gathering                  |              |                |

**Summary by Map Unit — Weakley County, Tennessee (TN183)**

| Map unit symbol | Map unit name                                                | Rating           | Component name (percent) | Rating reasons (numeric values)  | Acres in AOI | Percent of AOI |
|-----------------|--------------------------------------------------------------|------------------|--------------------------|----------------------------------|--------------|----------------|
|                 |                                                              |                  |                          | surface (0.33)                   |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.18) |              |                |
|                 |                                                              |                  |                          | Dusty (0.08)                     |              |                |
|                 |                                                              |                  | Collins (5%)             | Flooding (1.00)                  |              |                |
|                 |                                                              |                  |                          | Wetness (1.00)                   |              |                |
|                 |                                                              |                  |                          | Dusty (0.08)                     |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.04) |              |                |
|                 |                                                              |                  | Waverly (5%)             | Flooding (1.00)                  |              |                |
|                 |                                                              |                  |                          | Wetness (1.00)                   |              |                |
|                 |                                                              |                  |                          | Water gathering surface (0.33)   |              |                |
|                 |                                                              |                  |                          | Dusty (0.06)                     |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.04) |              |                |
| GrB2            | Grenada silt loam, 2 to 5 percent slopes, eroded             | Very limited     | Grenada (100%)           | Wetness (1.00)                   | 2.0          | 1.1%           |
|                 |                                                              |                  |                          | Dusty (0.05)                     |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.01) |              |                |
| GrC3            | Grenada silt loam, 5 to 8 percent slopes, severely eroded    | Very limited     | Grenada (100%)           | Wetness (1.00)                   | 3.5          | 2.0%           |
|                 |                                                              |                  |                          | Slope (0.16)                     |              |                |
|                 |                                                              |                  |                          | Dusty (0.05)                     |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.01) |              |                |
| LeC3            | Lexington silt loam, 5 to 8 percent slopes, severely eroded  | Somewhat limited | Lexington (100%)         | Seepage (0.50)                   | 3.5          | 2.0%           |
|                 |                                                              |                  |                          | Slope (0.16)                     |              |                |
|                 |                                                              |                  |                          | Dusty (0.05)                     |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.01) |              |                |
| LeD3            | Lexington silt loam, 8 to 12 percent slopes, severely eroded | Somewhat limited | Lexington (100%)         | Slope (0.84)                     | 4.6          | 2.6%           |
|                 |                                                              |                  |                          | Seepage (0.50)                   |              |                |
|                 |                                                              |                  |                          | Dusty (0.05)                     |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.01) |              |                |
| LoB2            | Loring silt loam, 2 to 5 percent slopes, eroded              | Very limited     | Loring (100%)            | Wetness (1.00)                   | 16.1         | 9.2%           |
|                 |                                                              |                  |                          | Dusty (0.05)                     |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.01) |              |                |
| LoC3            | Loring silt loam, 5 to 8 percent slopes, severely eroded     | Very limited     | Loring (100%)            | Wetness (1.00)                   | 15.5         | 8.8%           |
|                 |                                                              |                  |                          | Slope (0.16)                     |              |                |
|                 |                                                              |                  |                          | Dusty (0.05)                     |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.01) |              |                |
| MeB2            | Memphis silt loam, 2 to 5 percent slopes, eroded, north      | Somewhat limited | Memphis (88%)            | Dusty (0.08)                     | 24.9         | 14.2%          |
|                 |                                                              |                  |                          | Unstable excavation walls (0.01) |              |                |
|                 |                                                              |                  | Lexington (6%)           | Seepage (0.50)                   |              |                |
|                 |                                                              |                  |                          | Dusty (0.08)                     |              |                |
|                 |                                                              |                  |                          | Unstable excavation walls (0.01) |              |                |

### Summary by Map Unit — Weakley County, Tennessee (TN183)

| Map unit symbol                    | Map unit name                                              | Rating           | Component name (percent) | Rating reasons (numeric values)                                                                         | Acres in AOI | Percent of AOI |
|------------------------------------|------------------------------------------------------------|------------------|--------------------------|---------------------------------------------------------------------------------------------------------|--------------|----------------|
| MeC2                               | Memphis silt loam, 5 to 8 percent slopes, eroded           | Somewhat limited | Memphis (100%)           | Slope (0.16)<br>Dusty (0.05)<br>Unstable excavation walls (0.01)                                        | 7.6          | 4.3%           |
| RO                                 | Rosebloom silt loam, ponded                                | Very limited     | Rosebloom (100%)         | Ponding (1.00)<br>Flooding (1.00)<br>Wetness (1.00)<br>Dusty (0.05)<br>Unstable excavation walls (0.01) | 0.3          | 0.1%           |
| Rt                                 | Routon silt loam                                           | Very limited     | Routon (100%)            | Wetness (1.00)<br>Dusty (0.05)<br>Unstable excavation walls (0.01)                                      | 24.3         | 13.8%          |
| WR                                 | Waverly, Rosebloom silt loams and Frequently flooded soils | Very limited     | Waverly (55%)            | Flooding (1.00)<br>Wetness (1.00)<br>Dusty (0.05)<br>Unstable excavation walls (0.04)                   | 1.8          | 1.0%           |
|                                    |                                                            |                  | Rosebloom (35%)          | Flooding (1.00)<br>Wetness (1.00)<br>Dusty (0.05)<br>Unstable excavation walls (0.01)                   |              |                |
| <b>Totals for Area of Interest</b> |                                                            |                  |                          |                                                                                                         | <b>175.7</b> | <b>100.0%</b>  |

### Table — Catastrophic Mortality, Large Animal Disposal, Pit — Summary by Rating Value

#### Summary by Rating Value

| Rating                             | Acres in AOI | Percent       |
|------------------------------------|--------------|---------------|
| Very limited                       | 135.1        | 76.9%         |
| Somewhat limited                   | 40.6         | 23.1%         |
| <b>Totals for Area of Interest</b> | <b>175.7</b> | <b>100.0%</b> |

### Description — Catastrophic Mortality, Large Animal Disposal, Pit

"Catastrophic mortality, large animal disposal, pit," is a method of disposing of dead animals by placing the carcasses in successive layers in an excavated pit. The carcasses are spread, compacted, and covered daily with a thin layer of soil that is excavated from the pit. When the pit is full, a final cover of soil material at least 2 feet thick is placed over the burial pit.

The interpretation is applicable to both heavily populated and sparsely populated areas. While some general observations may be made, onsite evaluation is required before the final site is selected. Improper site selection, design, or installation may cause contamination of ground water, seepage, and contamination of stream systems from surface drainage or floodwater. The risk of contamination can be reduced or eliminated by installing systems designed to eliminate or reduce the adverse effects of limiting soil properties. Ratings are for soils in their present condition. The present land use is not considered in the ratings.

Ratings are based on properties and qualities to the depth normally observed during soil mapping (approximately 6 or 7 feet). However, because pits may be as deep as 15 feet or

more, geologic investigations are needed to determine the potential for pollution of ground water and to determine the design needed. These investigations, which are generally arranged by the pit developer, include examination of stratification, rock formations, and geologic conditions that might lead to the conducting of leachates to aquifers, wells, watercourses, and other water sources. The presence of hard, nonrippable bedrock, bedrock crevices, or highly permeable strata at or directly below the proposed pit bottom is undesirable because of the difficulty in excavation and the potential pollution of underground water.

Properties that influence the risk of pollution, ease of excavation, trafficability, and revegetation are major considerations. Soils that are flooded or have a water table within the depth of excavation present a potential pollution hazard and are difficult to excavate. Slope is an important consideration because it affects the work involved in road construction, the performance of the roads, and the control of surface water around the pit. It may also cause difficulty in constructing pits in which the pit bottom must be kept level and oriented to follow the contour of the land.

The ease with which the pit is dug and with which a soil can be used as daily and final cover is based largely on soil texture and consistence, which determine workability when the soil is dry and when it is wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and difficult to place as a uniformly thick cover over a layer of carcasses. The uppermost part of the final cover should be soil material that favors the growth of plants. It should not contain excess sodium or salts and should not be too acid. In comparison with other horizons, the surface layer in most soils has the best workability and the highest content of organic matter. Thus, it may be desirable to stockpile the surface layer for use in the final blanketing of the filled pit area.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected of a properly designed and installed system. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of the individual limitations. The ratings are shown in decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

***Important!*** In the event of catastrophic animal mortality, contact the following authority before beginning carcass disposal:

Authority name State Vet  
Contact name Charles Hatcher  
Phone number 615-837-5183

### 3.4. Chemical Handling

If checked, the indicated measures will be taken to prevent chemicals and other contaminants from contaminating process waste water or storm water storage and treatment systems.

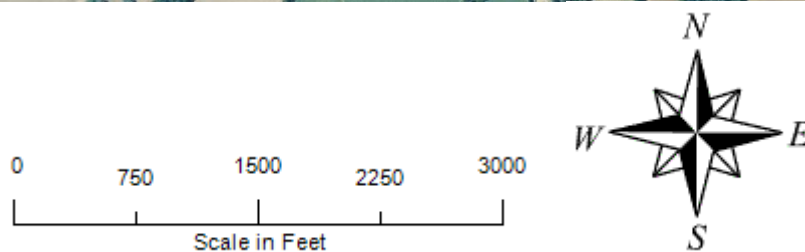
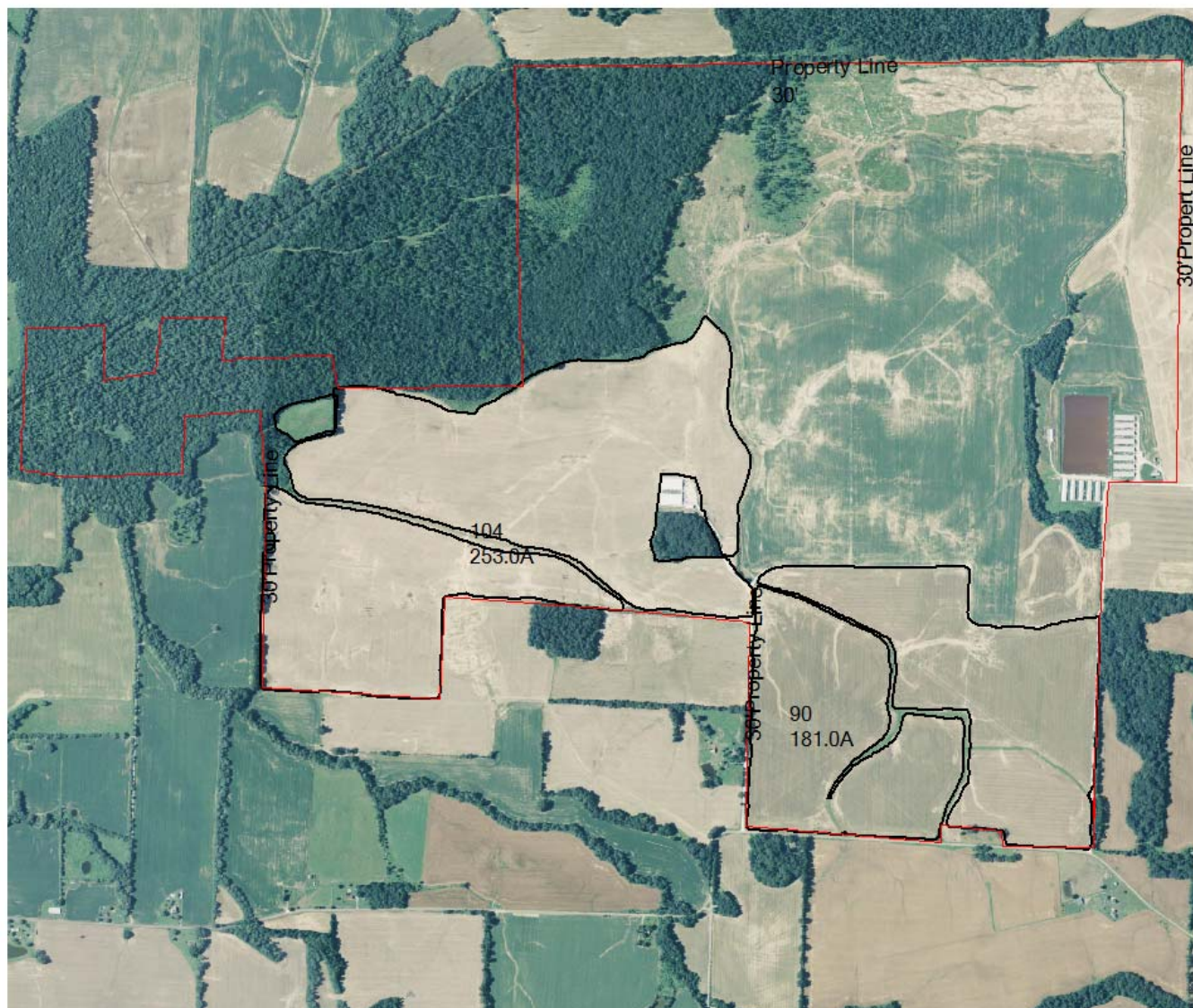
|  |                                                                                  |
|--|----------------------------------------------------------------------------------|
|  | This is not a regulatory-agency permitted facility. This section does not apply. |
|--|----------------------------------------------------------------------------------|

|   | <i>Measure</i>                                                                                                                                                                                                                                        |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X | All chemicals are stored in proper containers. Expired chemicals and empty containers are properly disposed of in accordance with state and federal regulations. Pesticides and associated refuse are disposed of in accordance with the FIFRA label. |
| X | Chemical storage areas are self-contained with no drains or other pathways that will allow spilled chemicals to exit the storage area.                                                                                                                |
| X | Chemical storage areas are covered to prevent chemical contact with rain or snow.                                                                                                                                                                     |
| X | Emergency procedures and equipment are in place to contain and clean up chemical spills.                                                                                                                                                              |
| X | Chemical handling and equipment wash areas are designed and constructed to prevent contamination of surface waters and waste water and storm water storage and treatment systems.                                                                     |
| X | All chemicals are custom applied and no chemicals are stored at the operation. Equipment wash areas are designed and constructed to prevent contamination of surface waters and waste water and storm water storage and treatment systems.            |

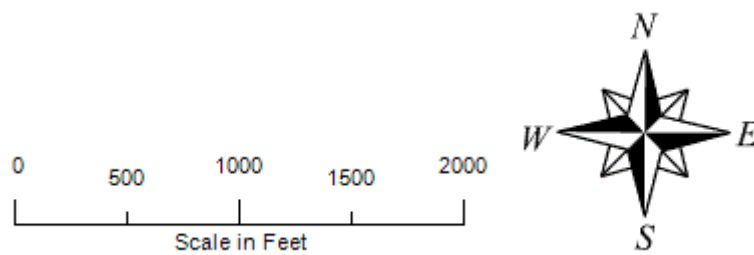
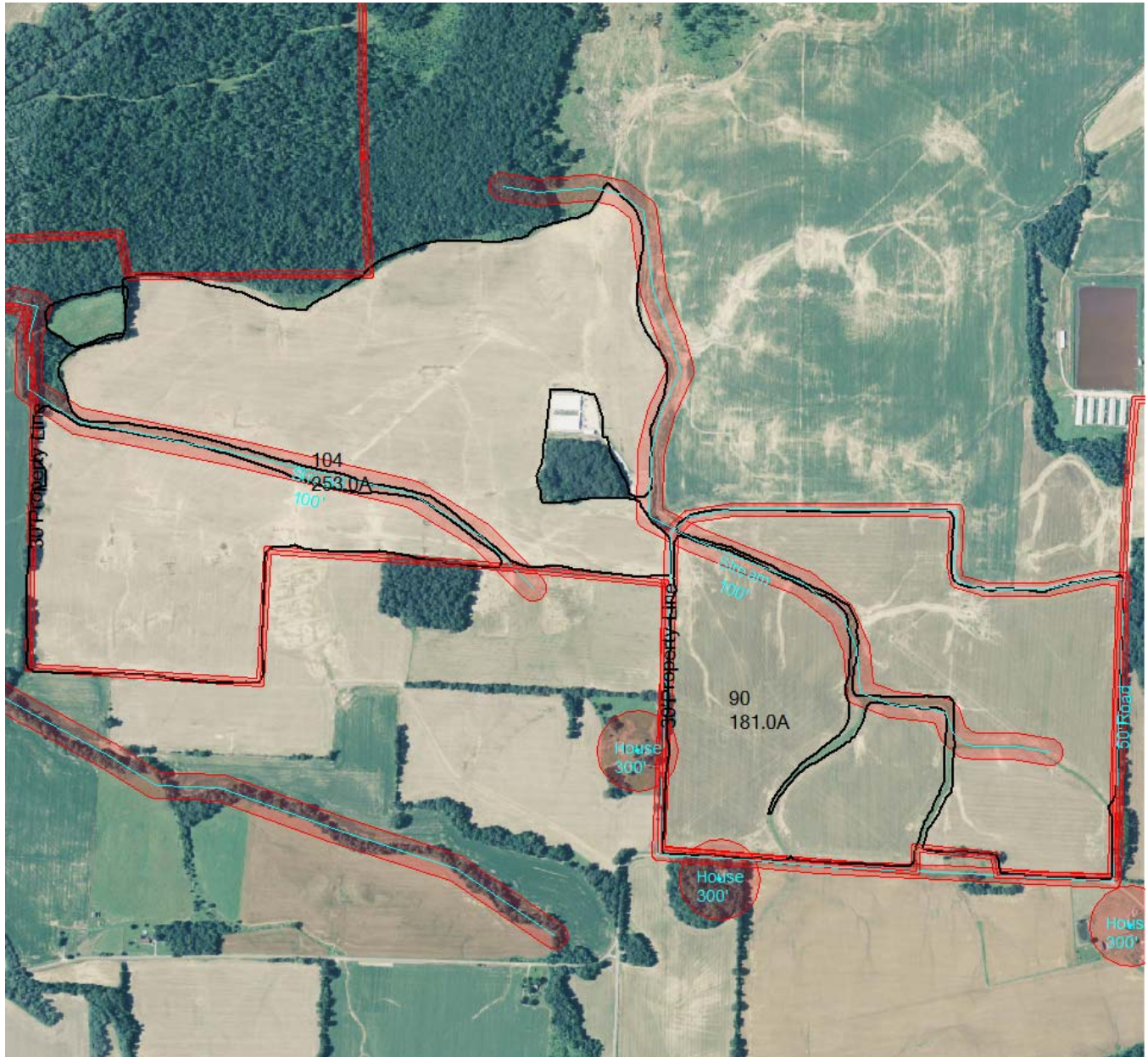
## Section 4. Land Treatment

### 4.1. Map(s) of Fields and Conservation Practices

#### Fields with Property Line



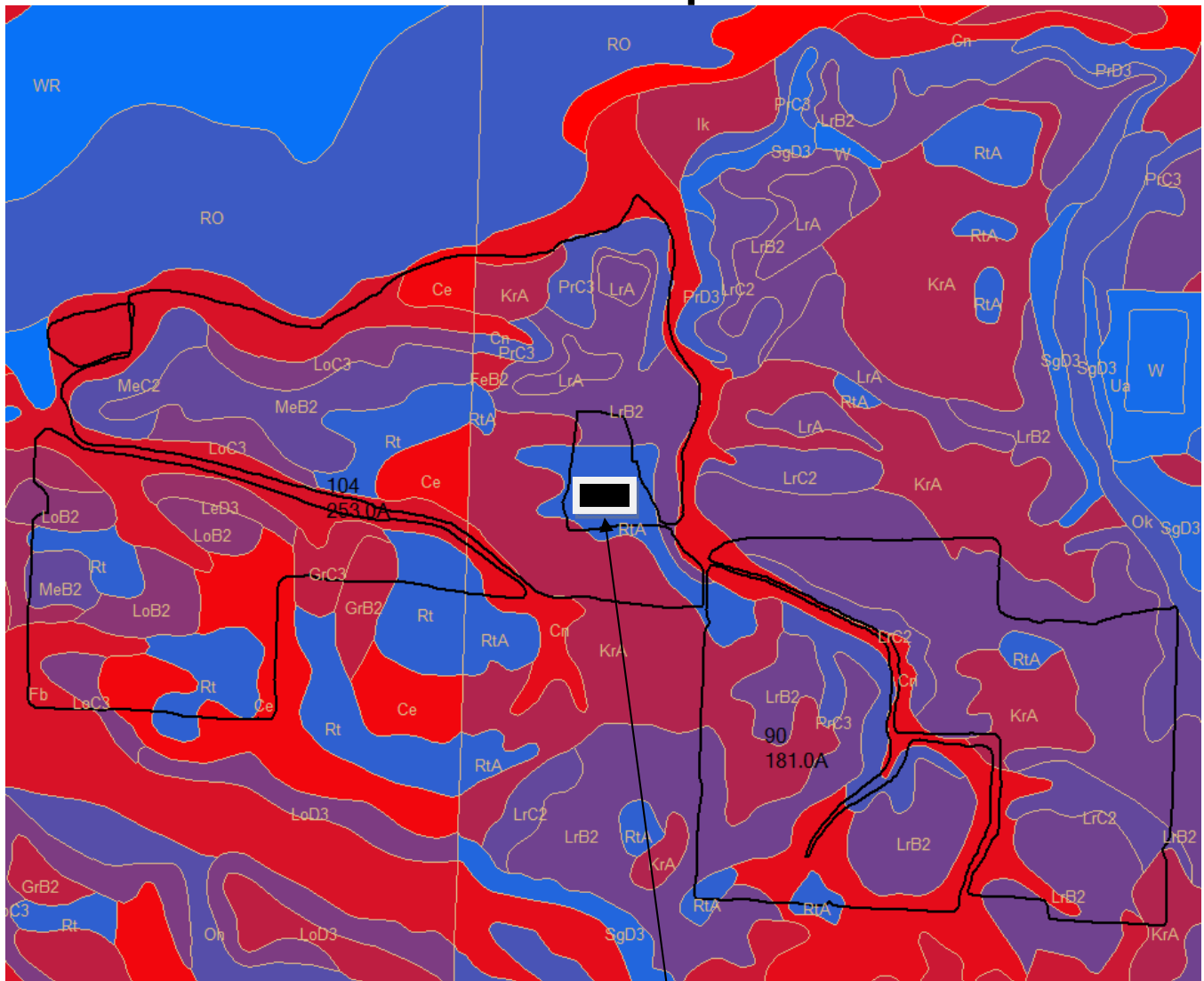
## Fields with Setbacks



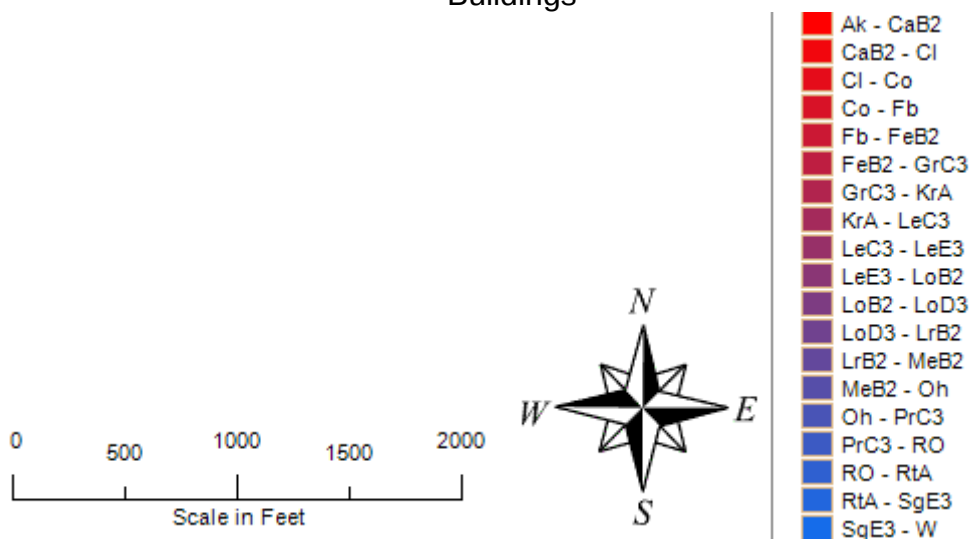
# Topo Map



# Soils Map



Buildings



## 4.2. Land Treatment Conservation Practices

### Conservation Crop Rotation (328)

| Tract/Field  | Planned amount (Ac) | Month | Year | Amount Applied | Date |
|--------------|---------------------|-------|------|----------------|------|
| 90           | 181                 | 9     | 2015 |                |      |
| 104          | 253                 | 9     | 2015 |                |      |
| <b>TOTAL</b> | <b>434</b>          |       |      |                |      |

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. These fields are in a Corn Winter Wheat and Soybeans rotation.

### Nutrient Management (590)

Soil amendments, animal waste, and lime will be applied according to soil test recommendations. When applying animal waste, recommended buffer widths shall be observed. Refer to Practice Standard 590.

| Tract/Field  | Planned amount (Ac) | Month | Year | Amount Applied | Date |
|--------------|---------------------|-------|------|----------------|------|
| 90           | 181                 | 9     | 2015 |                |      |
| 104          | 253                 | 9     | 2015 |                |      |
| <b>TOTAL</b> | <b>434</b>          |       |      |                |      |

Manage the amount, form, placement and timing of plant nutrient application. See the enclosed "Nutrient Management" element of the CNMP for the proper application rates, timing, and methods of application to provide needed crop nutrients and to minimize the movement of nutrients to ground and surface water.

Manure needs to be tested each time an application occurs by an accredited lab if manure test varies from this document, make adjustments to future application rates and to the nutrient budget.

### Residue & Tillage Management No-Till (329)

| Tract/Field  | Planned amount (Ac) | Month | Year | Amount Applied | Date |
|--------------|---------------------|-------|------|----------------|------|
| 90           | 181                 | 9     | 2015 |                |      |
| 104          | 253                 | 9     | 2015 |                |      |
| <b>TOTAL</b> | <b>434</b>          |       |      |                |      |

Manage organic residue so maximum amounts are left on the soil surface on a year-round basis. Plant crops in narrow slots or narrow tilled strips in previously untilled soil.

All NRCS conservation practices shall be installed, operated and maintained according to NRCS conservation practice standards and associated technical specifications.

## Section 5. Soil and Risk Assessment Analyses

### 5.1. Soil Information

| Field | Soil Survey | Map Unit | Soil Component Name | Surface Texture | Slope Range (%) | OM Range (%) | Bedrock Depth (in.) | Hydro-logic Group |
|-------|-------------|----------|---------------------|-----------------|-----------------|--------------|---------------------|-------------------|
| 90    | 079         | LrB2     | Loring              | SIL             | 2-5%            | 0.5-2%       |                     | C                 |
| 104   | 183         | Fb       | Falaya              | SIL             | 0-2%            | 0.5-3%       |                     | D                 |

#### Weakley County, Tennessee

**Map Unit:** Ce—Center silt loam

**Component:** Center (100%)

The Center component makes up 100 percent of the map unit. Slopes are 1 to 3 percent. This component is on stream terraces on plains. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 21 inches during January, February, March, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

**Map Unit:** Fb—Falaya silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration

**Component:** Falaya (90%)

The Falaya component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on plains. The parent material consists of coarse-silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 9 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

**Component:** Waverly (5%)

Generated brief soil descriptions are created for major components. The Waverly soil is a minor component.

**Component:** Collins (5%)

Generated brief soil descriptions are created for major components. The Collins soil is a minor component.

**Map Unit:** GrB2—Grenada silt loam, 2 to 5 percent slopes, eroded

**Component:** Grenada (100%)

The Grenada component makes up 100 percent of the map unit. Slopes are 2 to 5 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer, fragipan, is 18 to 36 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

**Map Unit:** GrC3—Grenada silt loam, 5 to 8 percent slopes, severely eroded

**Component:** Grenada (100%)

The Grenada component makes up 100 percent of the map unit. Slopes are 5 to 8 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer, fragipan, is 18 to 36 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

**Map Unit:** LeC3—Lexington silt loam, 5 to 8 percent slopes, severely eroded

**Component:** Lexington (100%)

The Lexington component makes up 100 percent of the map unit. Slopes are 5 to 8 percent. This component is on hillslopes on coastal plains. The parent material consists of loess over loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

**Map Unit:** LeD3—Lexington silt loam, 8 to 12 percent slopes, severely eroded

**Component:** Lexington (100%)

The Lexington component makes up 100 percent of the map unit. Slopes are 8 to 12 percent. This component is on hillslopes on coastal plains. The parent material consists of loess over loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria.

**Map Unit:** LoB2—Loring silt loam, 2 to 5 percent slopes, eroded

**Component:** Loring (100%)

The Loring component makes up 100 percent of the map unit. Slopes are 2 to 5 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

**Map Unit:** LoC3—Loring silt loam, 5 to 8 percent slopes, severely eroded

**Component:** Loring (100%)

The Loring component makes up 100 percent of the map unit. Slopes are 5 to 8 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

**Map Unit:** MeB2—Memphis silt loam, 2 to 5 percent slopes, eroded, north

**Component:** Memphis (88%)

The Memphis component makes up 88 percent of the map unit. Slopes are 2 to 5 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

**Component:** Lexington (6%)

Generated brief soil descriptions are created for major components. The Lexington soil is a minor component.

**Component:** Loring (4%)

Generated brief soil descriptions are created for major components. The Loring soil is a minor component.

**Component:** Grenada (2%)

Generated brief soil descriptions are created for major components. The Grenada soil is a minor component.

**Map Unit:** MeC2—Memphis silt loam, 5 to 8 percent slopes, eroded

**Component:** Memphis (100%)

The Memphis component makes up 100 percent of the map unit. Slopes are 5 to 8 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well

drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

**Map Unit:** RO—Rosebloom silt loam, ponded

**Component:** Rosebloom (100%)

The Rosebloom component makes up 100 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains on plains. The parent material consists of silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria.

**Map Unit:** Rt—Routon silt loam

**Component:** Routon (100%)

The Routon component makes up 100 percent of the map unit. Slopes are 0 to 2 percent. This component is on stream terraces on plains. The parent material consists of loess over silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

**Map Unit:** WR—Waverly, Rosebloom silt loams and Frequently flooded soils

**Component:** Waverly (55%)

The Waverly component makes up 55 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains on plains. The parent material consists of silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 9 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

**Component:** Rosebloom (35%)

The Rosebloom component makes up 35 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains on plains. The parent material consists of silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is moderate. This soil is frequently flooded. It is not ponded. A seasonal zone of

water saturation is at 6 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

**Component:** Minor componenets (10%)

Generated brief soil descriptions are created for major components. The Minor componenets soil is a minor component.

## **Weakley County, Tennessee**

**Map Unit:** Ce—Center silt loam

**Component:** Center (100%)

The Center component makes up 100 percent of the map unit. Slopes are 1 to 3 percent. This component is on stream terraces on plains. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 21 inches during January, February, March, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

**Map Unit:** Fb—Falaya silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration

**Component:** Falaya (90%)

The Falaya component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on plains. The parent material consists of coarse-silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 9 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

**Component:** Waverly (5%)

Generated brief soil descriptions are created for major components. The Waverly soil is a minor component.

**Component:** Collins (5%)

Generated brief soil descriptions are created for major components. The Collins soil is a minor component.

**Map Unit:** GrB2—Grenada silt loam, 2 to 5 percent slopes, eroded

**Component:** Grenada (100%)

The Grenada component makes up 100 percent of the map unit. Slopes are 2 to 5 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer, fragipan, is 18 to 36 inches. The natural drainage class is

moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

**Map Unit:** GrC3—Grenada silt loam, 5 to 8 percent slopes, severely eroded

**Component:** Grenada (100%)

The Grenada component makes up 100 percent of the map unit. Slopes are 5 to 8 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer, fragipan, is 18 to 36 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

**Map Unit:** LeC3—Lexington silt loam, 5 to 8 percent slopes, severely eroded

**Component:** Lexington (100%)

The Lexington component makes up 100 percent of the map unit. Slopes are 5 to 8 percent. This component is on hillslopes on coastal plains. The parent material consists of loess over loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

**Map Unit:** LeD3—Lexington silt loam, 8 to 12 percent slopes, severely eroded

**Component:** Lexington (100%)

The Lexington component makes up 100 percent of the map unit. Slopes are 8 to 12 percent. This component is on hillslopes on coastal plains. The parent material consists of loess over loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria.

**Map Unit:** LoB2—Loring silt loam, 2 to 5 percent slopes, eroded

**Component:** Loring (100%)

The Loring component makes up 100 percent of the map unit. Slopes are 2 to 5 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is

moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

**Map Unit:** LoC3—Loring silt loam, 5 to 8 percent slopes, severely eroded

**Component:** Loring (100%)

The Loring component makes up 100 percent of the map unit. Slopes are 5 to 8 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

**Map Unit:** MeB2—Memphis silt loam, 2 to 5 percent slopes, eroded, north

**Component:** Memphis (88%)

The Memphis component makes up 88 percent of the map unit. Slopes are 2 to 5 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

**Component:** Lexington (6%)

Generated brief soil descriptions are created for major components. The Lexington soil is a minor component.

**Component:** Loring (4%)

Generated brief soil descriptions are created for major components. The Loring soil is a minor component.

**Component:** Grenada (2%)

Generated brief soil descriptions are created for major components. The Grenada soil is a minor component.

**Map Unit:** MeC2—Memphis silt loam, 5 to 8 percent slopes, eroded

**Component:** Memphis (100%)

The Memphis component makes up 100 percent of the map unit. Slopes are 5 to 8 percent. This component is on loess hills on plains. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well

drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

**Map Unit:** RO—Rosebloom silt loam, ponded

**Component:** Rosebloom (100%)

The Rosebloom component makes up 100 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains on plains. The parent material consists of silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria.

**Map Unit:** Rt—Routon silt loam

**Component:** Routon (100%)

The Routon component makes up 100 percent of the map unit. Slopes are 0 to 2 percent. This component is on stream terraces on plains. The parent material consists of loess over silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

**Map Unit:** WR—Waverly, Rosebloom silt loams and Frequently flooded soils

**Component:** Waverly (55%)

The Waverly component makes up 55 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains on plains. The parent material consists of silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 9 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

**Component:** Rosebloom (35%)

The Rosebloom component makes up 35 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains on plains. The parent material consists of silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is moderate. This soil is frequently flooded. It is not ponded. A seasonal zone of

water saturation is at 6 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

**Component:** Minor componenets (10%)

Generated brief soil descriptions are created for major components. The Minor componenets soil is a minor component.

## 5.2. Predicted Soil Erosion

### Average water, wind, irrigation, gully and ephemeral soil loss

| Field | Predominant Soil Type | Slope (%) | Conservation Plan Soil Loss (Ton/A/Yr) | Wind (Ton/A/Yr) | Irrigation (Ton/A/Yr) | Gully (Ton/A/Yr) | Ephemeral (Ton/A/Yr) | T Factor (Ton/A/Yr) |
|-------|-----------------------|-----------|----------------------------------------|-----------------|-----------------------|------------------|----------------------|---------------------|
| 90    | LrB2 (Loring SIL)     | 3.5       | 1.7                                    |                 |                       |                  |                      | 4                   |
| 104   | Fb (Falaya SIL)       | 1.0       | 0.6                                    |                 |                       |                  |                      | 5                   |

### Crop period water soil loss

| Field | Crop Year | Primary Crop | Starting Date (mm/dd/yyyy) | Ending Date (mm/dd/yyyy) | Crop Period Soil Loss (Ton/Acre) |
|-------|-----------|--------------|----------------------------|--------------------------|----------------------------------|
| 90    | 2016      | Soybean      | 9/16/2015                  | 10/15/2016               | 1.5                              |
|       | 2017      | Corn grain   | 10/16/2016                 | 9/15/2017                | 1.9                              |
|       | 2018      | Soybean      | 9/16/2017                  | 10/15/2018               | 1.6                              |
|       | 2019      | Corn grain   | 10/16/2018                 | 9/15/2019                | 1.9                              |
|       | 2020      | Soybean      | 9/16/2019                  | 10/15/2020               | 1.6                              |
| 104   | 2016      | Soybean      | 9/16/2015                  | 10/15/2016               | 0.4                              |
|       | 2017      | Corn grain   | 10/16/2016                 | 9/15/2017                | 0.7                              |
|       | 2018      | Soybean      | 9/16/2017                  | 10/15/2018               | 0.5                              |
|       | 2019      | Corn grain   | 10/16/2018                 | 9/15/2019                | 0.8                              |
|       | 2020      | Soybean      | 9/16/2019                  | 10/15/2020               | 0.5                              |

### 5.3. Nitrogen and Phosphorus Risk Analyses

#### Tennessee Phosphorus Index

| Field | Crop Year | Site and Transport Factor | Mgmt. and Source Factor | P Index w/o P Apps | P Index w/ P Apps | P Loss Risk |
|-------|-----------|---------------------------|-------------------------|--------------------|-------------------|-------------|
| 90    | 2016      | 10                        | 14                      | 40                 | 140               | Medium      |
| 90    | 2017      | 10                        | 4                       | 40                 | 40                | Low         |
| 90    | 2018      | 10                        | 14                      | 40                 | 140               | Medium      |
| 90    | 2019      | 10                        | 4                       | 40                 | 40                | Low         |
| 90    | 2020      | 10                        | 14                      | 40                 | 140               | Medium      |
| 104   | 2016      | 12                        | 4                       | 48                 | 48                | Low         |
| 104   | 2017      | 12                        | 22                      | 48                 | 264               | High        |
| 104   | 2018      | 12                        | 4                       | 48                 | 48                | Low         |
| 104   | 2019      | 12                        | 22                      | 48                 | 264               | High        |
| 104   | 2020      | 12                        | 4                       | 48                 | 48                | Low         |

### 5.4. Additional Field Data Required by Risk Assessment Procedure(s)

#### Tennessee Phosphorus Index

| Field | Distance to Water (Feet) | Slope Length (Feet) | Buffer Width (Feet) | Tillage/Cover Type                  |
|-------|--------------------------|---------------------|---------------------|-------------------------------------|
| 90    | 100                      | 250                 | 100                 | No-till w/ light to medium residues |
| 104   | 100                      | 100                 | 100                 | No-till w/ light to medium residues |

## Section 6. Nutrient Management

### 6.1. Field Information

| Field ID | Sub-field ID | Total Acres | Spread-able Acres | County  | Predominant Soil Type | Slope (%) | Watershed Code | FSA Farm | FSA Tract | FSA Field |
|----------|--------------|-------------|-------------------|---------|-----------------------|-----------|----------------|----------|-----------|-----------|
| 90       |              | 181.0       | 161.1             | Henry   | LrB2 (Loring SIL)     | 3.5       | 080102020107   |          |           |           |
| 104      |              | 253.0       | 239.9             | Weakley | Fb (Falaya SIL)       | 1.0       | 080102020107   |          |           |           |

### 6.2. Manure Application Setback Distances

#### Setback Requirements: Class I CAFO

| Feature                          | Setback Criteria                                               | Setback Distance (Feet) |
|----------------------------------|----------------------------------------------------------------|-------------------------|
| Streams                          | Applied upgradient, permanent vegetated setback $\geq 35$ feet | 35                      |
| Streams                          | New operation, near high quality stream                        | 60                      |
| Surface waters                   | Applied upgradient, permanent vegetated setback $\geq 35$ feet | 35                      |
| Open tile line inlet structures  | Applied upgradient, permanent vegetated setback $\geq 35$ feet | 35                      |
| Sinkholes                        | Applied upgradient, permanent vegetated setback $\geq 35$ feet | 35                      |
| Agricultural well heads          | Applied upgradient, permanent vegetated setback $\geq 35$ feet | 35                      |
| Other conduits to surface waters | Applied upgradient, permanent vegetated setback $\geq 35$ feet | 35                      |
| Potable well, public or private  | Application down-gradient of feature                           | 150                     |
| Potable well, public or private  | Application upgradient of feature                              | 300                     |

Source: TN DEQ Rule 1200-4-5-.14(17)(d) (<http://www.state.tn.us/sos/rules/1200/1200-04/1200-04-05.pdf>)

#### Setback Requirements: NRCS Standard

| Feature                        | Setback Criteria                               | Setback Distance (Feet) |
|--------------------------------|------------------------------------------------|-------------------------|
| Well                           | Application upgradient of feature              | 300                     |
| Well                           | Application down-gradient of feature           | 150                     |
| Waterbody                      | Predominant slope $< 5\%$ with good vegetation | 30                      |
| Waterbody                      | Poor vegetation                                | 100                     |
| Public road                    | All applications                               | 50                      |
| Dwelling (other than producer) | All applications                               | 300                     |
| Public use area                | All applications                               | 300                     |
| Property line                  | Application upgradient of feature              | 30                      |

Source: Nutrient Management Standard 590 ([http://efotg.nrcs.usda.gov/references/public/TN/Nutrient\\_Management\\_\(590\)\\_Standard.doc](http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc))

### 6.3. Soil Test Data

| Field | Test Year | OM (%) | P Test Used | P   | K   | Mg | Ca | Units | Soil pH | Buffer pH | CEC (meq/100g) |
|-------|-----------|--------|-------------|-----|-----|----|----|-------|---------|-----------|----------------|
| 90    | 2014      |        | Mehlich-1   | 116 | 305 |    |    | lbs/a |         |           |                |
| 104   | 2015      |        | Mehlich-1   | 221 | 794 |    |    | lbs/a |         |           |                |

Highest sample for each element was used from the grid sampling.

### 6.4. Manure Nutrient Analyses

| Manure Source | Dry Matter (%) | Total N | NH <sub>4</sub> -N | Total P <sub>2</sub> O <sub>5</sub> | Total K <sub>2</sub> O | Avail. P <sub>2</sub> O <sub>5</sub> | Avail. K <sub>2</sub> O | Units      | Analysis Source and Date |
|---------------|----------------|---------|--------------------|-------------------------------------|------------------------|--------------------------------------|-------------------------|------------|--------------------------|
| Barn 1        |                | 37.8    |                    | 20.9                                | 22.3                   | 20.9                                 | 22.3                    | Lb/1000Gal | Tosh Cottage Grove       |
| Barn 2        |                | 36.5    |                    | 21.2                                | 21.5                   | 21.2                                 | 21.5                    | Lb/1000Gal | Tosh Cottage Grove       |

(1) Entered analysis may be the average of several individual analyses.

(2) Tennessee assumes that 100% of manure phosphorus and 100% of manure potassium is crop available. First-year per-acre nitrogen availability for individual manure applications is given in the Planned Nutrient Applications table. For more information about nitrogen availability in Tennessee, see "Manure Application Management," Tables 3 and 4, Tennessee Extension, PB1510, 2/94 (<http://wastemgmt.ag.utk.edu/Pubs/PB1510.pdf>).

## 6.5. Planned Crops and Fertilizer Recommendations

| Field | Crop Year | Planned Crop | Yield Goal (per Acre) | N Rec (Lbs/A)   | P <sub>2</sub> O <sub>5</sub> Rec (Lbs/A) | K <sub>2</sub> O Rec (Lbs/A) | N Removed (Lbs/A) | P <sub>2</sub> O <sub>5</sub> Removed (Lbs/A) | K <sub>2</sub> O Removed (Lbs/A) | Custom Fert. Rec. Source |
|-------|-----------|--------------|-----------------------|-----------------|-------------------------------------------|------------------------------|-------------------|-----------------------------------------------|----------------------------------|--------------------------|
| 90    | 2016      | Small grain* | 78.0 Bu               | 90 <sup>a</sup> | 0                                         | 0                            | 101               | 39                                            | 27                               | After Corn not legume    |
| 90    | 2016      | Soybean      | 42.0 Bu               | 0               | 0                                         | 0                            | 168               | 34                                            | 59                               |                          |
| 90    | 2017      | Corn grain   | 160.0 Bu              | 160             | 0                                         | 0                            | 120               | 70                                            | 46                               |                          |
| 90    | 2018      | Small grain* | 78.0 Bu               | 90              | 0                                         | 0                            | 101               | 39                                            | 27                               |                          |
| 90    | 2018      | Soybean      | 42.0 Bu               | 0               | 0                                         | 0                            | 168               | 34                                            | 59                               |                          |
| 90    | 2019      | Corn grain   | 160.0 Bu              | 160             | 0                                         | 0                            | 120               | 70                                            | 46                               |                          |
| 90    | 2020      | Small grain* | 78.0 Bu               | 90              | 0                                         | 0                            | 101               | 39                                            | 27                               |                          |
| 90    | 2020      | Soybean      | 42.0 Bu               | 0               | 0                                         | 0                            | 168               | 34                                            | 59                               |                          |
| 104   | 2016      | Small grain* | 78.0 Bu               | 90 <sup>a</sup> | 0                                         | 0                            | 101               | 39                                            | 27                               | After Corn not legume    |
| 104   | 2016      | Soybean      | 42.0 Bu               | 0               | 0                                         | 0                            | 168               | 34                                            | 59                               |                          |
| 104   | 2017      | Corn grain   | 160.0 Bu              | 160             | 0                                         | 0                            | 120               | 70                                            | 46                               |                          |
| 104   | 2018      | Small grain* | 78.0 Bu               | 90              | 0                                         | 0                            | 101               | 39                                            | 27                               |                          |
| 104   | 2018      | Soybean      | 42.0 Bu               | 0               | 0                                         | 0                            | 168               | 34                                            | 59                               |                          |
| 104   | 2019      | Corn grain   | 160.0 Bu              | 160             | 0                                         | 0                            | 120               | 70                                            | 46                               |                          |
| 104   | 2020      | Small grain* | 78.0 Bu               | 90              | 0                                         | 0                            | 101               | 39                                            | 27                               |                          |
| 104   | 2020      | Soybean      | 42.0 Bu               | 0               | 0                                         | 0                            | 168               | 34                                            | 59                               |                          |

\* Unharvested cover crop or first crop in double-crop system.

<sup>a</sup> Custom fertilizer recommendation.

The default nitrogen rec was 75. System was thinking it was after beans so it cut nitrogen back. 90 was used as a custom N Rec.

## 6.6. Manure Application Planning Calendar – October 2015 through September 2016

| Field        | Total Acres  | Spread. Acres | Predominant Soil Type  | Primary 2016 Crop (Prev. Primary Crop) | Oct '15 | Nov '15 | Dec '15 | Jan '16 | Feb '16 | Mar '16 | Apr '16 | May '16 | Jun '16 | Jul '16 | Aug '16 | Sep '16 |
|--------------|--------------|---------------|------------------------|----------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 90           | 181.0        | 161.1         | Loring SIL (LrB2 2-5%) | Soybean (Corn grain)                   |         | X       |         |         |         |         |         |         |         |         |         |         |
| 104          | 253.0        | 239.9         | Falaya SIL (Fb 0-2%)   | Soybean (Corn grain)                   |         |         |         |         |         |         |         |         |         |         |         |         |
| <i>Total</i> | <i>434.0</i> | <i>401.0</i>  |                        |                                        |         | X       |         |         |         |         |         |         |         |         |         |         |

|               |                                                              |
|---------------|--------------------------------------------------------------|
| Crop in field | No. indicates total loads<br>"X" indicates other manure apps |
|---------------|--------------------------------------------------------------|

## Manure Application Planning Calendar – October 2016 through September 2017

| Field        | Total Acres  | Spread. Acres | Predominant Soil Type  | Primary 2017 Crop (Prev. Primary Crop) | Oct '16 | Nov '16 | Dec '16 | Jan '17 | Feb '17 | Mar '17 | Apr '17 | May '17 | Jun '17 | Jul '17 | Aug '17 | Sep '17 |
|--------------|--------------|---------------|------------------------|----------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 90           | 181.0        | 161.1         | Loring SIL (LrB2 2-5%) | Corn grain (Soybean)                   |         |         |         |         |         |         |         |         |         |         |         |         |
| 104          | 253.0        | 239.9         | Falaya SIL (Fb 0-2%)   | Corn grain (Soybean)                   |         |         |         |         |         | X       |         |         |         |         |         |         |
| <i>Total</i> | <i>434.0</i> | <i>401.0</i>  |                        |                                        |         |         |         |         |         | X       |         |         |         |         |         |         |

|               |                                                              |
|---------------|--------------------------------------------------------------|
| Crop in field | No. indicates total loads<br>"X" indicates other manure apps |
|---------------|--------------------------------------------------------------|

## Manure Application Planning Calendar – October 2017 through September 2018

| Field        | Total Acres  | Spread. Acres | Predominant Soil Type  | Primary 2018 Crop (Prev. Primary Crop) | Oct '17 | Nov '17 | Dec '17 | Jan '18 | Feb '18 | Mar '18 | Apr '18 | May '18 | Jun '18 | Jul '18 | Aug '18 | Sep '18 |
|--------------|--------------|---------------|------------------------|----------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 90           | 181.0        | 161.1         | Loring SIL (LrB2 2-5%) | Soybean (Corn grain)                   | X       |         |         |         |         |         |         |         |         |         |         |         |
| 104          | 253.0        | 239.9         | Falaya SIL (Fb 0-2%)   | Soybean (Corn grain)                   |         |         |         |         |         |         |         |         |         |         |         |         |
| <i>Total</i> | <i>434.0</i> | <i>401.0</i>  |                        |                                        | X       |         |         |         |         |         |         |         |         |         |         |         |

|               |                                                              |
|---------------|--------------------------------------------------------------|
| Crop in field | No. indicates total loads<br>"X" indicates other manure apps |
|---------------|--------------------------------------------------------------|

### Manure Application Planning Calendar – October 2018 through September 2019

| Field        | Total Acres  | Spread. Acres | Predominant Soil Type  | Primary 2019 Crop (Prev. Primary Crop) | Oct '18 | Nov '18 | Dec '18 | Jan '19 | Feb '19 | Mar '19 | Apr '19 | May '19 | Jun '19 | Jul '19 | Aug '19 | Sep '19 |
|--------------|--------------|---------------|------------------------|----------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 90           | 181.0        | 161.1         | Loring SIL (LrB2 2-5%) | Corn grain (Soybean)                   |         |         |         |         |         |         |         |         |         |         |         |         |
| 104          | 253.0        | 239.9         | Falaya SIL (Fb 0-2%)   | Corn grain (Soybean)                   |         | X       |         |         |         |         |         |         |         |         |         |         |
| <i>Total</i> | <i>434.0</i> | <i>401.0</i>  |                        |                                        |         | X       |         |         |         |         |         |         |         |         |         |         |

|               |                                                              |
|---------------|--------------------------------------------------------------|
| Crop in field | No. indicates total loads<br>"X" indicates other manure apps |
|---------------|--------------------------------------------------------------|

### Manure Application Planning Calendar – October 2019 through September 2020

| Field        | Total Acres  | Spread. Acres | Predominant Soil Type  | Primary 2020 Crop (Prev. Primary Crop) | Oct '19 | Nov '19 | Dec '19 | Jan '20 | Feb '20 | Mar '20 | Apr '20 | May '20 | Jun '20 | Jul '20 | Aug '20 | Sep '20 |
|--------------|--------------|---------------|------------------------|----------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 90           | 181.0        | 161.1         | Loring SIL (LrB2 2-5%) | Soybean (Corn grain)                   | X       |         |         |         |         |         |         |         |         |         |         |         |
| 104          | 253.0        | 239.9         | Falaya SIL (Fb 0-2%)   | Soybean (Corn grain)                   |         |         |         |         |         |         |         |         |         |         |         |         |
| <i>Total</i> | <i>434.0</i> | <i>401.0</i>  |                        |                                        | X       |         |         |         |         |         |         |         |         |         |         |         |

|               |                                                              |
|---------------|--------------------------------------------------------------|
| Crop in field | No. indicates total loads<br>"X" indicates other manure apps |
|---------------|--------------------------------------------------------------|

## 6.7. Planned Nutrient Applications (Manure-spreadable Area)

| Field | App. Month | Target Crop | Nutrient Source | Application Method | Rate Basis | Rate/Acre | Loads, Speed or Time | Total Amount Applied | Acres Cov. | Avail N (Lbs/A) | Avail P <sub>2</sub> O <sub>5</sub> (Lbs/A) | Avail K <sub>2</sub> O (Lbs/A) |
|-------|------------|-------------|-----------------|--------------------|------------|-----------|----------------------|----------------------|------------|-----------------|---------------------------------------------|--------------------------------|
| 90    | Nov 2015   | Small grain | Barn 2          | Aerway             | 2-yr P     | 3,600 Gal | 5.9 mph              | 305,000 Gal          | 84.7       | 92              | 76                                          | 77                             |
| 90    | Nov 2015   | Small grain | Barn 1          | Aerway             | 2-yr P     | 3,400 Gal | 6.2 mph              | 259,760 Gal          | 76.4       | 90              | 71                                          | 76                             |
| 90    | Mar 2017   | Corn grain  | 82-0-0          | Inject             | 1-yr N     | 38 Gal    |                      | 6,122 Gal            | 161.1      | 156             | 0                                           | 0                              |
| 90    | Oct 2017   | Small grain | Barn 2          | Aerway             | 2-yr P     | 3,500 Gal | 6 mph                | 563,850 Gal          | 161.1      | 89              | 74                                          | 75                             |
| 90    | Feb 2018   | Small grain | 32-0-0          |                    | Custom     | Gal       |                      | 0 Gal                | 161.1      |                 |                                             |                                |
| 90    | Mar 2019   | Corn grain  | 82-0-0          | Inject             | 1-yr N     | 38 Gal    |                      | 6,122 Gal            | 161.1      | 156             | 0                                           | 0                              |
| 90    | Oct 2019   | Small grain | Barn 2          | Aerway             | 2-yr P     | 3,500 Gal | 6 mph                | 172,550 Gal          | 49.3       | 89              | 74                                          | 75                             |
| 90    | Oct 2019   | Small grain | Barn 1          | Aerway             | 2-yr P     | 3,400 Gal | 6.2 mph              | 380,000 Gal          | 111.8      | 90              | 71                                          | 76                             |
| 104   | Feb 2016   | Small grain | 32-0-0          | Surface band       | 1-yr N     | 26 Gal    |                      | 6,237 Gal            | 239.9      | 92              | 0                                           | 0                              |
| 104   | Mar 2017   | Corn grain  | Barn 2          | Aerway             | 2-yr P     | 6,300 Gal | 3.4 mph              | 597,240 Gal          | 94.8       | 161             | 134                                         | 135                            |
| 104   | Mar 2017   | Corn grain  | 82-0-0          |                    | Custom     | Gal       |                      | 0 Gal                | 239.9      |                 |                                             |                                |
| 104   | Mar 2017   | Corn grain  | Barn 1          | Aerway             | 2-yr P     | 6,100 Gal | 3.5 mph              | 885,240 Gal          | 145.1      | 162             | 127                                         | 136                            |
| 104   | Feb 2018   | Small grain | 32-0-0          | Surface band       | 1-yr N     | 23 Gal    |                      | 5,518 Gal            | 239.9      | 81              | 0                                           | 0                              |
| 104   | Nov 2018   | Corn grain  | Barn 2          | Aerway             | 2-yr P     | 6,100 Gal | 3.5 mph              | 694,180 Gal          | 113.8      | 156             | 129                                         | 131                            |
| 104   | Nov 2018   | Corn grain  | Barn 1          | Aerway             | 2-yr P     | 5,900 Gal | 3.6 mph              | 743,990 Gal          | 126.1      | 156             | 123                                         | 132                            |
| 104   | Feb 2020   | Small grain | 32-0-0          | Surface band       | 1-yr N     | 23 Gal    |                      | 5,518 Gal            | 239.9      | 81              | 0                                           | 0                              |

## Planned Nutrient Applications (Non-manure-spreadable Area)

| Field | App. Month | Target Crop | Nutrient Source | Application Method | Rate Basis | Rate/Acre | Total Amount Applied | Acres Cov. | Avail N (Lbs/A) | Avail P <sub>2</sub> O <sub>5</sub> (Lbs/A) | Avail K <sub>2</sub> O (Lbs/A) |
|-------|------------|-------------|-----------------|--------------------|------------|-----------|----------------------|------------|-----------------|---------------------------------------------|--------------------------------|
| 90    | Mar 2017   | Corn grain  | 82-0-0          | Inject             | 1-yr N     | 38 Gal    | 756 Gal              | 19.9       | 156             | 0                                           | 0                              |
| 90    | Feb 2018   | Small grain | 32-0-0          |                    | Custom     | Gal       | 0 Gal                | 19.9       |                 |                                             |                                |
| 90    | Mar 2019   | Corn grain  | 82-0-0          | Inject             | 1-yr N     | 38 Gal    | 756 Gal              | 19.9       | 156             | 0                                           | 0                              |
| 104   | Feb 2016   | Small grain | 32-0-0          | Surface band       | 1-yr N     | 26 Gal    | 341 Gal              | 13.1       | 92              | 0                                           | 0                              |
| 104   | Mar 2017   | Corn grain  | 82-0-0          |                    | Custom     | Gal       | 0 Gal                | 13.1       |                 |                                             |                                |
| 104   | Feb 2018   | Small grain | 32-0-0          | Surface band       | 1-yr N     | 23 Gal    | 301 Gal              | 13.1       | 81              | 0                                           | 0                              |
| 104   | Feb 2020   | Small grain | 32-0-0          | Surface band       | 1-yr N     | 23 Gal    | 301 Gal              | 13.1       | 81              | 0                                           | 0                              |

## 6.8. Field Nutrient Balance (Manure-spreadable Area)

| Year         | Field      | Size  | Crop        | Yield Goal | Fertilizer Recs <sup>1</sup> |                                       |                          | Nutrients Applied <sup>2</sup> |                                       |                          | Balance After Recs <sup>3</sup> |                                       |                          | Balance After Removal <sup>4</sup>    |                          |
|--------------|------------|-------|-------------|------------|------------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------------------|--------------------------|---------------------------------|---------------------------------------|--------------------------|---------------------------------------|--------------------------|
|              |            |       |             |            | N<br>Lb/A                    | P <sub>2</sub> O <sub>5</sub><br>Lb/A | K <sub>2</sub> O<br>Lb/A | N<br>Lb/A                      | P <sub>2</sub> O <sub>5</sub><br>Lb/A | K <sub>2</sub> O<br>Lb/A | N<br>Lb/A                       | P <sub>2</sub> O <sub>5</sub><br>Lb/A | K <sub>2</sub> O<br>Lb/A | P <sub>2</sub> O <sub>5</sub><br>Lb/A | K <sub>2</sub> O<br>Lb/A |
| 2016         | 90         | 161.1 | Small grain | 78         | 90                           | 0                                     | 0                        |                                |                                       |                          |                                 |                                       |                          |                                       |                          |
| 2016         | 90         | 161.1 | Soybean     | 42         | 0                            | 0                                     | 0                        | 91                             | 74                                    | 77                       | 1                               | 74                                    | 77                       | 1                                     | -9                       |
| 2017         | 90         | 161.1 | Corn grain  | 160        | 160                          | 0                                     | 0                        | 156                            | 0                                     | 0                        | 1 <sup>†</sup>                  | 74                                    | 77                       | -69                                   | -46                      |
| 2018         | 90         | 161.1 | Small grain | 78         | 90                           | 0                                     | 0                        |                                |                                       |                          |                                 |                                       |                          |                                       |                          |
| 2018         | 90         | 161.1 | Soybean     | 42         | 0                            | 0                                     | 0                        | 89                             | 74                                    | 75                       | 1 <sup>†</sup>                  | 148                                   | 152                      | 1                                     | -11                      |
| 2019         | 90         | 161.1 | Corn grain  | 160        | 160                          | 0                                     | 0                        | 156                            | 0                                     | 0                        | 1 <sup>†</sup>                  | 148                                   | 152                      | -69                                   | -46                      |
| 2020         | 90         | 161.1 | Small grain | 78         | 90                           | 0                                     | 0                        |                                |                                       |                          |                                 |                                       |                          |                                       |                          |
| 2020         | 90         | 161.1 | Soybean     | 42         | 0                            | 0                                     | 0                        | 90                             | 72                                    | 76                       | 2 <sup>†</sup>                  | 220                                   | 228                      | -1                                    | -10                      |
| <b>Total</b> | <b>90</b>  |       |             |            | <b>590</b>                   | <b>0</b>                              | <b>0</b>                 | <b>582</b>                     | <b>220</b>                            | <b>228</b>               |                                 |                                       |                          |                                       |                          |
| 2016         | 104        | 239.9 | Small grain | 78         | 90                           | 0                                     | 0                        |                                |                                       |                          |                                 |                                       |                          |                                       |                          |
| 2016         | 104        | 239.9 | Soybean     | 42         | 0                            | 0                                     | 0                        | 92                             | 0                                     | 0                        | 2                               | 0                                     | 0                        | -73                                   | -86                      |
| 2017         | 104        | 239.9 | Corn grain  | 160        | 160                          | 0                                     | 0                        | 162                            | 130                                   | 136                      | 2                               | 130                                   | 136                      | 60                                    | 90                       |
| 2018         | 104        | 239.9 | Small grain | 78         | 90                           | 0                                     | 0                        |                                |                                       |                          |                                 |                                       |                          |                                       |                          |
| 2018         | 104        | 239.9 | Soybean     | 42         | 0                            | 0                                     | 0                        | 81                             | 0                                     | 0                        | 1 <sup>†</sup>                  | 130                                   | 136                      | -13                                   | 4                        |
| 2019         | 104        | 239.9 | Corn grain  | 160        | 160                          | 0                                     | 0                        | 156                            | 126                                   | 132                      | 0 <sup>†</sup>                  | 256                                   | 268                      | 56                                    | 90                       |
| 2020         | 104        | 239.9 | Small grain | 78         | 90                           | 0                                     | 0                        |                                |                                       |                          |                                 |                                       |                          |                                       |                          |
| 2020         | 104        | 239.9 | Soybean     | 42         | 0                            | 0                                     | 0                        | 81                             | 0                                     | 0                        | 0 <sup>†</sup>                  | 256                                   | 268                      | -17                                   | 4                        |
| <b>Total</b> | <b>104</b> |       |             |            | <b>590</b>                   | <b>0</b>                              | <b>0</b>                 | <b>572</b>                     | <b>256</b>                            | <b>268</b>               |                                 |                                       |                          |                                       |                          |

## Field Nutrient Balance (Non-manure-spreadable Area)

| Year | Field | Size | Crop        | Yield Goal | Fertilizer Recs <sup>1</sup> |                                       |                          | Nutrients Applied <sup>2</sup> |                                       |                          | Balance After Recs <sup>3</sup> |                                       |                          | Balance After Removal <sup>4</sup>    |                          |
|------|-------|------|-------------|------------|------------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------------------|--------------------------|---------------------------------|---------------------------------------|--------------------------|---------------------------------------|--------------------------|
|      |       |      |             |            | N<br>Lb/A                    | P <sub>2</sub> O <sub>5</sub><br>Lb/A | K <sub>2</sub> O<br>Lb/A | N<br>Lb/A                      | P <sub>2</sub> O <sub>5</sub><br>Lb/A | K <sub>2</sub> O<br>Lb/A | N<br>Lb/A                       | P <sub>2</sub> O <sub>5</sub><br>Lb/A | K <sub>2</sub> O<br>Lb/A | P <sub>2</sub> O <sub>5</sub><br>Lb/A | K <sub>2</sub> O<br>Lb/A |
| 2016 | 90    | 19.9 | Small grain | 78         | 90                           | 0                                     | 0                        |                                |                                       |                          |                                 |                                       |                          |                                       |                          |
| 2016 | 90    | 19.9 | Soybean     | 42         | 0                            | 0                                     | 0                        | 0                              | 0                                     | 0                        | -90                             | 0                                     | 0                        | -73                                   | -86                      |
| 2017 | 90    | 19.9 | Corn grain  | 160        | 160                          | 0                                     | 0                        | 156                            | 0                                     | 0                        | -4                              | 0                                     | 0                        | -70                                   | -46                      |
| 2018 | 90    | 19.9 | Small grain | 78         | 90                           | 0                                     | 0                        |                                |                                       |                          |                                 |                                       |                          |                                       |                          |
| 2018 | 90    | 19.9 | Soybean     | 42         | 0                            | 0                                     | 0                        | 0                              | 0                                     | 0                        | -90                             | 0                                     | 0                        | -73                                   | -86                      |
| 2019 | 90    | 19.9 | Corn grain  | 160        | 160                          | 0                                     | 0                        | 156                            | 0                                     | 0                        | -4                              | 0                                     | 0                        | -70                                   | -46                      |

| Year         | Field      | Size | Crop        | Yield Goal | Fertilizer Recs <sup>1</sup> |                                    |                       | Nutrients Applied <sup>2</sup> |                                    |                       | Balance After Recs <sup>3</sup> |                                    |                       | Balance After Removal <sup>4</sup> |                       |
|--------------|------------|------|-------------|------------|------------------------------|------------------------------------|-----------------------|--------------------------------|------------------------------------|-----------------------|---------------------------------|------------------------------------|-----------------------|------------------------------------|-----------------------|
|              |            |      |             |            | N Lb/A                       | P <sub>2</sub> O <sub>5</sub> Lb/A | K <sub>2</sub> O Lb/A | N Lb/A                         | P <sub>2</sub> O <sub>5</sub> Lb/A | K <sub>2</sub> O Lb/A | N Lb/A                          | P <sub>2</sub> O <sub>5</sub> Lb/A | K <sub>2</sub> O Lb/A | P <sub>2</sub> O <sub>5</sub> Lb/A | K <sub>2</sub> O Lb/A |
| 2020         | 90         | 19.9 | Small grain | 78         | 90                           | 0                                  | 0                     |                                |                                    |                       |                                 |                                    |                       |                                    |                       |
| 2020         | 90         | 19.9 | Soybean     | 42         | 0                            | 0                                  | 0                     | 0                              | 0                                  | 0                     | -90                             | 0                                  | 0                     | -73                                | -86                   |
| <b>Total</b> | <b>90</b>  |      |             |            | <b>590</b>                   | <b>0</b>                           | <b>0</b>              | <b>312</b>                     | <b>0</b>                           | <b>0</b>              |                                 |                                    |                       |                                    |                       |
| 2016         | 104        | 13.1 | Small grain | 78         | 90                           | 0                                  | 0                     |                                |                                    |                       |                                 |                                    |                       |                                    |                       |
| 2016         | 104        | 13.1 | Soybean     | 42         | 0                            | 0                                  | 0                     | 92                             | 0                                  | 0                     | 2                               | 0                                  | 0                     | -73                                | -86                   |
| 2017         | 104        | 13.1 | Corn grain  | 160        | 160                          | 0                                  | 0                     | 0                              | 0                                  | 0                     | -160                            | 0                                  | 0                     | -70                                | -46                   |
| 2018         | 104        | 13.1 | Small grain | 78         | 90                           | 0                                  | 0                     |                                |                                    |                       |                                 |                                    |                       |                                    |                       |
| 2018         | 104        | 13.1 | Soybean     | 42         | 0                            | 0                                  | 0                     | 81                             | 0                                  | 0                     | -9                              | 0                                  | 0                     | -73                                | -86                   |
| 2019         | 104        | 13.1 | Corn grain  | 160        | 160                          | 0                                  | 0                     | 0                              | 0                                  | 0                     | -160                            | 0                                  | 0                     | -70                                | -46                   |
| 2020         | 104        | 13.1 | Small grain | 78         | 90                           | 0                                  | 0                     |                                |                                    |                       |                                 |                                    |                       |                                    |                       |
| 2020         | 104        | 13.1 | Soybean     | 42         | 0                            | 0                                  | 0                     | 81                             | 0                                  | 0                     | -9                              | 0                                  | 0                     | -73                                | -86                   |
| <b>Total</b> | <b>104</b> |      |             |            | <b>590</b>                   | <b>0</b>                           | <b>0</b>              | <b>254</b>                     | <b>0</b>                           | <b>0</b>              |                                 |                                    |                       |                                    |                       |

<sup>1</sup> Fertilizer Recs are the crop fertilizer recommendations. The N rec accounts for any N credit from previous legume crop.

<sup>2</sup> Nutrients Applied are the nutrients expected to be available to the crop from that year's manure applications plus nutrients from that year's commercial fertilizer applications and nitrates from irrigation water. With a double-crop year, the total nutrients applied for both crops and the year's balances are listed on the second crop's line.

<sup>3</sup> For N, Nutrients Applied minus Fertilizer Recs for indicated crop year. Also includes amount of residual N expected to become available that year from prior years' manure applications. For P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O, Nutrients Applied minus Fertilizer Recs *through* the indicated crop year, with positive balances carried forward to subsequent years. Negative values indicate a potential need to apply additional nutrients.

<sup>4</sup> Nutrients Applied minus amount removed by harvested portion of crop through the indicated year. Positive balances are carried forward to subsequent years.

<sup>□</sup> Indicates a custom fertilizer recommendation in the Fertilizer Recs column.

<sup>a</sup> Indicates in the Balance After Recs N column that the legume crop is assumed to utilize some or all of the supplied N.

<sup>†</sup> Indicates in the Balance After Recs N column that the value includes residual N expected to become available that year from prior years' manure applications.

## 6.9. Manure Inventory Annual Summary

| Manure Source      | Plan Period              | On Hand<br>at Start of<br>Period | Total<br>Generated | Total<br>Imported | Total<br>Trans-<br>ferred In | Total<br>Applied | Total<br>Exported | Total<br>Trans-<br>ferred Out | On Hand<br>at End of<br>Period | Units      |
|--------------------|--------------------------|----------------------------------|--------------------|-------------------|------------------------------|------------------|-------------------|-------------------------------|--------------------------------|------------|
| Barn 1             | Oct '15 - Sep '16        | 200,000                          | 630,000            | 0                 | 0                            | 259,760          | 0                 | 0                             | 570,240                        | Gal        |
| Barn 2             | Oct '15 - Sep '16        | 200,000                          | 630,000            | 0                 | 0                            | 305,000          | 0                 | 0                             | 525,000                        | Gal        |
| <b>All Sources</b> | <b>Oct '15 - Sep '16</b> | <b>400,000</b>                   | <b>1,260,000</b>   | <b>0</b>          | <b>0</b>                     | <b>564,760</b>   | <b>0</b>          | <b>0</b>                      | <b>1,095,240</b>               | <b>Gal</b> |
| Barn 1             | Oct '16 - Sep '17        | 570,240                          | 630,000            | 0                 | 0                            | 885,240          | 0                 | 0                             | 315,000                        | Gal        |
| Barn 2             | Oct '16 - Sep '17        | 525,000                          | 630,000            | 0                 | 0                            | 597,240          | 0                 | 0                             | 557,760                        | Gal        |
| <b>All Sources</b> | <b>Oct '16 - Sep '17</b> | <b>1,095,240</b>                 | <b>1,260,000</b>   | <b>0</b>          | <b>0</b>                     | <b>1,482,480</b> | <b>0</b>          | <b>0</b>                      | <b>872,760</b>                 | <b>Gal</b> |
| Barn 1             | Oct '17 - Sep '18        | 315,000                          | 630,000            | 0                 | 0                            | 0                | 0                 | 0                             | 945,000                        | Gal        |
| Barn 2             | Oct '17 - Sep '18        | 557,760                          | 630,000            | 0                 | 0                            | 563,850          | 0                 | 0                             | 623,910                        | Gal        |
| <b>All Sources</b> | <b>Oct '17 - Sep '18</b> | <b>872,760</b>                   | <b>1,260,000</b>   | <b>0</b>          | <b>0</b>                     | <b>563,850</b>   | <b>0</b>          | <b>0</b>                      | <b>1,568,910</b>               | <b>Gal</b> |
| Barn 1             | Oct '18 - Sep '19        | 945,000                          | 630,000            | 0                 | 0                            | 743,990          | 0                 | 0                             | 831,010                        | Gal        |
| Barn 2             | Oct '18 - Sep '19        | 623,910                          | 630,000            | 0                 | 0                            | 694,180          | 0                 | 0                             | 559,730                        | Gal        |
| <b>All Sources</b> | <b>Oct '18 - Sep '19</b> | <b>1,568,910</b>                 | <b>1,260,000</b>   | <b>0</b>          | <b>0</b>                     | <b>1,438,170</b> | <b>0</b>          | <b>0</b>                      | <b>1,390,740</b>               | <b>Gal</b> |
| Barn 1             | Oct '19 - Sep '20        | 831,010                          | 630,000            | 0                 | 0                            | 380,000          | 0                 | 0                             | 1,081,010                      | Gal        |
| Barn 2             | Oct '19 - Sep '20        | 559,730                          | 630,000            | 0                 | 0                            | 172,550          | 0                 | 0                             | 1,017,180                      | Gal        |
| <b>All Sources</b> | <b>Oct '19 - Sep '20</b> | <b>1,390,740</b>                 | <b>1,260,000</b>   | <b>0</b>          | <b>0</b>                     | <b>552,550</b>   | <b>0</b>          | <b>0</b>                      | <b>2,098,190</b>               | <b>Gal</b> |

## 6.10. Fertilizer Material Annual Summary

| Product Analysis | Plan Period       | Product<br>Needed<br>Oct - Dec | Product<br>Needed<br>Jan - Sep | Total<br>Product<br>Needed | Units |
|------------------|-------------------|--------------------------------|--------------------------------|----------------------------|-------|
| 32-0-0           | Oct '15 - Sep '16 | 0                              | 6,578                          | 6,578                      | Gal   |
| 82-0-0           | Oct '16 - Sep '17 | 0                              | 6,878                          | 6,878                      | Gal   |
| 32-0-0           | Oct '17 - Sep '18 | 0                              | 5,819                          | 5,819                      | Gal   |
| 82-0-0           | Oct '18 - Sep '19 | 0                              | 6,878                          | 6,878                      | Gal   |
| 32-0-0           | Oct '19 - Sep '20 | 0                              | 5,819                          | 5,819                      | Gal   |

## 6.11. Plan Nutrient Balance (Manure-spreadable Area)

|                                                                                             | N<br>(Lbs) | P <sub>2</sub> O <sub>5</sub><br>(Lbs) | K <sub>2</sub> O<br>(Lbs) |
|---------------------------------------------------------------------------------------------|------------|----------------------------------------|---------------------------|
| Total Manure Nutrients on Hand at Start of Plan <sup>1</sup>                                | 14,860     | 8,420                                  | 8,760                     |
| Total Manure Nutrients Collected <sup>2</sup>                                               | 234,045    | 132,615                                | 137,970                   |
| Total Manure Nutrients Imported <sup>3</sup>                                                | 0          | 0                                      | 0                         |
| Total Manure Nutrients Exported <sup>4</sup>                                                | 0          | 0                                      | 0                         |
| Total Manure Nutrients Gained/Lost in Transfer <sup>5</sup>                                 | 0          | 0                                      | 0                         |
| Total Manure Nutrients on Hand at End of Plan <sup>6</sup>                                  | 77,989     | 44,157                                 | 45,976                    |
| Total Manure Nutrients Applied <sup>7</sup>                                                 | 171,125    | 96,690                                 | 100,690                   |
| Available Manure Nutrients Applied (Utilized by plan's crops) <sup>8</sup>                  | 127,328    | 96,641                                 | 100,690                   |
| Available Manure Nutrients Applied (Not utilized by plan's crops) <sup>9</sup>              | 2,087      | 49                                     | 0                         |
| Commercial Fertilizer Nutrients Applied (Utilized by plan's crops) <sup>10</sup>            | 111,198    | 0                                      | 0                         |
| Commercial Fertilizer Nutrients Applied (Not utilized by plan's crops) <sup>11</sup>        | 0          | 0                                      | 0                         |
| Available Nutrients Applied (Manure and fertilizer; utilized by plan's crops) <sup>12</sup> | 238,526    | 96,641                                 | 100,690                   |
| Nutrient Utilization Potential <sup>13</sup>                                                | 438,694    | 143,959                                | 140,350                   |
| Nutrient Balance of Spreadable Acres <sup>14*</sup>                                         | -200,168   | -47,318                                | -39,660                   |
| Average Nutrient Balance per Spreadable Acre per Year <sup>15*</sup>                        | -100       | -24                                    | -20                       |

1. Values indicate total manure nutrients present in storage(s) at the beginning of the plan.

2. Values indicate total manure nutrients collected on the farm.

3. Values indicate total manure nutrients imported onto the farm.

4. Values indicate total manure nutrients exported from the farm to an external operation.

5. Values indicate changes in total manure nutrients due to internal transfers between storage units with differing analyses.

6. Values indicate total manure nutrients present in storage(s) at the end of plan.

7. Values indicate total nutrients present in land-applied manure. Losses due to rate, timing and method of application are not included in these values.

8. Values indicate available manure nutrients applied on the farm based on rate, time and method of application. These values are based on the total manure nutrients applied (row 7) after accounting for state-specific nutrient losses due to rate, time and method of application. Nutrients which will not be utilized by crops in the plan (row 9) are excluded from these values.

9. Values indicate manure nutrients applied that will be utilized by crops outside the plan.

10. Values indicate nutrients applied as commercial fertilizers and nitrates contained in irrigation water. Nutrients that will not be utilized by crops in the plan (row 11) are excluded from these values.

11. Values indicate nutrients applied as commercial fertilizer which will be utilized by crops outside the plan.

12. Values are the sum of available manure nutrients applied (row 8) and commercial fertilizer nutrients applied (row 10).

13. Values indicate nutrient utilization potential of crops grown. For N the value generally is based on crop N recommendation for non-legume crops and crop N uptake or other state-imposed limit for N application rates for legumes. P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O values generally are based on fertilizer recommendations or crop removal (whichever is greatest).

14. Values indicate available nutrients applied (row 12) minus crop nutrient utilization potential (row 13). Negative values indicate additional nutrient utilization potential and positive values indicate over-application.

15. Values indicate average per acre nutrient balance. Values are calculated by dividing nutrient balance of spreadable acres (row 14) by the number of spreadable acres in plan and by the length of the plan in years. Negative values indicate additional average per acre nutrient utilization potential and positive values indicate average per acre over-application.

\* Non-trivial, positive values for N indicate that the plan was not properly developed. Negative values for N indicate additional nutrient utilization potential which may or may not be intentional. For example, plans that include legume crops often will not utilize the full N utilization potential for legume crops if manure can be applied to non-legume crops that require N for optimum yield. Positive values for P<sub>2</sub>O<sub>5</sub> and/or K<sub>2</sub>O do not necessarily indicate that the plan was not developed properly. For example, producers may be allowed to apply N-based application rates of manure to fields with low soil test P values or fields with a low potential P-loss risk based on the risk assessment tool used by the state. Negative values for P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O indicate that planned applications to some fields are less than crop removal rates.

## Plan Nutrient Balance (Non-manure-spreadable Area)

|                                                                         | N<br>(Lbs) | P <sub>2</sub> O <sub>5</sub><br>(Lbs) | K <sub>2</sub> O<br>(Lbs) |
|-------------------------------------------------------------------------|------------|----------------------------------------|---------------------------|
| Commercial Fertilizer Nutrients Applied <sup>1</sup>                    | 9,536      | 0                                      | 0                         |
| Nutrient Utilization Potential <sup>2</sup>                             | 19,470     | 0                                      | 0                         |
| Nutrient Balance of Non-spreadable Acres <sup>3*</sup>                  | -9,934     | 0                                      | 0                         |
| Average Nutrient Balance per Non-spreadable Acre per Year <sup>4*</sup> | -60        | 0                                      | 0                         |

1. Values indicate nutrients applied as commercial fertilizers and nitrates contained in irrigation water.

2. Values indicate nutrient utilization potential of crops grown based on crop fertilizer recommendations.

3. Values indicate commercial fertilizer nutrients applied (row 1) minus crop nutrient utilization potential (row 2). Negative values indicate additional nutrient utilization potential and positive values indicate over-application.

4. Values indicate average per acre nutrient balance. Values are calculated by dividing nutrient balance of non-spreadable acres (row 3) by number of non-spreadable acres in plan. Negative values indicate additional average per acre nutrient utilization potential and positive values indicate average per acre over-application.

\* Non-trivial, positive values for N indicate that the plan was not properly developed. Negative values for N indicate additional nutrient utilization potential which may or may not be intentional. Positive values for P<sub>2</sub>O<sub>5</sub> and/or K<sub>2</sub>O do not necessarily indicate that the plan was not developed properly. For example, multiple year applications may have been planned during the final plan year(s) and these nutrients will not be utilized by crops in the current plan. Negative values for P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O indicate that applications to some fields may have been delayed to allow the producer to apply the nutrients in accordance with their fertilization schedule.

## Section 7. Feed Management

This facility uses wet-dry feeders and all feed that Tosh Farms supplies has Phytase added.

## **Record Keeping**

This section includes a list of key records that Tosh Farms will keep in order to document and verify implementation of the procedures in this CNMP. Records shall be kept for a minimum of 5 years, or for the length of the contract, rotation, or permit, whichever is longer, for each field where manure is applied.

These general records include but are not limited to:

1. Soil Test Results
2. Weather and soil conditions 24 hours prior to, during and 24 hours application of manure, chemicals and pesticides.
3. Type, quantities, and sources of all nutrients generated and collected
4. Type, quantities, and sources of all nutrients applied to each field
5. Dates of manure applications
6. Inspection Reports
7. Operation and Maintenance records of conservation practices and equipment
8. Restricted pesticides used to meet label requirements
9. Equipment Calibration records
10. Crops planted, tillage method and dates planted
11. Crop harvest dates and yield
12. Adjustments to nutrient management plan based on records and changes in farming operations as appropriate
13. Weekly check of volume in pit
14. Annual visual inspection of retention structure (pits), animal holding areas, if applicable and land application areas
15. Records of mortalities and how managed

## Operation and Maintenance

Tosh Farms is responsible for safe operation and maintenance of the nutrient management plan including all equipment. Operation and maintenance includes the following items:

1. periodic plan review to determine if adjustments or modifications to the plan are needed. As minimum, plans will be reviewed/revise with each soil test cycle.
2. weekly there will be a visual inspection of pits
3. calibration of application equipment to ensure uniform distribution of material at planned rates.
4. documentation of the actual rate at which nutrients were applied. When the actual rates used differ from or exceed the recommended and planned rates, records will indicate the reasons for the differences.
5. Maintaining records to document plan implementation. As applicable, records include
  - a. Soil test results and recommendations for nutrient application
  - b. Quantities, analysis and sources of nutrients applied
  - c. Dates and method of nutrient applications
  - d. Crops planted, planting and harvest dates, yields, and residues removed
  - e. Results of water, plant and organic byproduct analysis
  - f. Dates of review and person performing the review and recommendations
  - g. Conservation practices being applied.

Records will be maintained for five years or for a period longer than five years if required by other Federal, state, or local ordinances or program or contract requirements.

The disposal of material generated by the cleaning nutrient application equipment accomplished properly. Excess material should be collected and stored or field applied in an appropriate manner. Excess material should not be applied on areas of high potential risk for runoff and leaching.

The disposal/recycling of nutrient containers should be according to state and local guidelines or regulations.

Pesticides, toxic chemicals, and petroleum products will not be used in areas where leakage could enter the manure storage facility.

## Conservation Crop Rotation (328)

Rotations shall provide for acceptable substitute crops in case of crop failure or shift in planting intentions for weather related or economic reasons. Acceptable substitutes are crops having similar properties that meet the criteria for all the resource concerns identified for the field or treatment unit. In areas where summer fallow is practiced, the decision to plant a crop or fallow shall be made annually based on soil moisture at planting time. Fields shall be fallowed only when soil moisture is not adequate to produce a crop. If moisture supply

is adequate but limited, short-season shallowrooted crops shall be selected and grown. Deep-rooted crops shall follow shallow-rooted crops in subsequent years, if needed, to utilize all plant available water in the root zone.

## **Residue and Tillage Management No-Till (329)**

Crops grown in the planned cropping sequence will yield adequate residue cover amounts as stated in the conservation plan for the farming operation.

## **Access Road (560)**

An operation and maintenance plan will be developed and carried out for the life of the practice as follows:

Inspect culverts, roadside ditches, waterbars, and outlets after each major runoff event and restore flow capacity as needed.

Maintain vegetated areas in adequate cover. Reseed and mow as needed.

Fill low areas in travel treads and re-grade, as needed, to maintain road cross-section.

Inspect roads with waterbars periodically to ensure proper cross-section is available and outlets are stable.

## **Heavy Use Area Protection (561)**

The life of this installation can be assured and usually increased by developing and carrying out a good operation and maintenance program. Operation and Maintenance (O & M) is necessary for all conservation practices and is required for all practices installed with NRCS assistance. The land user is responsible for proper O & M throughout the life of the practice and as may be required by federal, state, or local laws or regulations. The heavy use area protection is designed to provide firm footing for animals when feeding or watering, vehicles, and equipment and is intended to prevent mudding and soil erosion, and improve water quality.

Operation is defined as operating the practice in compliance with all laws, regulations, ordinances, and easements and in a manner that is beneficial to the environment and will permit the practice to serve its intended purpose. Maintenance includes working to prevent deterioration of the practice, repairing damage, or replacing components that may fail.

## Section 10. References

### 10.1. Publications

#### Crop Fertilizer Recommendations

"Lime and Fertilizer Recommendations for the Various Crops of Tennessee," BEES Info #100, Feb 2009  
<http://soilplantandpest.utk.edu/publications/soilfertilizerpubs.htm>

#### Manure Application Setback Features/Distances

Nutrient Management Standard 590  
[http://efotg.nrcs.usda.gov/references/public/TN/Nutrient\\_Management\\_\(590\)\\_Standard.doc](http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc)

TN DEQ Rule 1200-4-5-.14(17)(d)  
<http://www.state.tn.us/sos/rules/1200/1200-04/1200-04-05.pdf>

#### Manure Nutrient Availability

"Manure Application Management," Tables 3 and 4, Tennessee Extension, PB1510, 2/94  
<http://wastemgmt.ag.utk.edu/Pubs/PB1510.pdf>

#### Phosphorus Assessment

"Tennessee Phosphorus Index," Tennessee NRCS, Nov. 2001

#### Practice Standards

Tennessee NRCS Nutrient Management Standard (590), Jan. 2003  
[http://efotg.nrcs.usda.gov/references/public/TN/Nutrient\\_Management\\_\(590\)\\_Standard.doc](http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc)

## 10.2. Software and Data Sources

|                                       |                                                              |
|---------------------------------------|--------------------------------------------------------------|
| MMP Version                           | MMP 0.3.4.0                                                  |
| MMP Plan File                         | Tate.mmp<br>8/15/2015 2:37:25 PM                             |
| MMP Initialization File for Tennessee | 11/8/2011                                                    |
| MMP Soils File for Tennessee          | 7/8/2014                                                     |
| Phosphorus Assessment Tool            | 2009.02.20                                                   |
| NRCS Conservation Plan(s)             | n/a                                                          |
| RUSLE2 Library                        | Version: 1.32.3.0<br>Build: Dec 17 2007<br>Science: 20061020 |
| RUSLE2 Database                       | Tate.gdb                                                     |

# Sampling Farm Fields

Divide fields to be sampled into production areas (of 10 acres or less) based on uniform soil type, fertilization and management history. Sandy or eroded areas, and problem areas of obviously different plant growth responses should also be sampled separately -- provided the area is sufficiently large enough to be treated differently with lime or fertilizer.

From your local [county Extension office](#), obtain a soil sample box for **each** production area, and submit a [Soil and Media Test Information Sheet](#),\* for each **ten** production areas.

For each production area that you have identified:

1. Collect a composite soil sample by moving through the area in a zig-zag pattern; sampling at a minimum of 20 locations. This sampling procedure should be random with respect to any existing cropping row. In continuous no-till production fields, be sure to vary distance from the row for each sub-sample collected. In continuous no-till fields or where fertilizer has been banded, increasing the number of sub-samples to 30 or 40 will increase precision of the results.
2. Move surface litter aside. Each sub-sample should be obtained by using a soil tube, trowel or spade. For determination of plant nutrients, take soil samples to a depth of 6 inches. For organic matter determination, sample to the depth of 2 inches.
3. Combine each sub-sample in a clean bucket as you move through the production area. Do not use a galvanized bucket if Zn is to be determined. Thoroughly mix the sub-samples into one composite sample. If the soil is exceptionally wet, you may have to let it air dry on a paper plate before it can be properly mixed (wet soil can also dramatically increase shipping costs and weaken shipping containers). DO NOT use heat to dry a soil sample as heat may change your results.
4. From this composite sample remove enough soil (about a cup) to fill a soil sample box. Adequately mark the box to identify the selected production area location represented by that soil sample and keep this record in a safe place for later referral.
5. For the PSNT soil test, sample to a depth of 12 inches when corn is 6 to 12 inches tall. Height should be measured from the ground to bottom of the whorl (4-6 fully mature leaves present).
6. For container media analysis, medium should be sampled before posting by removing several portions from the mix and blending thoroughly. For established plantings, select 8 to 10 pots that are representative of the medium used. Scrape away the top one-fourth inch of each pot including slow-release fertilizer pellets and discard. Mix samples being careful not to crush any remaining fertilizer pellets. Completely fill **two** soil sample boxes for container media analysis.



Send soil sample(s), [Soil and Media Information Sheet\(s\)](#), and appropriate fees to the Soil, Plant and Pest Center (see address and fee information on the Soil and Media Information Sheet). Fees can also be paid by credit card using the secure UT Institute of Agriculture eMarketplace site. [Click here to pay online](#).



## Livestock Waste Management and Conservation

### Procedures for Manure and Litter Sampling

(Class I & II – Large and Medium CAFOs)

Tennessee CAFO Factsheet #14

Kristy M. Hill, Extension Dairy Specialist  
Animal Science Department

Nutrient composition of manure varies with a number of factors, including animal type, bedding, ration, storage and handling, environmental conditions, field application method, age of manure, timing of sampling and sampling technique. This variability makes book values (or averages) an unreliable source for determining application rates of nitrogen, phosphorus and potassium. Each livestock production operation and manure management system is unique, and an individual farm's manure analysis can vary from average values by 50 percent or more. Testing manure may better indicate how animal management and other factors actually affect nutrient contents and will allow for more accurate calculation of application rates.

The results of a manure analysis are only as reliable as the sample taken. A representative sample is needed to accurately reflect the nutrient content. However, obtaining a representative sample can be a challenge as manure nutrient content is not uniform within storage structures. Mixing and sampling strategies can insure that samples more accurately reflect the type of manure that will be applied.

#### When to Sample

The ideal time to sample manure is prior to application to ensure that results of the analysis are received in time to adjust nutrient application rates.

However, do not allow long periods of time to pass before application begins, because there can be storage and handling losses over time. Sampling several days to a week prior to application is best. However, a complication of the timing of the sampling is that semi-solid (or slurry) manure should be well agitated before sampling, and in many situations, such as contracting waste application to a third party, agitators or other necessary equipment are not available until application begins. In cases such as this, "pre-sampling" (dipping samples off the top of the storage structure for N and K concentrations) can be used to estimate application rates (See page 4 for more info on pre-sampling).

Building a "bank" of manure analysis over time can be quite useful in the future as long as animal management practices, feed rations or manure storage and handling methods do not drastically change from present methods. If samples do not vary greatly from year to year or are consistent during spring or fall applications, the "bank" averages will help estimate application rates if an analysis cannot be performed prior to application.

#### Safety Precautions

It is more dangerous and more difficult to sample from liquid storage facilities than dry-manure systems. Proper precautions should be taken to prevent

accidents, such as falling into the storage facility or being overcome by manure gases.

1. Have two people present at all times;
2. Never enter confined manure-storage spaces without appropriate safety gear, such as a self-contained breathing apparatus;
3. When agitating a storage pit below a building, be sure to provide adequate ventilation for both humans and animals; and
4. When agitating outdoor pits, monitor activities closely to prevent erosion of berms or destruction of pit liners.

#### **Sample Preparations**

1. Check with the laboratory performing the analysis, as most of these labs have plastic bottles available for liquid sample collection or sealable plastic bags for dry samples (freezer bags work well). Additionally, they may have specific sample collection procedures, including holding times, refrigeration and shipping requirements.
2. Do not use glass containers, as expansion of the gases in the sample can cause the container to break.
3. Never use galvanized containers for collection or mixing due to the risk of contamination from metals like zinc in the container.
4. When taking liquid samples from facilities spreading both effluent and solids, the manure should be agitated for two to four hours before taking the sample.
5. Liquid samples can be taken during agitation (after two to four hours have passed) because most agitation equipment is effective 75 to 100 feet away from the equipment.

6. Take multiple samples from the storage facility and mix them together thoroughly in a larger bucket to obtain a representative sample. For liquid or semi-solid samples, use a stirring rod to get the solids spinning in suspension and collect the representative sample while the liquid is still spinning.
7. When taking liquid samples, fill the plastic bottle three-fourths full and leave at least 1 inch of air space to allow for gas expansion.
8. When taking dry samples, squeeze all of the excess air from the sealable plastic bag to allow for gas expansion and place the first bag into a second sealable plastic bag to prevent leaks.
9. Label the plastic bags or bottles prior to sampling with your name, date and sample identification number. Use a waterproof pen.
10. After sampling, place the container(s) in the refrigerator or freezer (preferred) until mailed to the lab. Cooling the samples will reduce microbial activity, chemical reactions and reduce odors.
11. Ship samples early in the week (Monday–Wednesday) using an overnight service. Avoid holidays and weekends.

#### **Sampling Semi-Solid and Liquid Manure from Storage Facilities**

Manure with 10 to 20 percent solids is classified as semi-solid manure and can usually be handled as a liquid. Semi-solid manure usually requires the use of chopper pumps to provide thorough agitation before pumping. Liquid manure is manure with less than 10 percent solids and is handled with pumps, pipes, tank wagons or irrigation equipment (if less than 5 percent solids).

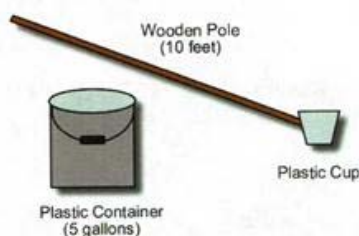
If all contents of the entire semi-solid or liquid storage facility will be applied, complete agitation (2-4 hours minimum) is required to accurately sample the manure because in liquid and semi-solid systems, settled solids can contain more than 90 percent of the phosphorus. However, if solids will be purposefully left on the bottom when the storage structure is pumped out, as is sometimes the case with lagoons, then complete agitation during sampling will generate artificially high nutrient values. In this case, agitation of the solids or sludge at the bottom of the lagoon is not needed for nutrient analysis, and premixing the surface liquid in the lagoon is not needed.

#### Methods of Sampling:

Several different methods may be used to sample liquid or semi-solid manure from storage facilities:

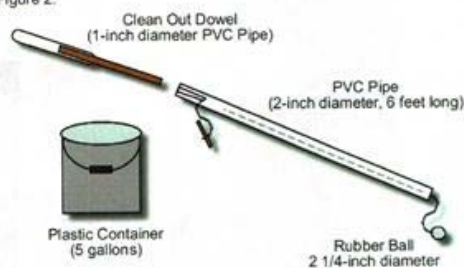
1. Use a plastic sampling cup with a 10- to 12-foot handle to obtain surface water samples (see Figure 1). Collect about a pint of sample from several locations (six to eight) around the perimeter of the storage unit about 6 feet from the bank and 12 inches below the surface. Avoid floating debris or scum. Pour each of the samples into a clean plastic bucket and mix well. Pour representative sample in plastic container for shipping. (Chastain, 2003)

Figure 1.



2. Throw a small plastic bucket tied to a long rope out towards the middle of the storage unit while holding onto the rope. Begin pulling the bucket back to the bank as soon as it strikes the surface. Make sure the bucket is raised above the surface before it strikes the bank. Pour each sample into a larger plastic bucket, and repeat this procedure at four to six locations evenly spaced around the perimeter of the storage unit. Mix all samples well and pour representative sample into a plastic container for shipping. (Chastain, 2003)
3. Samples may also be taken using a probe or a tube. They can be constructed out of a 1½-inch diameter PVC pipe. Cut the PVC pipe a foot longer than the depth of the pit. Run a ¼-inch rod or string through the length of the pipe and attach a plug such as a rubber stopper or rubber ball (see Figure 2). The rod or the string must be longer than the pipe. If using a rod, bend the top over to prevent it from falling out of the pipe. The probe should be slowly inserted into the pit or lagoon with the stopper open, to the full depth of the pit. Pull the string or rod to close the bottom of the pipe and pull the probe out of the pit, being careful not to tip the pipe and dump the sample. Release the sample into a large plastic bucket and repeat the process at least three times around the pit. Mix all samples well and pour a representative sample into a plastic container for shipping. (Rieck-Hinz, 2003)

Figure 2.



#### **Sampling Semi-Solid and Liquid Manure during Land Application with Tank Wagons**

Settling begins as soon as agitation stops, so samples should be collected as soon as possible after the manure tank wagon is filled, unless the tanker has an agitator. Be sure the port or opening does not have a solids accumulation from prior loads. Collect samples in a plastic bucket from the loading or unloading port or the opening near the bottom of the tank. Stir the sample in the bucket to get the solids in suspension. Remove a ladle full while the liquid is still spinning and pour into the sample bottle. Repeat these steps until the sample bottle is three quarters full.

#### **Sampling Liquid Manure during Land Application with Irrigation Systems**

Place plastic buckets randomly at different distances from the sprinkler head in the field to collect the liquid manure that is being applied by an irrigation system. Immediately after manure has been applied, collect manure from the buckets and combine them into one container. Stir the collective sample, remove a ladle full while the liquid is still spinning and pour into the sample bottle.

#### **Pre-Sampling Nitrogen and Potassium from Liquid Manure Systems**

If liquid systems cannot be agitated prior to application and a sample is needed to estimate application rates, manure samples can be dipped off the top of the stored liquid manure to analyze for N and K concentrations. Research indicates that the top-dipped liquid represents approximately 90 percent of the N concentration measured in mixed, field-collected samples. Multiply the results of the N concentration from top-dipped samples by 1.1 for a better estimate of N. Dipping a sample from

the surface of a liquid storage pit does NOT provide a good estimate of P concentrations in the pit, so use of the P analysis from top-dipped samples is not recommended. Therefore, if application is limited to a P-based application rate, pre-sampling is not recommended. Producers who take these types of samples should remember to take additional samples during application to calculate the actual amount of nutrients applied and use to adjust commercial fertilizer application. (Rieck-Hinz, 2003)

#### **Sampling Dry or Solid Manure**

Solid manure systems will include fecal matter, urine, bedding and feed. They can vary from one location to another within the same production operation and from season to season. Sampling of dry or solid manure is best done in the field during application, because it will take into account losses that occur during handling and application. Manure is better mixed during application than during storage. Results will not be available in time to adjust application rates; however, sampling will allow producers to adjust any future commercial fertilizer rates and manure application in subsequent years. If a sample must be taken prior to application to estimate application rates, be sure to take samples from various places in the manure pile, stack or litter to obtain a representative sample for analysis. It may even be beneficial to take samples several times during the year because of the variation in bedding content.

#### **Methods of Sampling:**

As with liquid or semi-solid systems, many different methods can be used to obtain a representative sample. The method chosen will depend on the type of solid system used on the farm. Sub-samples can be taken with a shovel, pitchfork or soil probe. Regardless of the method of sampling, a composite

sample will need to be taken from all of the samples to ensure it represents the entire manure used for application. To obtain a composite sample, place all sub-samples (the more sub-samples, the more accurate the results) in a pile and mix with a shovel by continuously scooping from the outside of the pile to the center of the pile until well mixed. Fill a one-gallon plastic Zip-lock® freezer bag (or the bag provided by the laboratory) one-half full with the composite sample by turning the bag inside out over one hand. With the covered hand, grab representative handfuls of manure and turn the freezer bag right side out over the sample with the free hand. Squeeze out the excess air, close, seal and store sample in another plastic sealable bag in the freezer until mailed. (Rieck-Hinz, 2003)

1. *Sampling poultry litter in-house:* Collect 10 to 15 sub-samples from throughout the house to the depth the litter will be removed. Cake litter samples should be taken at the depth of cake removal. The number of samples taken near feeders or waterers should be proportionate to their space occupied in the whole house. (LPES)
2. *Sampling stockpiled manure, litter or compost:* Ideally, stockpiled material should be stored under cover on an impervious surface. The exterior of uncovered waste may not accurately represent the majority of the material because rainfall moves water-soluble nutrients down into the pile. If an uncovered stockpile is used over an extended period of time, it should be sampled before each application. Take 10 sub-samples from different locations around the pile at least 18 inches below the surface. (LPES)

3. *Sampling from a bedded pack:* It is recommended that samples from a bedded pack be taken during loading. Take at least five sub-samples while loading several spreader loads. (Peters, 2003)
4. *Sampling daily hauls:* Place a five-gallon pail under the barn cleaner 4 to 5 times while loading a spreader. (Peters, 2003)
5. *Sampling scrape-and-haul feedlots:* Facilities where manure accumulates on paved feedlots and is scraped and hauled to the field daily or several times during the week are referred to as scrape-and-haul feedlots. Sub-samples can be collected by scraping a shovel across approximately 25 feet of the paved feedlot. This process should be repeated 10 or more times, taking care to sample in a direction that slices through the variations of moisture, bedding, depth, age, etc. Avoid excessively wet areas and areas with large amounts of hay or feed. Several composite samples may be needed for this type of facility. (Rieck-Hinz, 2003)
6. *Sampling during spreading or land application:* Spread a sheet of plastic or a tarp in the field and drive the tractor and spreader over the top of the plastic to catch the manure from one pass of the spreader. Samples should be collected to represent the first, middle and last part of the storage facility or loads applied and should be correlated as to which loads are applied on each field to track changes in nutrient content throughout the storage facility. (Rieck-Hinz, 2003)

## References

Peters, John. (ed.) 2003.

**Recommended Methods of Manure Analysis.** University of Wisconsin Extension. A3769.

Rieck-Hinz, A., J. Lorimor, T. Richard, and K. Kohl. 2003. **How to Sample Manure for Nutrient Analysis.** Iowa State University Extension. PM1558.

Chastain, J.P. 2003. **Manure Sampling Procedures.** South Carolina Confined Animal Manure Managers Certification Program. Clemson Extension.

Livestock and Poultry Environmental Stewardship (LPES) Curriculum. Manure Sampling. Module D, Land Application and Nutrient Management.

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# Extension



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F104

Year 2014

## Mehlich 1 ICP (lbs./A) Results and Ratings

| Name       | Lab ID | Farm ID | ID | Water pH | Buffer Value | P   | P rating | K   | K rating | Ca   | Ca rating | Mg  |
|------------|--------|---------|----|----------|--------------|-----|----------|-----|----------|------|-----------|-----|
| TOSH FARMS | 495562 | F104    | 1  | 6.63     |              | 75  | H        | 142 | M        | 1926 | S         | 90  |
| TOSH FARMS | 495563 | F104    | 2  | 5.74     | 7.93         | 85  | H        | 178 | H        | 1376 | S         | 119 |
| TOSH FARMS | 495564 | F104    | 3  | 5.79     | 7.9          | 89  | H        | 538 | V        | 1301 | S         | 96  |
| TOSH FARMS | 495565 | F104    | 4  | 5.88     | 7.88         | 104 | H        | 794 | V        | 1058 | S         | 139 |
| TOSH FARMS | 495566 | F104    | 5  | 5.96     | 7.89         | 72  | H        | 587 | V        | 1179 | S         | 86  |
| TOSH FARMS | 495567 | F104    | 6  | 5.36     | 7.8          | 58  | H        | 504 | V        | 990  | S         | 183 |
| TOSH FARMS | 495568 | F104    | 7  | 6.51     |              | 28  | M        | 144 | M        | 1818 | S         | 147 |
| TOSH FARMS | 495569 | F104    | 8  | 5.1      | 7.7          | 79  | H        | 236 | H        | 841  | S         | 91  |
| TOSH FARMS | 495570 | F104    | 9  | 5.87     | 7.81         | 27  | M        | 171 | H        | 1390 | S         | 92  |
| TOSH FARMS | 495571 | F104    | 10 | 7.47     |              | 221 | V        | 219 | H        | 3182 | S         | 171 |
| TOSH FARMS | 495572 | F104    | 11 | 6.62     |              | 70  | H        | 109 | M        | 1904 | S         | 123 |
| TOSH FARMS | 495573 | F104    | 12 | 5.39     | 7.85         | 46  | H        | 155 | M        | 945  | S         | 80  |
| TOSH FARMS | 495574 | F104    | 13 | 6.36     |              | 69  | H        | 159 | M        | 1597 | S         | 88  |
| TOSH FARMS | 495575 | F104    | 14 | 5.64     | 7.96         | 76  | H        | 135 | M        | 1199 | S         | 79  |
| TOSH FARMS | 495576 | F104    | 15 | 7.17     |              | 62  | H        | 185 | H        | 2039 | S         | 108 |
| TOSH FARMS | 495577 | F104    | 16 | 6.84     |              | 35  | H        | 129 | M        | 1956 | S         | 108 |
| TOSH FARMS | 495578 | F104    | 17 | 6.31     |              | 14  | L        | 85  | L        | 1379 | S         | 106 |
| TOSH FARMS | 495579 | F104    | 18 | 6.71     |              | 35  | H        | 85  | L        | 1803 | S         | 131 |
| TOSH FARMS | 495580 | F104    | 19 | 5.64     | 7.84         | 35  | H        | 127 | M        | 1382 | S         | 292 |
| TOSH FARMS | 495581 | F104    | 20 | 6.13     |              | 42  | H        | 92  | M        | 1442 | S         | 118 |
| TOSH FARMS | 495582 | F104    | 21 | 6.29     |              | 64  | H        | 79  | L        | 1601 | S         | 91  |
| TOSH FARMS | 495583 | F104    | 22 | 6.44     |              | 26  | M        | 78  | L        | 1631 | S         | 117 |

F104

|            |             |    |      |      |      |       |        |     |
|------------|-------------|----|------|------|------|-------|--------|-----|
| TOSH FARMS | 495584 F104 | 23 | 6.32 |      | 13 L | 66 L  | 1427 S | 115 |
| TOSH FARMS | 495585 F104 | 24 | 6.93 |      | 52 H | 92 M  | 1955 S | 108 |
| TOSH FARMS | 495586 F104 | 25 | 6.62 |      | 32 H | 67 L  | 1836 S | 106 |
| TOSH FARMS | 495587 F104 | 26 | 5.9  | 7.89 | 19 M | 89 L  | 1307 S | 244 |
| TOSH FARMS | 495588 F104 | 27 | 6.16 |      | 31 H | 153 M | 1419 S | 107 |
| TOSH FARMS | 495589 F104 | 28 | 6.7  |      | 41 H | 121 M | 1798 S | 127 |
| TOSH FARMS | 495590 F104 | 29 | 5.86 | 7.9  | 44 H | 120 M | 1254 S | 113 |
| TOSH FARMS | 495591 F104 | 30 | 6.14 |      | 34 H | 146 M | 1452 S | 121 |
| TOSH FARMS | 495592 F104 | 31 | 6.09 |      | 24 M | 97 M  | 1218 S | 108 |
| TOSH FARMS | 495593 F104 | 32 | 5.92 | 7.96 | 29 M | 73 L  | 1242 S | 92  |
| TOSH FARMS | 495594 F104 | 33 | 6.43 |      | 17 L | 71 L  | 1623 S | 134 |
| TOSH FARMS | 495595 F104 | 34 | 5.65 | 7.85 | 36 H | 126 M | 1661 S | 273 |
| TOSH FARMS | 495596 F104 | 35 | 6.14 |      | 46 H | 98 M  | 1884 S | 159 |
| TOSH FARMS | 495597 F104 | 36 | 5.67 | 7.92 | 15 L | 59 L  | 1210 S | 106 |
| TOSH FARMS | 495598 F104 | 37 | 5.62 | 7.91 | 26 M | 134 M | 1199 S | 99  |
| TOSH FARMS | 495599 F104 | 38 | 6.19 |      | 29 M | 204 H | 1230 S | 123 |
| TOSH FARMS | 495600 F104 | 39 | 5.6  | 7.81 | 26 M | 96 M  | 1167 S | 152 |
| TOSH FARMS | 474924 F 90 | 15 | 6.59 |      | 52 H | 273 H | 1882 S | 173 |



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Henry, TN 38231  
Gibson County

F90

Year 2014

Mehlich 1 ICP (lbs./A) Results and Ratings

| Name       | Lab ID   | Farm ID | ID        | Water pH | Buffer Value | P   | P rating | K   | K rating | Ca   | Ca rating | Mg  |
|------------|----------|---------|-----------|----------|--------------|-----|----------|-----|----------|------|-----------|-----|
| Last_Name  | SampleID | Farm ID | Sample Nu | Water pH | Buffer Valu  | P   | P rating | K   | K rating | Ca   | Ca rating | Mg  |
| TOSH FARMS | 472848   | F90     | 1         | 6.95     |              | 26  | M        | 296 | H        | 2073 | S         | 296 |
| TOSH FARMS | 472849   | F90     | 2         | 6.63     |              | 31  | H        | 229 | H        | 1695 | S         | 229 |
| TOSH FARMS | 472850   | F90     | 3         | 6.87     |              | 23  | M        | 282 | H        | 1999 | S         | 282 |
| TOSH FARMS | 472851   | F90     | 4         | 6.9      |              | 45  | H        | 163 | H        | 1885 | S         | 163 |
| TOSH FARMS | 472852   | F90     | 5         | 6.75     |              | 111 | H        | 223 | H        | 2298 | S         | 223 |
| TOSH FARMS | 472853   | F90     | 6         | 6.47     |              | 80  | H        | 191 | H        | 1887 | S         | 191 |
| TOSH FARMS | 472854   | F90     | 7         | 6.73     |              | 49  | H        | 186 | H        | 2054 | S         | 186 |
| TOSH FARMS | 472855   | F90     | 8         | 6.31     |              | 21  | M        | 165 | H        | 1597 | S         | 165 |
| TOSH FARMS | 472856   | F90     | 9         | 6.63     |              | 42  | H        | 261 | H        | 1532 | S         | 261 |
| TOSH FARMS | 472857   | F90     | 10        | 6.86     |              | 58  | H        | 185 | H        | 2098 | S         | 185 |
| TOSH FARMS | 472858   | F90     | 12        | 5.79     | 7.55         | 16  | L        | 262 | H        | 1253 | S         | 262 |
| TOSH FARMS | 472859   | F90     | 13        | 6.62     |              | 38  | H        | 182 | H        | 1546 | S         | 182 |
| TOSH FARMS | 472860   | F90     | 14        | 6.15     |              | 52  | H        | 169 | H        | 1365 | S         | 169 |
| TOSH FARMS | 472861   | F90     | 16        | 7.12     |              | 33  | H        | 227 | H        | 2101 | S         | 227 |
| TOSH FARMS | 472862   | F90     | 17        | 5.81     | 7.74         | 80  | H        | 134 | M        | 1201 | S         | 134 |
| TOSH FARMS | 472863   | F90     | 18        | 6.15     |              | 39  | H        | 161 | H        | 1702 | S         | 161 |
| TOSH FARMS | 472864   | F90     | 19        | 6.13     |              | 36  | H        | 163 | H        | 1613 | S         | 163 |
| TOSH FARMS | 472865   | F90     | 20        | 6.74     |              | 85  | H        | 277 | H        | 1863 | S         | 277 |
| TOSH FARMS | 472866   | F90     | 21        | 6.34     |              | 14  | L        | 171 | H        | 1794 | S         | 171 |
| TOSH FARMS | 472867   | F90     | 22        | 6.98     |              | 34  | H        | 232 | H        | 1965 | S         | 232 |
| TOSH FARMS | 472868   | F90     | 23        | 5.99     | 7.73         | 16  | L        | 109 | M        | 1295 | S         | 109 |

F90

|            |             |    |      |      |       |       |        |     |
|------------|-------------|----|------|------|-------|-------|--------|-----|
| TOSH FARMS | 472869 F90  | 24 | 7.26 |      | 21 M  | 222 H | 2188 S | 222 |
| TOSH FARMS | 472870 F90  | 25 | 5.9  | 7.68 | 21 M  | 133 M | 1262 S | 133 |
| TOSH FARMS | 472871 F90  | 26 | 6.77 |      | 31 H  | 299 H | 1646 S | 299 |
| TOSH FARMS | 472872 F90  | 27 | 6.18 |      | 48 H  | 254 H | 1354 S | 254 |
| TOSH FARMS | 472873 F90  | 28 | 5.86 | 7.66 | 45 H  | 218 H | 1336 S | 218 |
| TOSH FARMS | 472874 F90  | 29 | 6.37 |      | 55 H  | 199 H | 1534 S | 199 |
| TOSH FARMS | 472875 F90  | 30 | 6.55 |      | 29 M  | 293 H | 1550 S | 293 |
| TOSH FARMS | 472876 F90  | 31 | 6.37 |      | 29 M  | 142 M | 1853 S | 142 |
| TOSH FARMS | 472877 F90  | 32 | 6.81 |      | 76 H  | 305 H | 2517 S | 305 |
| TOSH FARMS | 472878 F90  | 33 | 6.99 |      | 31 H  | 201 H | 2160 S | 201 |
| TOSH FARMS | 472879 F90  | 34 | 6.71 |      | 75 H  | 232 H | 1692 S | 232 |
| TOSH FARMS | 472880 F90  | 35 | 6.91 |      | 93 H  | 161 H | 2133 S | 161 |
| TOSH FARMS | 472882 F90  | 36 | 6.19 |      | 116 H | 259 H | 1261 S | 259 |
| TOSH FARMS | 472883 F90  | 37 | 6.86 |      | 65 H  | 235 H | 1667 S | 235 |
| TOSH FARMS | 472884 F90  | 38 | 6.86 |      | 105 H | 224 H | 1935 S | 224 |
| TOSH FARMS | 472885 F90  | 39 | 6.81 |      | 79 H  | 207 H | 1695 S | 207 |
| TOSH FARMS | 474923 F 90 | 11 | 5.18 | 7.49 | 22 M  | 107 M | 1017 S | 150 |
| TOSH FARMS | 474924 F 90 | 15 | 6.59 |      | 52 H  | 273 H | 1882 S | 173 |

# SOIL TEST REPORT

TOSH FARMS

1586 ATLANTIC AVENUE  
HENRY, TN 382310000



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soilplantpestcenter@utk.edu

Date Tested: 1/8/2015

County: Henry

Lab Number: 495562

## Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-1       | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                 |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |
| 6.6       |              | 75 H              | 142 M               | 1926 S     | 90 S         |         |         |              |         |           |                 |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                 |                    |

## RECOMMENDATIONS

F104-1

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

## Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 495563

### Mehlich 1 SOIL TEST RESULTS and RATINGS

Sample ID F104-2

(Pounds Per Acre)

| Water pH | Buffer Value | P Phosphorus     | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
|----------|--------------|------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| 5.7      | 7.9          | 85               | H                   | 178        | H            | 1376    | S       | 119          | S       |           |                              |                    |
|          |              | Organic Matter % | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

### RECOMMENDATIONS

F104-2

#### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

## Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: 1 tons per acre

TOSH FARMS - Page 2

See back of this report for interpretation and detailed explanation of results and recommendations.

If you have questions about this report, please contact us or your County Extension Office.  
Visit us on the web at [ag.tennessee.edu/spp](http://ag.tennessee.edu/spp) or Facebook at SoilPlantandPestCenter.

We appreciate your business!

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 495564

### Mehlich 1 SOIL TEST RESULTS and RATINGS

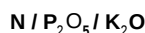
| Sample ID F104-3 |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                 |                    |  |
|------------------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|--|
| Water pH         | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.8              | 7.9          | 89 H              | 538 V               | 1301 S     | 96 S         |         |         |              |         |           |                 |                    |  |
|                  |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                 |                    |  |

### RECOMMENDATIONS

F104-3

#### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)



Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

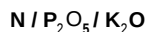
Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans



Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: 1 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 495565

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID F104-4 |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                 |                    |  |
|------------------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|--|
| Water pH         | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.9              | 7.9          | 104               | H                   | 794        | V            | 1058    | S       | 139          | S       |           |                 |                    |  |
|                  |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                 |                    |  |

### RECOMMENDATIONS

F104-4

#### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: 1 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 495566

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID F104-5 |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                 |                    |
|------------------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|
| Water pH         | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |
| 6.0              | 7.9          | 72 H              | 587 V               | 1179 S     | 86 S         |         |         |              |         |           |                 |                    |
|                  |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                 |                    |

### RECOMMENDATIONS

F104-5

#### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: 1 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 495567

## Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID F104-6 |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                 |                    |
|------------------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|
| Water pH         | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |
| 5.4              | 7.8          | 58                | H                   | 504        | V            | 990     | S       | 183          | S       |           |                 |                    |
|                  |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                 |                    |

## RECOMMENDATIONS

**F104-6**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495568

## Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID F104-7 |              | (Pounds Per Acre) |             |            |              |         |         |              |         |           |                 |                    |
|------------------|--------------|-------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|
| Water pH         | Buffer Value | P Phosphorus      | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |
|                  |              |                   |             |            |              |         |         |              |         |           |                 |                    |

TOSH FARMS - Page 6

See back of this report for interpretation and detailed explanation of results and recommendations.

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**We appreciate your business!**

6.5                      28    M    144    M    1818    S    147    S

Organic    Soluble  
Matter    Salts  
%        PPM\*\*

## RECOMMENDATIONS

**F104-7**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone:                      Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone:                      Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495569

## Mehlich 1 SOIL TEST RESULTS and RATINGS

**Sample ID**    **F104-8**

**(Pounds Per Acre)**

| Water<br>pH | Buffer<br>Value | P<br>Phosphorus        | K<br>Potassium            | Ca<br>Calcium | Mg<br>Magnesium | Zn<br>Zinc | Fe<br>Iron | Mn<br>Manganese | B<br>Boron | Na<br>Sodium | S-NH <sub>4</sub> OAC<br>Sulfur | Nitrates-ISE<br>(ppm) |
|-------------|-----------------|------------------------|---------------------------|---------------|-----------------|------------|------------|-----------------|------------|--------------|---------------------------------|-----------------------|
| 5.1         | 7.7             | 79    H                | 236    H                  | 841    S      | 91    S         |            |            |                 |            |              |                                 |                       |
|             |                 | Organic<br>Matter<br>% | Soluble<br>Salts<br>PPM** |               |                 |            |            |                 |            |              |                                 |                       |

## RECOMMENDATIONS

**F104-8**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495570

### Mehlich 1 SOIL TEST RESULTS and RATINGS

**Sample ID** F104-9

(Pounds Per Acre)

| Water<br>pH | Buffer<br>Value | P<br>Phosphorus        | K<br>Potassium            | Ca<br>Calcium | Mg<br>Magnesium | Zn<br>Zinc | Fe<br>Iron | Mn<br>Manganese | B<br>Boron | Na<br>Sodium | S-NH <sub>4</sub> OAC<br>Sulfur | Nitrates-ISE<br>(ppm) |
|-------------|-----------------|------------------------|---------------------------|---------------|-----------------|------------|------------|-----------------|------------|--------------|---------------------------------|-----------------------|
| 5.9         | 7.8             | 27                     | M                         | 171           | H               | 1390       | S          | 92              | S          |              |                                 |                       |
|             |                 | Organic<br>Matter<br>% | Soluble<br>Salts<br>PPM** |               |                 |            |            |                 |            |              |                                 |                       |

## RECOMMENDATIONS

**F104-9**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: 1 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495571

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-10             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 7.5       |                  | 221 V               | 219 H       | 3182 S     | 171 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-10**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495572

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-11             |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.6       |                  | 70                  | H           | 109        | M            | 123     | S       |              |         |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-11**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495573

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-12           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.4       | 7.9          | 46                | H                   | 155        | M            | 945     | S       | 80           | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-12**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495574

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-13           |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.4       |              | 69 H              | 159 M               | 1597 S     | 88 S         |         |         |              |         |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-13**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495575

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-14      | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.6       | 8.0          | 76                | H                   | 135        | M            | 1199    | S       | 79           | S       |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-14**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: No Recommendation

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: No Recommendation

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495576

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-15             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 7.2       |                  | 62 H                | 185 H       | 2039 S     | 108 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-15**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495577

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-16             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.8       |                  | 35                  | H           | 129        | M            | 1956    | S       | 108          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-16**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495578

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-17             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.3       |                  | 14 L                | 85 L        | 1379 S     | 106 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-17**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495579

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-18             |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.7       |                  | 35                  | H           | 85         | L            | 1803    | S       | 131          | S       |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-18**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495580

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-19           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.6       | 7.8          | 35                | H                   | 127        | M            | 1382    | S       | 292          | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-19**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495581

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-20             |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.1       |                  | 42 H                | 92 M        | 1442 S     | 118 S        |         |         |              |         |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-20**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495582

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-21           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.3       |              | 64 H              | 79 L                | 1601 S     | 91 S         |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-21**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495583

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-22 (Pounds Per Acre) |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
| Water pH  | Buffer Value     | P Phosphorus              | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.4       |                  | 26 M                      | 78 L        | 1631 S     | 117 S        |         |         |              |         |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM**       |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-22**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495584

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-23             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.3       |                  | 13 L                | 66 L        | 1427 S     | 115 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-23**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495585

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-24           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.9       |              | 52 H              | 92 M                | 1955 S     | 108 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-24**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495586

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-25           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.6       |              | 32 H              | 67 L                | 1836 S     | 106 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-25**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495587

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-26           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.9       | 7.9          | 19 M              | 89 L                | 1307 S     | 244 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-26**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 140 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 80 pounds per acre

Limestone: 1 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495588

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-27          | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.2       |                  | 31 H                | 153 M       | 1419 S     | 107 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-27**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495589

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-28             |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.7       |                  | 41                  | H           | 121        | M            | 1798    | S       | 127          | S       |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-28**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495590

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-29           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.9       | 7.9          | 44                | H                   | 120        | M            | 1254    | S       | 113          | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-29**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: 1 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495591

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-30             |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.1       |                  | 34                  | H           | 146        | M            | 1452    | S       | 121          | S       |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-30**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495592

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-31             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.1       |                  | 24 M                | 97 M        | 1218 S     | 108 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-31**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495593

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-32           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.9       | 8.0          | 29 M              | 73 L                | 1242 S     | 92 S         |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-32**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 140 pounds per acre

Limestone: No Recommendation

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 80 pounds per acre

Limestone: No Recommendation

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495594

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-33          | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.4       |                  | 17 L                | 71 L        | 1623 S     | 134 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-33**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495595

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-34           |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.7       | 7.9          | 36                | H                   | 126        | M            | 1661    | S       | 273          | S       |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-34**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: 1 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495596

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-35             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.1       |                  | 46                  | H           | 98         | M            | 1884    | S       | 159          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-35**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495597

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-36      | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.7       | 7.9          | 15 L              | 59 L                | 1210 S     | 106 S        |         |         |              |         |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-36**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 140 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 80 pounds per acre

Limestone: 1 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495598

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-37      | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.6       | 7.9          | 26 M              | 134 M               | 1199 S     | 99 S         |         |         |              |         |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-37**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: 1 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: 1 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495599

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-38           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.2       |              | 29 M              | 204 H               | 1230 S     | 123 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-38**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495600

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-39      | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.6       | 7.8          | 26 M              | 96 M                | 1167 S     | 152 S        |         |         |              |         |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-39**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495602

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-40             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.9       |                  | 46 H                | 135 M       | 2732 S     | 240 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-40**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495603

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-41           |                  |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|-------------------|------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           | (Pounds Per Acre) |                  |                     |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value      | P Phosphorus     | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.5       |                   | 34 H             | 119 M               | 1439 S     | 110 S        |         |         |              |         |           |                              |                    |
|           |                   | Organic Matter % | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-41**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495604

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-42             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.2       |                  | 15 L                | 57 L        | 1569 S     | 107 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-42**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495605

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-43 (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|---------------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
| Water pH  | Buffer Value | P Phosphorus              | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.1       | 7.5          | 11 L                      | 59 L                | 980 S      | 203 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %          | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-43**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 140 pounds per acre

Limestone: 2.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 80 pounds per acre

Limestone: 2.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495606

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-44             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 7.3       |                  | 45                  | H           | 151        | M            | 2293    | S       | 157          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-44**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495607

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-45 (Pounds Per Acre) |                     |             |            |              |         |         |              |         |           |                              |                    |
|-----------|---------------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value              | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.2       |                           | 24 M                | 105 M       | 1444 S     | 119 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter %          | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-45**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495608

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-46             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.1       |                  | 40                  | H           | 149        | M            | 1694    | S       | 115          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-46**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495609

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-47             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.4       |                  | 51 H                | 207 H       | 1771 S     | 144 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-47**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495610

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-48             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 7.0       |                  | 42 L                | 238 L       | 3094 S     | 221 D        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-48**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495611

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-49           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.6       | 7.6          | 18 L              | 100 M               | 1174 S     | 223 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-49**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 70 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 40 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495612

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-50           |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.8       | 7.7          | 18 L              | 135 M               | 969 S      | 102 S        |         |         |              |         |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-50**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 70 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 40 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495613

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-51           |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.9       | 7.7          | 25                | M                   | 129        | M            | 1404    | S       | 135          | S       |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-51**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495614

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-52           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.9       | 7.7          | 26                | M                   | 60         | L            | 1447    | S       | 130          | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-52**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 140 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 80 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495615

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-53           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.8       | 7.7          | 11 L              | 90 L                | 1327 S     | 139 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-53**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 140 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 80 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495616

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-54           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.8       | 7.7          | 14 L              | 147 M               | 1205 S     | 95 S         |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-54**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 70 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 40 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495617

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-55           |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.9       | 7.7          | 14 L              | 139 M               | 1090 S     | 122 S        |         |         |              |         |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-55**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495618

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-56             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.1       |                  | 24 M                | 240 H       | 1213 S     | 94 S         |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-56**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495619

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-57           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.9       | 7.7          | 35                | H                   | 177        | H            | 1292    | S       | 108          | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-57**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495620

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-58             |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.2       |                  | 76                  | H           | 142        | M            | 1969    | S       | 124          | S       |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-58**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495621

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-59      | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.9       | 7.7          | 37                | H                   | 108        | M            | 1402    | S       | 124          | S       |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-59**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495622

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-60             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 7.2       |                  | 47 H                | 109 M       | 2602 S     | 149 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-60**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495623

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-61             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.6       |                  | 40                  | H           | 137        | M            | 1806    | S       | 130          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-61**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495624

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-62             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.9       |                  | 43 H                | 158 M       | 2333 S     | 158 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-62**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495625

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-63           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.8       | 7.7          | 47                | H                   | 90         | L            | 1335    | S       | 113          | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-63**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 140 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 80 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495626

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-64             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.2       |                  | 25 M                | 76 L        | 1271 S     | 324 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-64**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 140 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 80 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495627

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-65           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.7       | 7.7          | 17 L              | 174 H               | 1013 S     | 118 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-65**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 0 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 0 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495628

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-66             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.3       |                  | 16 L                | 101 M       | 1879 S     | 165 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-66**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495629

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-67           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.9       | 7.6          | 24 M              | 158 M               | 1673 S     | 214 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-67**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495630

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F104-68      | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.7       | 7.5          | 18 L              | 144 M               | 1644 S     | 286 S        |         |         |              |         |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-68**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 70 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 40 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495631

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-69           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.1       | 7.4          | 20                | M                   | 253        | H            | 1077    | S       | 231          | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-69**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: 3 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: 3 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495632

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-70             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.1       |                  | 31                  | H           | 161        | H            | 1223    | S       | 77           | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-70**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495633

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-71           |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.4       | 7.5          | 20                | M                   | 281        | H            | 1102    | S       | 208          | S       |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-71**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495634

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-72             |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.3       |                  | 28 M                | 127 M       | 1605 S     | 134 S        |         |         |              |         |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-72**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495635

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-73             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.5       |                  | 74 H                | 155 M       | 1809 S     | 203 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-73**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495636

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-74             |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.3       |                  | 46                  | H           | 151        | M            | 1529    | S       | 121          | S       |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-74**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495637

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-75             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.9       |                  | 68 H                | 116 M       | 2047 S     | 133 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-75**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495638

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-76             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 7.0       |                  | 133                 | V           | 185        | H            | 2362    | S       | 267          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-76**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495639

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-77           |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.0       | 7.7          | 20                | M                   | 131        | M            | 1369    | S       | 122          | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F104-77**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495640

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F104-78           |                     |            |              |         |         |              |         |           |                              |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 5.9       | 7.7          | 20                | M                   | 142        | M            | 1290    | S       | 132          | S       |           |                              |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-78**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495642

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-79             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.4       |                  | 21 M                | 111 M       | 1362 S     | 93 S         |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F104-79**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 495643

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F104-80             |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.3       |                  | 65 H                | 236 H       | 1245 S     | 104 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

F104-80

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

# Explanation of Soil Test Report

Recommendations in this report are based upon research data collected under various soil conditions and cropping systems throughout the state by University of Tennessee Research and Education Centers and Extension personnel.

## Soil Test Ratings and Results

### Phosphorus (P) and Potassium (K)

**LOW (L)** - In most cases, plants will respond to the application of that nutrient. If the nutrient is not applied, deficiency symptoms may occur and crops usually yield less than 75 percent of their potential.

**MEDIUM (M)** - Plants may or may not respond to the application of the nutrient. Deficiency symptoms are not likely and soils can be expected to produce 75 percent or more of their potential without application of the nutrient.

**HIGH (H)** - The soil will produce at or near 100 percent of its potential without the addition of the nutrient.

**VERY HIGH (V)** - Supply of the nutrient in the soil is well in excess of the amount needed to produce 100 percent of the soil's potential. Application of the nutrient is not recommended, since further additions may create nutrient imbalances.

### Soil Test Ratings and Pounds per Acre - Phosphorus (P) and Potassium (K)

| Rating        | Phosphorus (P) | Potassium (K) |
|---------------|----------------|---------------|
| LOW (L)       | 0 - 18         | 0 - 90        |
| MEDIUM (M)    | 19 - 30        | 91 - 160      |
| HIGH (H)      | 31 - 120       | 161 - 320     |
| VERY HIGH (V) | 121+           | 321+          |

### Secondary and Micronutrients

**SUFFICIENT (S)** - Indicates an adequate supply of the nutrient is available in the soil and a plant response to its use would not normally be expected.

**DEFICIENT (D)** - Indicates an inadequate supply of the nutrient is in the soil and application of the nutrient is recommended.

### Soluble Salts

The soluble salts test refers to the potential for harmful effects due to the concentration of salts present in the soil. Soluble salt levels should be in the very low to medium range. Higher levels may indicate over-fertilization or a poor drainage situation which allows accumulation.

### General Soluble Salt Ratings and Interpretations

| ppm*        | Rating    | Interpretations                              |
|-------------|-----------|----------------------------------------------|
| 0 - 360     | Very Low  | Salt effects mostly negligible.              |
| 361 - 1060  | Low       | Field crops mostly unaffected.               |
| 1061 - 1760 | Medium    | Favorable range for most established plants. |
| 2461 - 3160 | High      | Reduced yields and growth of many plants.    |
| 3161 +      | Very High | Severe salt injury and death may occur.      |

\*ppm - parts per million total salt in the air-dried sample

### Organic Matter

Organic matter is estimated from total carbon determined by Carlo Erba (combustion).

### Details of your soil test report

**Water pH** - Actual soil pH ("Water" refers to the method of measuring pH). Most plants grow best at a slightly acidic range of 6.1 to 6.5 where nutrients are most available.

**Buffer Value** - An additional procedure we do where lime might be required. It helps to formulate a lime rate of application based on the buffering capacity of your soil.

**Nutrient Results** - See explanations above.

**Nitrogen/Phosphate/Potash** - Where fertilizer recommendations are given in *actual pounds of nutrient* per acre expressed as N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O. Those crops grown in smaller areas will be provided recommendations in square footage noted in text below lime recommendation(s).

**Limestone** - If lime is recommended, water pH is too low for optimal plant growth. Crop/plant response to lime varies with both crop and variety.

*For plants with the recommended target pH range of 6.1 to 6.5: At pH 6.0 - 5.8, chances are low for a response to lime. At pH 5.6 - 5.7, chances are medium for a response to lime. At pH < 5.6, chances become high for a response to lime therefore liming is strongly encouraged to increase soil pH levels and prevent yield loss.* You may lime any time of the year, however fall applications are best. Types of lime recommended are ground agricultural limestone or pelleted lime.

**Text Notes** - Contains crucial information concerning fertilizer recommendations and specific instructions on types, rate of application and dates when applications should be applied.

# SOIL TEST REPORT

TOSH FARMS  
1586 ATLANTIC AVE  
  
HENRY, TN

*Deborah K. Joines*  
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Manager  
Soil, Plant and Pest Center  
5201 Marchant Drive  
Nashville, TN 37211-5112  
(615) 832-5850  
soilplantpestcenter@utk.edu

Date Tested: 1/9/2014

County: Henry

Lab Number: 472848

## Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F90-1             |                     |            |              |         |         |              |         |           |                 |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                 |                    |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |
| 7.0       |              | 26 M              | 296 H               | 2073 S     | 296 S        |         |         |              |         |           |                 |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                 |                    |

## RECOMMENDATIONS

F90-1

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

## Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 472849

### Mehlich 1 SOIL TEST RESULTS and RATINGS

Sample ID F90-2

(Pounds Per Acre)

| Water pH | Buffer Value | P Phosphorus     | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
|----------|--------------|------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| 6.6      |              | 31 H             | 229 H               | 1695 S     | 229 S        |         |         |              |         |           |                              |                    |
|          |              | Organic Matter % | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

### RECOMMENDATIONS

F90-2

#### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcropl.com](http://www.utcropl.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

## Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

TOSH FARMS - Page 2

See back of this report for interpretation and detailed explanation of results and recommendations.

If you have questions about this report, please contact us or your County Extension Office.  
Visit us on the web at [ag.tennessee.edu/spp](http://ag.tennessee.edu/spp) or Facebook at SoilPlantandPestCenter.

We appreciate your business!

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 472850

### Mehlich 1 SOIL TEST RESULTS and RATINGS

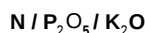
| Sample ID F90-3 |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |
|-----------------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH        | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.9             |              | 23 M              | 282 H               | 1999 S     | 282 S        |         |         |              |         |           |                              |                    |
|                 |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

### RECOMMENDATIONS

F90-3

#### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)



Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

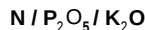
Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans



Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 472851

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F90-4 (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                 |                    |  |
|-----------|--------------|-------------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|--|
| Water pH  | Buffer Value | P Phosphorus            | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.9       |              | 45 H                    | 163 H               | 1885 S     | 163 S        |         |         |              |         |           |                 |                    |  |
|           |              | Organic Matter %        | Soluble Salts PPM** |            |              |         |         |              |         |           |                 |                    |  |

### RECOMMENDATIONS

F90-4

#### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 472852

### Mehlich 1 SOIL TEST RESULTS and RATINGS

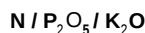
| Sample ID |              | F90-5             |                     |            |              |         |         |              |         |           |                 |                    |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                 |                    |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |
| 6.8       |              | 111 H             | 223 H               | 2298 S     | 223 S        |         |         |              |         |           |                 |                    |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                 |                    |

### RECOMMENDATIONS

F90-5

#### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)



Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

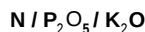
Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcropl.com](http://www.utcropl.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans



Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 472853

## Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F90-6 (Pounds Per Acre) |                  |                     |            |              |         |         |              |         |           |                 |                    |
|-----------|-------------------------|------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|
| Water pH  | Buffer Value            | P Phosphorus     | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |
| 6.5       |                         | 80 H             | 191 H               | 1887 S     | 191 S        |         |         |              |         |           |                 |                    |
|           |                         | Organic Matter % | Soluble Salts PPM** |            |              |         |         |              |         |           |                 |                    |

## RECOMMENDATIONS

**F90-6**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

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Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472854

## Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F90-7 (Pounds Per Acre) |              |             |            |              |         |         |              |         |           |                 |                    |
|-----------|-------------------------|--------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|
| Water pH  | Buffer Value            | P Phosphorus | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |
|           |                         |              |             |            |              |         |         |              |         |           |                 |                    |

TOSH FARMS - Page 6

See back of this report for interpretation and detailed explanation of results and recommendations.

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Visit us on the web at [ag.tennessee.edu/spp](http://ag.tennessee.edu/spp) or Facebook at SoilPlantandPestCenter.

**We appreciate your business!**

6.7                      49    H    186    H    2054    S    186    S

Organic    Soluble  
Matter    Salts  
%        PPM\*\*

## RECOMMENDATIONS

F90-7

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone:                      Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone:                      Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

County: Henry

Lab Number: 472855

## Mehlich 1 SOIL TEST RESULTS and RATINGS

Sample ID    F90-8

(Pounds Per Acre)

| Water pH | Buffer Value | P Phosphorus     | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
|----------|--------------|------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| 6.3      |              | 21    M          | 165    H            | 1597    S  | 165    S     |         |         |              |         |           |                              |                    |
|          |              | Organic Matter % | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-8**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472856

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-9               |             |            |              |         |         |              |         |           |                 |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|-----------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                 |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH4OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.6       |                  | 42                  | H           | 261        | H            | 1532    | S       | 261          | S       |           |                 |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                 |                    |  |

## RECOMMENDATIONS

**F90-9**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472857

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-10              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.9       |                  | 58                  | H           | 185        | H            | 2098    | S       | 185          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-10**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472858

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F90-12            |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.8       | 7.6          | 16 L              | 262 H               | 1253 S     | 262 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-12**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 0 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 0 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472859

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F90-13           | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.6       |                  | 38 H                | 182 H       | 1546 S     | 182 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-13**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472860

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-14 (Pounds Per Acre) |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|--------------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
| Water pH  | Buffer Value     | P Phosphorus             | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.2       |                  | 52 H                     | 169 H       | 1365 S     | 169 S        |         |         |              |         |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM**      |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-14**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472861

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-16              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 7.1       |                  | 33 H                | 227 H       | 2101 S     | 227 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-16**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472862

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F90-17            |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.8       | 7.7          | 80                | H                   | 134        | M            | 1201    | S       | 134          | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-17**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 70 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 40 pounds per acre

Limestone: 2 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472863

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-18              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.2       |                  | 39 H                | 161 H       | 1702 S     | 161 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-18**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472864

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-19              |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.1       |                  | 36                  | H           | 163        | H            | 1613    | S       | 163          | S       |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-19**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472865

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F90-19           | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.7       |                  | 85 H                | 277 H       | 1863 S     | 277 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-19**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472866

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-21              |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.3       |                  | 14 L                | 171 H       | 1794 S     | 171 S        |         |         |              |         |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-21**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472867

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-22              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 7.0       |                  | 34 H                | 232 H       | 1965 S     | 232 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-22**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472868

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F90-23            |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.0       | 7.7          | 16 L              | 109 M               | 1295 S     | 109 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-23**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 140 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 40 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472869

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-24              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 7.3       |                  | 21 M                | 222 H       | 2188 S     | 222 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-24**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472870

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F90-25            |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.9       | 7.7          | 21 M              | 133 M               | 1262 S     | 133 S        |         |         |              |         |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-25**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472871

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-26              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.8       |                  | 31 H                | 299 H       | 1646 S     | 299 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-26**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472872

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-27              |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 6.2       |                  | 48 H                | 254 H       | 1354 S     | 254 S        |         |         |              |         |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-27**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472873

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |              | F90-28            |                     |            |              |         |         |              |         |           |                              |                    |  |
|-----------|--------------|-------------------|---------------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |              | (Pounds Per Acre) |                     |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value | P Phosphorus      | K Potassium         | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 5.9       | 7.7          | 45                | H                   | 218        | H            | 1336    | S       | 218          | S       |           |                              |                    |  |
|           |              | Organic Matter %  | Soluble Salts PPM** |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-28**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: 1.5 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: 1.5 tons per acre

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472874

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-29              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.4       |                  | 55                  | H           | 199        | H            | 1534    | S       | 199          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-29**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472875

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-30              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.6       |                  | 29 M                | 293 H       | 1550 S     | 293 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-30**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472876

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-31              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.4       |                  | 29 M                | 142 M       | 1853 S     | 142 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-31**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 70 / 70 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 20 / 40 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472877

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID | F90-32           | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.8       |                  | 76 H                | 305 H       | 2517 S     | 305 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-32**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472878

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-33              |             |            |              |         |         |              |         |           |                              |                    |  |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|--|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |  |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |  |
| 7.0       |                  | 31                  | H           | 201        | H            | 2160    | S       | 201          | S       |           |                              |                    |  |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |  |

## RECOMMENDATIONS

**F90-33**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472879

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-34              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.7       |                  | 75 H                | 232 H       | 1692 S     | 232 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-34**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472880

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-35              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.9       |                  | 93 H                | 161 H       | 2133 S     | 161 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-35**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472882

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-36              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.2       |                  | 116 H               | 259 H       | 1261 S     | 259 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-36**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472883

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-37              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.9       |                  | 65 H                | 235 H       | 1667 S     | 235 S        |         |         |              |         |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-37**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472884

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-38              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.9       |                  | 105                 | H           | 224        | H            | 1935    | S       | 224          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

**F90-38**

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

**N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O**

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.

**County:** Henry

**Lab Number:** 472885

### Mehlich 1 SOIL TEST RESULTS and RATINGS

| Sample ID |                  | F90-39              |             |            |              |         |         |              |         |           |                              |                    |
|-----------|------------------|---------------------|-------------|------------|--------------|---------|---------|--------------|---------|-----------|------------------------------|--------------------|
|           |                  | (Pounds Per Acre)   |             |            |              |         |         |              |         |           |                              |                    |
| Water pH  | Buffer Value     | P Phosphorus        | K Potassium | Ca Calcium | Mg Magnesium | Zn Zinc | Fe Iron | Mn Manganese | B Boron | Na Sodium | S-NH <sub>4</sub> OAC Sulfur | Nitrates-ISE (ppm) |
| 6.8       |                  | 79                  | H           | 207        | H            | 1695    | S       | 207          | S       |           |                              |                    |
|           | Organic Matter % | Soluble Salts PPM** |             |            |              |         |         |              |         |           |                              |                    |

## RECOMMENDATIONS

F90-39

### Fertilizer/Lime Application Rate and Timing

#### Corn (150-175 BU/A)

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 180 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre. See Corn Nitrogen Rate Calculator at [www.utcrops.com](http://www.utcrops.com).

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce N rate by 60 to 80 pounds per acre following a winter cover crop of crimson clover or hairy vetch that has reached early bloom stage.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

#### Soybeans

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 0 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Lime, phosphate and potash can be broadcast over the soil surface in fall, winter or spring. If soybeans follow established wheat, apply the phosphate and potash for soybeans when the wheat is topdressed with nitrogen, or at time of planting the soybeans.

Nitrogen is not recommended since soybeans are legumes and when properly inoculated produce their own nitrogen

Treat soybean seed with two-tenths (0.2) ounce molybdenum per bushel when soil pH is 6.5 or below. Apply either one-half (0.5) ounce of sodium molybdate per bushel or follow the product label for liquid hopper-box applied sources containing fungicides.

Where only soybeans are to be grown, lime recommended may be omitted if water pH of the soil is greater than 5.6 and if soybean seed are properly treated with molybdenum.



# Waters Agricultural Laboratories, Inc.

## Manure/Sludge Analysis and Application Report

P.O. Box 382 \* 257 Newton Highway \* Camilla, Georgia 31730-0382 \* phone: (229) 336-7216

|                                                                   |                            |                                   |
|-------------------------------------------------------------------|----------------------------|-----------------------------------|
| Ship To:<br><b>TOSH FARMS</b><br>P.O. BOX 308<br>HENRY, TN 38231- | Grower: <b>TATE</b>        |                                   |
|                                                                   | SampleNumber: <b>5</b>     | Date Submitted: <b>05/07/2015</b> |
|                                                                   | Lab Number: <b>52067MS</b> | Report Date: <b>05/11/2015</b>    |
|                                                                   | Type: <b>LAGOON</b>        |                                   |

|                  | Parts per million (ppm) | Pounds per 1000 gallons |
|------------------|-------------------------|-------------------------|
| Nitrogen - Total | 4529.6                  | 37.777                  |
| P2O5 - Total     | 2511.8                  | 20.948                  |
| K2O - Total      | 2672.1                  | 22.285                  |

**Results Reported On:** L=LIQUID BASIS

### Remarks

Suggest the use of PLANT and SOIL analysis to monitor the need for additional and/or build up of some elements.  
TATE TO CLOVE 1 & 2 4-29-15



# Waters Agricultural Laboratories, Inc.

## Manure/Sludge Analysis and Application Report

P.O. Box 382 \* 257 Newton Highway \* Camilla, Georgia 31730-0382 \* phone: (229) 336-7216

|                                                                   |                            |                                   |
|-------------------------------------------------------------------|----------------------------|-----------------------------------|
| Ship To:<br><b>TOSH FARMS</b><br>P.O. BOX 308<br>HENRY, TN 38231- | Grower: <b>TATE</b>        |                                   |
|                                                                   | SampleNumber: <b>8</b>     | Date Submitted: <b>05/07/2015</b> |
|                                                                   | Lab Number: <b>52070MS</b> | Report Date: <b>05/11/2015</b>    |
|                                                                   | Type: <b>LAGOON</b>        |                                   |

|                  | Parts per million (ppm) | Pounds per 1000 gallons |
|------------------|-------------------------|-------------------------|
| Nitrogen - Total | 4381.1                  | 36.538                  |
| P2O5 - Total     | 2540.2                  | 21.185                  |
| K2O - Total      | 2578.4                  | 21.504                  |

**Results Reported On:** L=LIQUID BASIS

### Remarks

Suggest the use of PLANT and SOIL analysis to monitor the need for additional and/or build up of some elements.  
TATE TO CLOVE 1 & 2 4-29-15