

**State of North Carolina  
Department of Environment and Natural Resources  
Division of Water Resources**

**Animal Waste Management Systems**

Request for Certificate of Coverage

Facility Currently Covered by an Expiring State Non-Discharge General Permit

On September 30, 2014, the North Carolina State Non-Discharge General Permits for Animal Waste Management Systems will expire. As required by these permits, facilities that have been issued Certificates of Coverage to operate under these State Non-Discharge General Permits must apply for renewal at least 180 days prior to their expiration date. Therefore, all applications must be received by the Division of Water Resources by no later than **April 1, 2014**.

*Please do not leave any question unanswered. Please verify all information and make any necessary corrections below.*

*Application must be signed and dated by the Permittee.*

RECEIVED/DENR/DWR

MAR 21 2014

Water Quality Regional  
Operations Section

1. Facility Number: 070003 and Certificate of Coverage Number: AWS070003
2. Facility Name: Benson Farms Inc (off-site farm)
3. Landowner's name (same as on the Waste Management Plan): Oran Benson
4. Landowner's mailing address: 192 Topping Loop Rd  
City/State: Pantego NC Zip: 27860  
Telephone Number (include area code): (252)943-2370 E-mail: ORAN BENSON@GMAIL.COM  
C 252-943-8405
5. Facility's physical address: 192 Topping Loop Rd  
City: Pantego State: NC Zip: 27860
6. County where facility is located: Beaufort
7. Farm Manager's name (If different than the Landowner): Roger Klaassen
8. Farm Manager's telephone number (include area code): 252-945-0176
9. Integrator's name (if there is not an integrator write "None"): Murphy-Brown LLC
10. Operator in Charge (OIC) name: James Russ Telephone Number 252-945-0176 OIC # ROGER KLAASSEN
11. Lessee's name (if there is not a lessee write "None"): Dempsey Ange
12. Indicate animal operation type and number:

**Swine**

Wean to Finish  
Wean to Feeder 1760  
Farrow to Finish  
Feeder to Finish 4400  
Farrow to Wean  
Farrow to Feeder  
Boar/Stud  
Gilts  
Other

Horses - Horses  
Horses - Other

**Cattle**

Dairy Calf  
Dairy Heifer  
Milk Cow  
Dry Cow  
Beef Stocker Calf  
Beef Feeder  
Beef Brood Cow  
Other

Sheep - Sheep  
Sheep - Other

**Dry Poultry**

Non Laying Chickens  
Laying Chickens  
Turkeys  
Other  
Pullets  
Turkey Poults

**Wet Poultry**

Non Laying Pullets  
Layers

Mail one (1) copy of the most recent Waste Utilization Plan (WUP) along with the field maps for this facility with this completed and signed application as required by NC General Statutes 143-215.10C(d) to the address below. The WUP must be signed by the owner and a certified technical specialist.

As a second option to mailing paper copies of the application package, you can scan and email one signed copy of the application and the WUP to: [animalpermits@ncdenr.gov](mailto:animalpermits@ncdenr.gov)

I attest that this application has been reviewed by me and is accurate and complete to the best of my knowledge. I understand that, if all required parts of this application are not completed and that if all required supporting information and attachments are not included, this application package will be returned to me as incomplete. **Note:** In accordance with NC General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application may be subject to civil penalties up to \$25,000 per violation. (18 U.S.C. Section 1001 provides a punishment by a fine of not more than \$10,000 or imprisonment of not more than 5 years, or both for a similar offense.)

Printed Name of Signing Official (Landowner, or if multiple Landowners all landowners should sign. If Landowner is a corporation, signature should be by a principal executive officer of the corporation):

Name: BENSON FARMS INC. Title: PRESIDENT

Signature: Oran M Benson Date: 3/11/14

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

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

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

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

THE COMPLETED APPLICATION SHOULD BE SENT TO THE FOLLOWING ADDRESS:

**NCDENR-DWR**  
**Animal Feeding Operations Branch**  
**1636 Mail Service Center**  
**Raleigh, North Carolina 27699-1636**

**Telephone number: (919) 807-6464**  
**E-mail: [animalpermits@ncdenr.gov](mailto:animalpermits@ncdenr.gov)**



# Nutrient Management Plan For Animal Waste Utilization

06-10-2013

## This plan has been prepared for:

Off-Site 7694  
Oran Benson  
192 Topping Loop Road  
Pantego, NC 27860  
252-943-3546

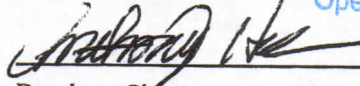
## This plan has been developed by:

Anthony Hester  
Beaufort SWCD  
155 C Airport Road  
Washington, NC 27889  
252-946-4989 Ext. 3

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MAR 21 2014

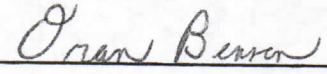
Water Quality Regional  
Operations Section

  
Developer Signature

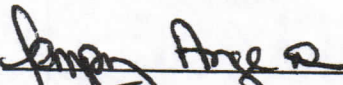
Type of Plan: Nitrogen Only with Manure Only

## Owner/Manager/Producer Agreement

I (we) understand and agree to the specifications and the operation and maintenance procedures established in this nutrient management plan which includes an animal waste utilization plan for the farm named above. I have read and understand the Required Specifications concerning animal waste management that are included with this plan.

  
Signature (owner)

3/12/14  
Date

  
Signature (manager or producer)

8-30-13  
Date

This plan meets the minimum standards and specifications of the U.S. Department of Agriculture - Natural Resources Conservation Service or the standard of practices adopted by the Soil and Water Conservation Commission.

Plan Approved By:

  
Technical Specialist Signature

7/22/13  
Date

**Nutrients applied in accordance with this plan will be supplied from the following source(s):**

Commercial Fertilizer is not included in this plan.

|   |   |                          |                            |                                 |                                   |
|---|---|--------------------------|----------------------------|---------------------------------|-----------------------------------|
| S33   | Swine Weanling-Feeder Liquid Manure Slurry waste generated 266,000 gals/year by a 1,750 animal Swine Weanling-Feeder Liquid Manure Slurry operation. This production facility has waste storage capacities of approximately 180 days. |                          |                            |                                 |                                   |
| Estimated Pounds of Plant Available Nitrogen Generated per Year |   |                          |                            |                                 |                                   |
| Broadcast   | 3354  |                          |                            |                                 |                                   |
| Incorporated  | 5399  |                          |                            |                                 |                                   |
| Injected  | 6380  |                          |                            |                                 |                                   |
| Irrigated   | 2781  |                          |                            |                                 |                                   |
|   | Max. Avail. PAN (lbs) *   | Actual PAN Applied (lbs) | PAN Surplus/ Deficit (lbs) | Actual Volume Applied (Gallons) | Volume Surplus/ Deficit (Gallons) |
| Year 1  | 2,781   | 2795                     | -14                        | 267,335                         | -1,335                            |
| Year 2  | 2,781   | 2786                     | -5                         | 266,502                         | -502                              |

|   |   |                             |                               |                                    |                                      |
|---|---|-----------------------------|-------------------------------|------------------------------------|--------------------------------------|
| S34   | Swine Feeder-Finish Liquid Manure Slurry waste generated 3,304,400 gals/year by a 4,400 animal Swine Feeder-Finish Liquid Manure Slurry operation. This production facility has waste storage capacities of approximately 180 days. |                             |                               |                                    |                                      |
| Estimated Pounds of Plant Available Nitrogen Generated per Year |   |                             |                               |                                    |                                      |
| Broadcast   |   |                             | 41662                         |                                    |                                      |
| Incorporated  |   |                             | 67066                         |                                    |                                      |
| Injected  |   |                             | 79259                         |                                    |                                      |
| Irrigated   |   |                             | 34549                         |                                    |                                      |
|   | Max. Avail.<br>PAN (lbs) *  | Actual PAN<br>Applied (lbs) | PAN Surplus/<br>Deficit (lbs) | Actual Volume<br>Applied (Gallons) | Volume Surplus/<br>Deficit (Gallons) |
| Year 1  | 34,549  | 34571                       | -22                           | 3,306,522                          | -2,122                               |
| Year 2  | 34,549  | 34629                       | -80                           | 3,312,039                          | -7,639                               |

Note: In source ID, S means standard source, U means user defined source.

\* Max. Available PAN is calculated on the basis of the actual application method(s) identified in the plan for this source.



The table shown below provides a summary of the crops or rotations included in this plan for each field. Realistic Yield estimates are also provided for each crop in the plan. In addition, the Leaching Index for each field is shown, where available.

### Planned Crops Summary

| Tract | Field | Total Acres | Useable Acres | Leaching Index | Soil Series | Crop Sequence                  | RYE     |
|-------|-------|-------------|---------------|----------------|-------------|--------------------------------|---------|
| 2938  | 1     | 18.89       | 15.90         | N/A            | Portsmouth  | Corn, Grain                    | 135 bu. |
|       |       |             |               |                |             | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
| 2938  | 10    | 16.49       | 13.90         | N/A            | Portsmouth  | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
|       |       |             |               |                |             | Corn, Grain                    | 135 bu. |
| 2938  | 11    | 15.95       | 13.40         | N/A            | Portsmouth  | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
|       |       |             |               |                |             | Corn, Grain                    | 135 bu. |
| 2938  | 12    | 15.38       | 12.90         | N/A            | Portsmouth  | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
|       |       |             |               |                |             | Corn, Grain                    | 135 bu. |
| 2938  | 13    | 15.07       | 12.60         | N/A            | Portsmouth  | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
|       |       |             |               |                |             | Corn, Grain                    | 135 bu. |
| 2938  | 14    | 16.33       | 13.70         | N/A            | Portsmouth  | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
|       |       |             |               |                |             | Corn, Grain                    | 135 bu. |
| 2938  | 15    | 15.45       | 12.90         | N/A            | Portsmouth  | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
|       |       |             |               |                |             | Corn, Grain                    | 135 bu. |
| 2938  | 2     | 15.62       | 13.10         | N/A            | Portsmouth  | Corn, Grain                    | 135 bu. |
|       |       |             |               |                |             | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
| 2938  | 3     | 17.18       | 14.40         | N/A            | Portsmouth  | Corn, Grain                    | 135 bu. |
|       |       |             |               |                |             | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
| 2938  | 4     | 17.35       | 14.60         | N/A            | Portsmouth  | Corn, Grain                    | 135 bu. |
|       |       |             |               |                |             | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
| 2938  | 5     | 16.29       | 13.70         | N/A            | Portsmouth  | Corn, Grain                    | 135 bu. |

### Planned Crops Summary

| Tract | Field | Total Acres | Useable Acres | Leaching Index | Soil Series | Crop Sequence                  | RYE     |
|-------|-------|-------------|---------------|----------------|-------------|--------------------------------|---------|
|       |       |             |               |                |             | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
| 2938  | 6     | 7.71        | 6.50          | N/A            | Portsmouth  | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
|       |       |             |               |                |             | Corn, Grain                    | 135 bu. |
| 2938  | 8     | 15.93       | 13.40         | N/A            | Portsmouth  | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
|       |       |             |               |                |             | Corn, Grain                    | 135 bu. |
| 2938  | 9     | 16.12       | 13.50         | N/A            | Portsmouth  | Wheat, Grain                   | 60 bu.  |
|       |       |             |               |                |             | Soybeans, Manured, Double Crop | 38 bu.  |
|       |       |             |               |                |             | Corn, Grain                    | 135 bu. |

PLAN TOTALS: 219.76 184.50

| LI           | Potential Leaching   | Technical Guidance   |
|--------------|--|--|
| < 2          | Low potential to contribute to soluble nutrient leaching below the root zone.      | None   |
| >= 2 & <= 10 | Moderate potential to contribute to soluble nutrient leaching below the root zone. | Nutrient Management (590) should be planned.   |
| > 10         | High potential to contribute to soluble nutrient leaching below the root zone.     | Nutrient Management (590) should be planned. Other conservation practices that improve the soils available water holding capacity and improve nutrient use efficiency should be considered. Examples are Cover Crops (340) to scavenge nutrients, Sod-Based Rotations (328), Long-Term No-Till (778), and edge-of-field practices such as Filter Strips (393) and Riparian Forest Buffers (391). |



The Waste Utilization table shown below summarizes the waste utilization plan for this operation. This plan provides an estimate of the number of acres of cropland needed to use the nutrients being produced. The plan requires consideration of the realistic yields of the crops to be grown, their nutrient requirements, and proper timing of applications to maximize nutrient uptake.

This table provides an estimate of the amount of nitrogen required by the crop being grown and an estimate of the nitrogen amount being supplied by manure or other by-products, commercial fertilizer and residual from previous crops. An estimate of the quantity of solid and liquid waste that will be applied on each field in order to supply the indicated quantity of nitrogen from each source is also included. A balance of the total manure produced and the total manure applied is included in the table to ensure that the plan adequately provides for the utilization of the manure generated by the operation.

Waste Utilization Table

Year 1

| Tract | Field | Source ID | Soil Series | Total Acres | Use Acres | Crop                           | RYE     | Applic. Period | Nitrogen PA Nutrient Req'd (lbs/A) | Comm. Fert. Nutrient Applied (lbs/A) | Res. (lbs/A) | Applic. Method | Manure PA Nutrient Applied (lbs/A) | Liquid Manure Applied (acre) | Solid Manure Applied (acre) | Liquid Manure Applied (Field) | Solid Manure Applied (Field) |
|-------|-------|-----------|-------------|-------------|-----------|--------------------------------|---------|----------------|------------------------------------|--------------------------------------|--------------|----------------|------------------------------------|------------------------------|-----------------------------|-------------------------------|------------------------------|
|       |       |           |             |             |           |                                |         |                | N                                  | N                                    | N            |                | N                                  | 1000 gal/A                   | Tons                        | 1000 gals                     | tons                         |
| 2938  | 1     | S34       | Portsmouth  | 18.89       | 15.90     | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 0            | Irrig.         | 150                                | 14.35                        | 0.00                        | 228.11                        | 0.00                         |
| 2938  | 1     | S34       | Portsmouth  | 18.89       | 15.90     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 48                                 | 4.63                         | 0.00                        | 73.60                         | 0.00                         |
| 2938  | 10    | S34       | Portsmouth  | 16.49       | 13.90     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 61                                 | 5.79                         | 0.00                        | 80.43                         | 0.00                         |
| 2938  | 10    | S34       | Portsmouth  | 16.49       | 13.90     | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 196.76                        | 0.00                         |
| 2938  | 11    | S34       | Portsmouth  | 15.95       | 13.40     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 51                                 | 4.83                         | 0.00                        | 64.72                         | 0.00                         |
| 2938  | 11    | S34       | Portsmouth  | 15.95       | 13.40     | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 189.68                        | 0.00                         |
| 2938  | 12    | S34       | Portsmouth  | 15.38       | 12.90     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 67                                 | 6.37                         | 0.00                        | 82.11                         | 0.00                         |
| 2938  | 12    | S34       | Portsmouth  | 15.38       | 12.90     | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 182.60                        | 0.00                         |
| 2938  | 13    | S33       | Portsmouth  | 15.07       | 12.60     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 61                                 | 5.79                         | 0.00                        | 72.91                         | 0.00                         |
| 2938  | 13    | S34       | Portsmouth  | 15.07       | 12.60     | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 178.36                        | 0.00                         |
| 2938  | 14    | S34       | Portsmouth  | 16.33       | 13.70     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 97                                 | 9.26                         | 0.00                        | 126.84                        | 0.00                         |
| 2938  | 14    | S34       | Portsmouth  | 16.33       | 13.70     | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 193.93                        | 0.00                         |
| 2938  | 15    | S33       | Portsmouth  | 15.45       | 12.90     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 121                                | 11.57                        | 0.00                        | 149.29                        | 0.00                         |
| 2938  | 15    | S34       | Portsmouth  | 15.45       | 12.90     | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 182.60                        | 0.00                         |
| 2938  | 2     | S34       | Portsmouth  | 15.62       | 13.10     | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 0            | Irrig.         | 150                                | 14.35                        | 0.00                        | 187.94                        | 0.00                         |
| 2938  | 2     | S34       | Portsmouth  | 15.62       | 13.10     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 0                                  | 0.00                         | 0.00                        | 0.00                          | 0.00                         |



Waste Utilization Table

Year 1

| Tract                        | Field | Source ID | Soil Series | Total Acres | Use Acres | Crop                           | RYE     | Applic. Period | Nitrogen PA Nutrient Req'd (lbs/A) | Comm. Fert. Nutrient Applied (lbs/A) | Res. (lbs/A) | Applic. Method | Manure PA Nutrient Applied (lbs/A) | Liquid Manure Applied (acre) | Solid Manure Applied (acre) | Liquid Manure Applied (Field) | Solid Manure Applied (Field) |
|------------------------------|-------|-----------|-------------|-------------|-----------|--------------------------------|---------|----------------|------------------------------------|--------------------------------------|--------------|----------------|------------------------------------|------------------------------|-----------------------------|-------------------------------|------------------------------|
|                              |       |           |             |             |           |                                |         |                | N                                  | N                                    | N            |                | N                                  | 1000 gal/A                   | Tons                        | 1000 gals                     | tons                         |
| 2938                         | 3     | S34       | Portsmouth  | 17.18       | 14.40     | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 0            | Irrig.         | 150                                | 14.35                        | 0.00                        | 206.59                        | 0.00                         |
| 2938                         | 3     | S34       | Portsmouth  | 17.18       | 14.40     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 48                                 | 4.63                         | 0.00                        | 66.66                         | 0.00                         |
| 2938                         | 4     | S34       | Portsmouth  | 17.35       | 14.60     | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 0            | Irrig.         | 150                                | 14.35                        | 0.00                        | 209.46                        | 0.00                         |
| 2938                         | 4     | S34       | Portsmouth  | 17.35       | 14.60     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 0                                  | 0.00                         | 0.00                        | 0.00                          | 0.00                         |
| 2938                         | 5     | S34       | Portsmouth  | 16.29       | 13.70     | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 0            | Irrig.         | 150                                | 14.35                        | 0.00                        | 196.55                        | 0.00                         |
| 2938                         | 5     | S34       | Portsmouth  | 16.29       | 13.70     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 0                                  | 0.00                         | 0.00                        | 0.00                          | 0.00                         |
| 2938                         | 6     | S33       | Portsmouth  | 7.71        | 6.50      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 73                                 | 6.94                         | 0.00                        | 45.13                         | 0.00                         |
| 2938                         | 6     | S34       | Portsmouth  | 7.71        | 6.50      | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 92.01                         | 0.00                         |
| 2938                         | 8     | S34       | Portsmouth  | 15.93       | 13.40     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 73                                 | 6.94                         | 0.00                        | 93.05                         | 0.00                         |
| 2938                         | 8     | S34       | Portsmouth  | 15.93       | 13.40     | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 189.68                        | 0.00                         |
| 2938                         | 9     | S34       | Portsmouth  | 16.12       | 13.50     | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 73                                 | 6.94                         | 0.00                        | 93.74                         | 0.00                         |
| 2938                         | 9     | S34       | Portsmouth  | 16.12       | 13.50     | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 191.10                        | 0.00                         |
| Total Applied, 1000 gallons  |       |           |             |             |           |                                |         |                |                                    |                                      |              |                |                                    |                              |                             | 3,573.86                      |                              |
| Total Produced, 1000 gallons |       |           |             |             |           |                                |         |                |                                    |                                      |              |                |                                    |                              |                             | 3,570.40                      |                              |
| Balance, 1000 gallons        |       |           |             |             |           |                                |         |                |                                    |                                      |              |                |                                    |                              |                             | -3.46                         |                              |
| Total Applied, tons          |       |           |             |             |           |                                |         |                |                                    |                                      |              |                |                                    |                              |                             |                               | 0.00                         |
| Total Produced, tons         |       |           |             |             |           |                                |         |                |                                    |                                      |              |                |                                    |                              |                             |                               | 0.00                         |
| Balance, tons                |       |           |             |             |           |                                |         |                |                                    |                                      |              |                |                                    |                              |                             |                               | 0.00                         |

Notes: 1. In the tract column, ~ symbol means leased, otherwise, owned. 2. Symbol \* means user entered data.



## Waste Utilization Table

Year 2

| Tract | Field | Source ID | Soil Series | Total Acres | Use. Acres | Crop                           | RYE     | Applic. Period | Nitrogen PA Nutrient Req'd (lbs/A) | Comm. Fert. Nutrient Applied (lbs/A) | Res. (lbs/A) | Applic. Method | Manure PA Nutrient Applied (lbs/A) | Liquid Manure Applied (acre) | Solid Manure Applied (acre) | Liquid Manure Applied (Field) | Solid Manure Applied (Field) |
|-------|-------|-----------|-------------|-------------|------------|--------------------------------|---------|----------------|------------------------------------|--------------------------------------|--------------|----------------|------------------------------------|------------------------------|-----------------------------|-------------------------------|------------------------------|
|       |       |           |             |             |            |                                |         |                | N                                  | N                                    | N            |                | N                                  | 1000 gal/A                   | Tons                        | 1000 gals                     | tons                         |
| 2938  | 1     | S34       | Portsmouth  | 18.89       | 15.90      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 73                                 | 6.94                         | 0.00                        | 110.41                        | 0.00                         |
| 2938  | 1     | S34       | Portsmouth  | 18.89       | 15.90      | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 225.07                        | 0.00                         |
| 2938  | 10    | S34       | Portsmouth  | 16.49       | 13.90      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 61                                 | 5.79                         | 0.00                        | 80.43                         | 0.00                         |
| 2938  | 10    | S34       | Portsmouth  | 16.49       | 13.90      | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 130                                | 12.43                        | 0.00                        | 172.83                        | 0.00                         |
| 2938  | 11    | S34       | Portsmouth  | 15.95       | 13.40      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 20           | Irrig.         | 51                                 | 4.83                         | 0.00                        | 64.72                         | 0.00                         |
| 2938  | 11    | S34       | Portsmouth  | 15.95       | 13.40      | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 130                                | 12.43                        | 0.00                        | 166.61                        | 0.00                         |
| 2938  | 12    | S34       | Portsmouth  | 15.38       | 12.90      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 54                                 | 5.21                         | 0.00                        | 67.18                         | 0.00                         |
| 2938  | 12    | S34       | Portsmouth  | 15.38       | 12.90      | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 130                                | 12.43                        | 0.00                        | 160.40                        | 0.00                         |
| 2938  | 13    | S33       | Portsmouth  | 15.07       | 12.60      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 61                                 | 5.79                         | 0.00                        | 72.91                         | 0.00                         |
| 2938  | 13    | S34       | Portsmouth  | 15.07       | 12.60      | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 130                                | 12.43                        | 0.00                        | 156.67                        | 0.00                         |
| 2938  | 14    | S34       | Portsmouth  | 16.33       | 13.70      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 24                                 | 2.31                         | 0.00                        | 31.71                         | 0.00                         |
| 2938  | 14    | S34       | Portsmouth  | 16.33       | 13.70      | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 130                                | 12.43                        | 0.00                        | 170.34                        | 0.00                         |
| 2938  | 15    | S33       | Portsmouth  | 15.45       | 12.90      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 0                                  | 0.00                         | 0.00                        | 0.00                          | 0.00                         |
| 2938  | 15    | S33       | Portsmouth  | 15.45       | 12.90      | Corn, Grain                    | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 130                                | 12.43                        | 0.00                        | 160.40                        | 0.00                         |
| 2938  | 2     | S34       | Portsmouth  | 15.62       | 13.10      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 121                                | 11.57                        | 0.00                        | 151.61                        | 0.00                         |
| 2938  | 2     | S34       | Portsmouth  | 15.62       | 13.10      | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 185.43                        | 0.00                         |
| 2938  | 3     | S34       | Portsmouth  | 17.18       | 14.40      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 73                                 | 6.94                         | 0.00                        | 99.99                         | 0.00                         |
| 2938  | 3     | S34       | Portsmouth  | 17.18       | 14.40      | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 203.84                        | 0.00                         |
| 2938  | 4     | S34       | Portsmouth  | 17.35       | 14.60      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 121                                | 11.57                        | 0.00                        | 168.97                        | 0.00                         |
| 2938  | 4     | S34       | Portsmouth  | 17.35       | 14.60      | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 206.67                        | 0.00                         |
| 2938  | 5     | S34       | Portsmouth  | 16.29       | 13.70      | Wheat, Grain                   | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 121                                | 11.57                        | 0.00                        | 158.55                        | 0.00                         |
| 2938  | 5     | S34       | Portsmouth  | 16.29       | 13.70      | Soybeans, Manured, Double Crop | 38 bu.  | 4/1-9/15       | 148                                | 0                                    | 0            | Irrig.         | 148                                | 14.16                        | 0.00                        | 193.93                        | 0.00                         |



Waste Utilization Table

Year 2

| Tract                        | Field | Source ID | Soil Series | Total Acres | Use. Acres | Crop         | RYE     | Applic. Period | Nitrogen PA Nutrient Req'd (lbs/A) | Comm. Fert. Nutrient Applied (lbs/A) | Res. (lbs/A) | Applic. Method | Manure PA Nutrient Applied (lbs/A) | Liquid Manure Applied (acre) | Solid Manure Applied (acre) | Liquid Manure Applied (Field) | Solid Manure Applied (Field) |
|------------------------------|-------|-----------|-------------|-------------|------------|--------------|---------|----------------|------------------------------------|--------------------------------------|--------------|----------------|------------------------------------|------------------------------|-----------------------------|-------------------------------|------------------------------|
|                              |       |           |             |             |            |              |         |                | N                                  | N                                    | N            |                | N                                  | 1000 gal/A                   | Tons                        | 1000 gals                     | tons                         |
| 2938                         | 6     | S33       | Portsmouth  | 7.71        | 6.50       | Wheat, Grain | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 48                                 | 4.63                         | 0.00                        | 30.09                         | 0.00                         |
| 2938                         | 6     | S33       | Portsmouth  | 7.71        | 6.50       | Corn, Grain  | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 5                                  | 0.48                         | 0.00                        | 3.11                          | 0.00                         |
| 2938                         | 6     | S34       | Portsmouth  | 7.71        | 6.50       | Corn, Grain  | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 125                                | 11.96                        | 0.00                        | 77.71                         | 0.00                         |
| 2938                         | 8     | S34       | Portsmouth  | 15.93       | 13.40      | Wheat, Grain | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 48                                 | 4.63                         | 0.00                        | 62.03                         | 0.00                         |
| 2938                         | 8     | S34       | Portsmouth  | 15.93       | 13.40      | Corn, Grain  | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 130                                | 12.43                        | 0.00                        | 166.61                        | 0.00                         |
| 2938                         | 9     | S34       | Portsmouth  | 16.12       | 13.50      | Wheat, Grain | 60 bu.  | 9/1-4/30       | 121                                | 0                                    | 0            | Irrig.         | 48                                 | 4.63                         | 0.00                        | 62.49                         | 0.00                         |
| 2938                         | 9     | S34       | Portsmouth  | 16.12       | 13.50      | Corn, Grain  | 135 bu. | 2/15-6/30      | 150                                | 0                                    | 20           | Irrig.         | 130                                | 12.43                        | 0.00                        | 167.86                        | 0.00                         |
| Total Applied, 1000 gallons  |       |           |             |             |            |              |         |                |                                    |                                      |              |                |                                    |                              |                             | 3,578.54                      |                              |
| Total Produced, 1000 gallons |       |           |             |             |            |              |         |                |                                    |                                      |              |                |                                    |                              |                             | 3,570.40                      |                              |
| Balance, 1000 gallons        |       |           |             |             |            |              |         |                |                                    |                                      |              |                |                                    |                              |                             | -8.14                         |                              |
| Total Applied, tons          |       |           |             |             |            |              |         |                |                                    |                                      |              |                |                                    |                              |                             |                               | 0.00                         |
| Total Produced, tons         |       |           |             |             |            |              |         |                |                                    |                                      |              |                |                                    |                              |                             |                               | 0.00                         |
| Balance, tons                |       |           |             |             |            |              |         |                |                                    |                                      |              |                |                                    |                              |                             |                               | 0.00                         |

Notes: 1. In the tract column, ~ symbol means leased, otherwise, owned. 2. Symbol \* means user entered data.



The Irrigation Application Factors for each field in this plan are shown in the following table. Infiltration rate varies with soils. If applying waste nutrients through an irrigation system, you must apply at a rate that will not result in runoff. This table provides the maximum application rate per hour that may be applied to each field selected to receive wastewater. It also lists the maximum application amount that each field may receive in any one application event.

#### Irrigation Application Factors

| Tract | Field | Soil Series | Application Rate<br>(inches/hour) | Application Amount<br>(inches) |
|-------|-------|-------------|-----------------------------------|--------------------------------|
| 2938  | 1     | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 10    | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 11    | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 12    | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 13    | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 14    | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 15    | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 2     | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 3     | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 4     | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 5     | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 6     | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 8     | Portsmouth  | 0.45                              | 1.0                            |
| 2938  | 9     | Portsmouth  | 0.45                              | 1.0                            |

The Available Waste Storage Capacity table provides an estimate of the number of days of storage capacity available at the end of each month of the plan. Available storage capacity is calculated as the design storage capacity in days minus the number of days of net storage volume accumulated. The start date is a value entered by the user and is defined as the date prior to applying nutrients to the first crop in the plan at which storage volume in the lagoon or holding pond is equal to zero.

Available storage capacity should be greater than or equal to zero and less than or equal to the design storage capacity of the facility. If the available storage capacity is greater than the design storage capacity, this indicates that the plan calls for the application of nutrients that have not yet accumulated. If available storage capacity is negative, the estimated volume of accumulated waste exceeds the design storage volume of the structure. Either of these situations indicates that the planned application interval in the waste utilization plan is inconsistent with the structure's temporary storage capacity.

#### Available Waste Storage Capacity

| Source Name | Swine Feeder-Finish Liquid Manure Slurry |                                     | Design Storage Capacity (Days) |
|-------------|--|-------------------------------------|--------------------------------|
| Start Date  | 9/1                                      |                                     | 180                            |
| Plan Year   | Month                                    | Available Storage Capacity (Days) * |                                |
| 1           | 1  | 129                                 |                                |
| 1           | 2  | 127                                 |                                |
| 1           | 3  | 138                                 |                                |
| 1           | 4  | 180                                 |                                |
| 1           | 5  | 180                                 |                                |
| 1           | 6  | 180                                 |                                |
| 1           | 7  | 149                                 |                                |
| 1           | 8  | 118                                 |                                |
| 1           | 9  | 114                                 |                                |
| 1           | 10                                       | 83                                  |                                |
| 1           | 11                                       | 53                                  |                                |
| 1           | 12                                       | 22                                  |                                |
| 2           | 1  | 67                                  |                                |
| 2           | 2  | 157                                 |                                |
| 2           | 3  | 145                                 |                                |
| 2           | 4  | 180                                 |                                |
| 2           | 5  | 149                                 |                                |
| 2           | 6  | 119                                 |                                |
| 2           | 7  | 88                                  |                                |
| 2           | 8  | 57                                  |                                |
| 2           | 9  | 68                                  |                                |
| 2           | 10                                       | 37                                  |                                |
| 2           | 11                                       | 7                                   |                                |
| 2           | 12                                       | -24                                 |                                |

\* Available Storage Capacity is calculated as of the end of each month.



Available Waste Storage Capacity

| Source Name | Swine Weanling-Feeder Liquid Manure Slurry | Design Storage Capacity (Days)      |
|-------------|--|-------------------------------------|
| Start Date  | 9/1  | 180                                 |
| Plan Year   | Month                                      | Available Storage Capacity (Days) * |
| 1           | 1  | 180                                 |
| 1           | 2  | 152                                 |
| 1           | 3  | 121                                 |
| 1           | 4  | 91                                  |
| 1           | 5  | 60                                  |
| 1           | 6  | 30                                  |
| 1           | 7  | -1                                  |
| 1           | 8  | -32                                 |
| 1           | 9  | -62                                 |
| 1           | 10   | -93                                 |
| 1           | 11   | -123                                |
| 1           | 12   | -154                                |
| 2           | 1  | -185                                |
| 2           | 2  | -99                                 |
| 2           | 3  | -20                                 |
| 2           | 4  | -50                                 |
| 2           | 5  | -81                                 |
| 2           | 6  | -111                                |
| 2           | 7  | -142                                |
| 2           | 8  | -173                                |
| 2           | 9  | -62                                 |
| 2           | 10   | -93                                 |
| 2           | 11   | -123                                |
| 2           | 12   | -154                                |

\* Available Storage Capacity is calculated as of the end of each month.

## **Required Specifications For Animal Waste Management**

- 1. Animal waste shall not reach surface waters of the state by runoff, drift, manmade conveyances, direct application, or direct discharge during operation or land application. Any discharge of waste that reaches surface water is prohibited.**
- 2. There must be documentation in the design folder that the producer either owns or has an agreement for use of adequate land on which to properly apply the waste. If the producer does not own adequate land to properly dispose of the waste, he/she shall provide evidence of an agreement with a landowner, who is within a reasonable proximity, allowing him/her the use of the land for waste application. It is the responsibility of the owner of the waste production facility to secure an update of the Nutrient Management Plan when there is a change in the operation, increase in the number of animals, method of application, receiving crop type, or available land.**
- 3. Animal waste shall be applied to meet, but not exceed, the nitrogen needs for realistic crop yields based upon soil type, available moisture, historical data, climatic conditions, and level of management, unless there are regulations that restrict the rate of applications for other nutrients.**
- 4. Animal waste shall be applied to land eroding less than 5 tons per acre per year. Waste may be applied to land eroding at more than 5 tons per acre per year but less than 10 tons per acre per year provided grass filter strips are installed where runoff leaves the field (see USDA, NRCS Field Office Technical Guide Standard 393 - Filter Strips).**
- 5. Odors can be reduced by injecting the waste or by disking after waste application. Waste should not be applied when there is danger of drift from the land application field.**
- 6. When animal waste is to be applied on acres subject to flooding, waste will be soil incorporated on conventionally tilled cropland. When waste is applied to conservation tilled crops or grassland, the waste may be broadcast provided the application does not occur during a season prone to flooding (see "Weather and Climate in North Carolina" for guidance).**



## Crop Notes

The following crop note applies to field(s): 1, 10, 11, 12, 13, 14, 15, 2, 3, 4, 5, 6, 8, 9

### Corn CP, Organic Soils

In the Coastal Plain, corn is normally planted when soil temperatures reach 52 to 55 degrees fahrenheit. Review the Official Variety "green book" and information from private companies to select a high yielding variety with the characteristics needed for your area and conditions. Plant 1-2" deep. Plant populations should be determined by the hybrid being planted. Increase the seeding rate by 10% when planting no-till. Phosphorus and potassium recommended by a soil test can be broadcast or banded at planting. When planting early in cool, wet soil, banded phosphorus will be more available to the young plants. An accepted practice is to apply 20-30 lbs/acre N and 20-30 lbs/acre phosphorus banded as a starter and one-half the remaining N behind the planter. The rest of the N should be applied about 30-40 days after emergence. The total amount of N is dependent on soil type. When including a starter in the fertilizer program, the recommended potassium and any additional phosphorus is normally broadcast at planting. Plant samples can be analyzed during the growing season to monitor the overall nutrient status of the corn. Timely management of weeds and insects are essential for corn production.

The following crop note applies to field(s): 1, 10, 11, 12, 13, 14, 15, 2, 3, 4, 5, 6, 8, 9

### Wheat: Coastal Plain, Organic Soils

In the Coastal Plain, wheat should be planted from October 20-November 25. Plant 22 seed/drill row foot at 1-1 1/2" deep and increase the seeding rate by 5% for each week seeding is delayed beyond the optimum time. See the seeding rates table for applicable seeding rate modifications in the current NCSU "Small Grain Production Guide". Also, increase the initial seeding rate by at least 10% when planting no-till. Adequate depth control when planting the wheat is essential. Review the NCSU Official Variety "green book" and information from private companies to select a high yielding variety with the characteristics needed for your area and conditions. Apply no more than 30 lbs/acre N at planting. Phosphorus and potash recommended by a soil test report can also be applied at this time. The remaining N should be applied during the months of February-March. The total N is dependent on the soil type. Plant samples can be analyzed during the growing season to monitor the nutrient status of the wheat. Timely management of diseases, insects and weeds are essential for profitable wheat production.

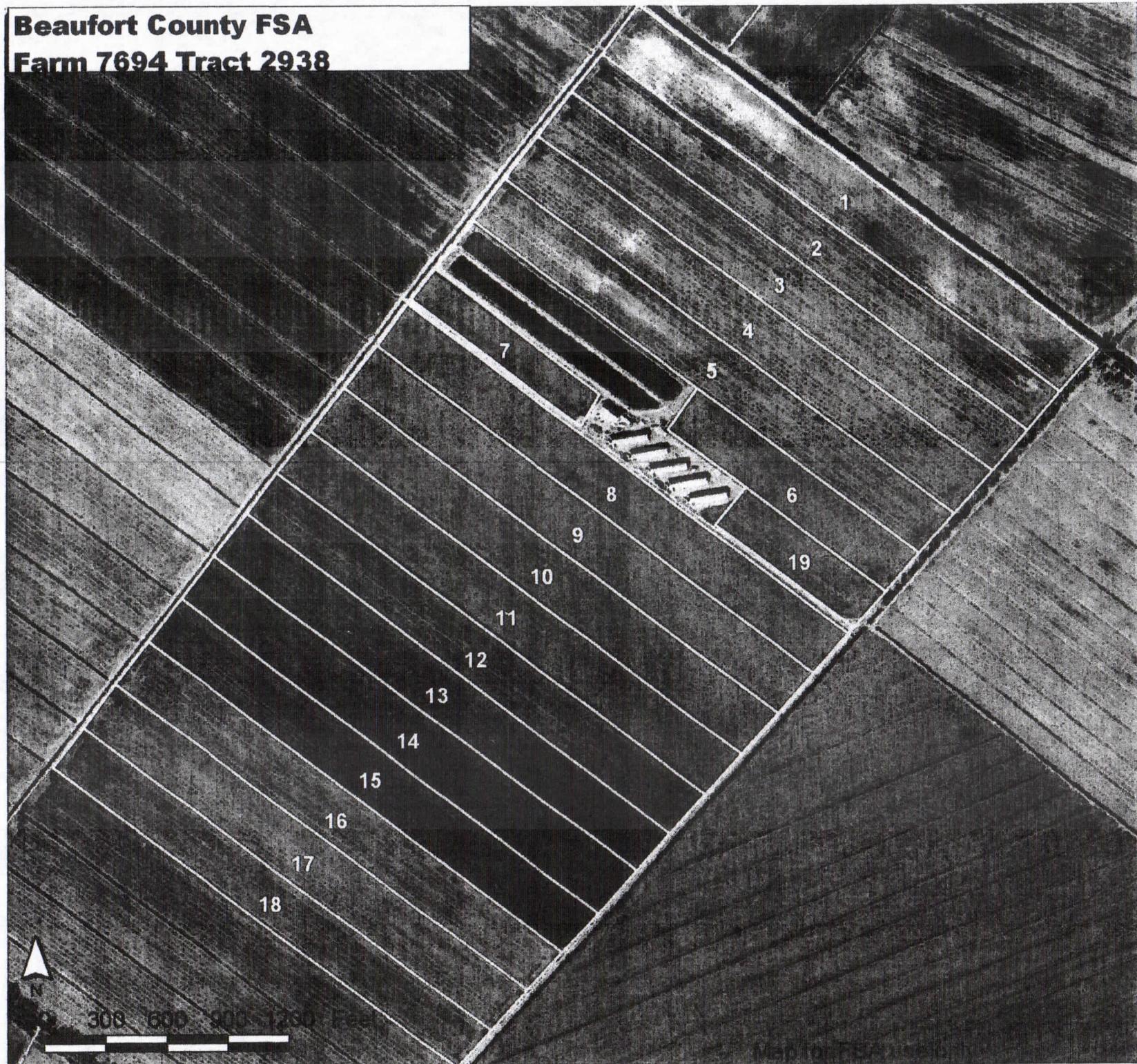
The following crop note applies to field(s): 1, 10, 11, 12, 13, 14, 15, 2, 3, 4, 5, 6, 8, 9

Double-Crop Soybeans, Coastal Plain: Organic Soils

Double-crop soybeans should be planted as early in June as possible with planting completed by July 4th. When no-tilling soybeans in small grain straw, it is essential to manage the straw to achieve adequate plant populations. Review the NCSU Official Variety "green book" and information from private companies to select a high yielding variety with the characteristics needed for your area and conditions. Plant 2-4 seed/row foot for 7-8" drills; 4-6 seed/row foot for 15" rows; 6-8 seed/row foot for 30" rows and 8-10 seed/row foot for 36" rows. Increase the seeding rate by at least 10% for no-till planting. Seeding depth should be 1-1 1/2" and adequate depth control is essential. Phosphorus and potash recommended for the soybeans can be applied to the wheat in the Fall. For soils such as----- phosphorus should be applied at planting as phosphorus will leach from these soils. Soybeans produce their own nitrogen and are normally grown without additions of nitrogen. However, applications of 20-30 lbs/acre N are sometimes made at planting to promote early growth and vigor. Tissue samples can be analyzed during the growing season to monitor the overall nutrient status of the soybeans. Timely management of weeds and insects is essential for profitable double crop soybean production.



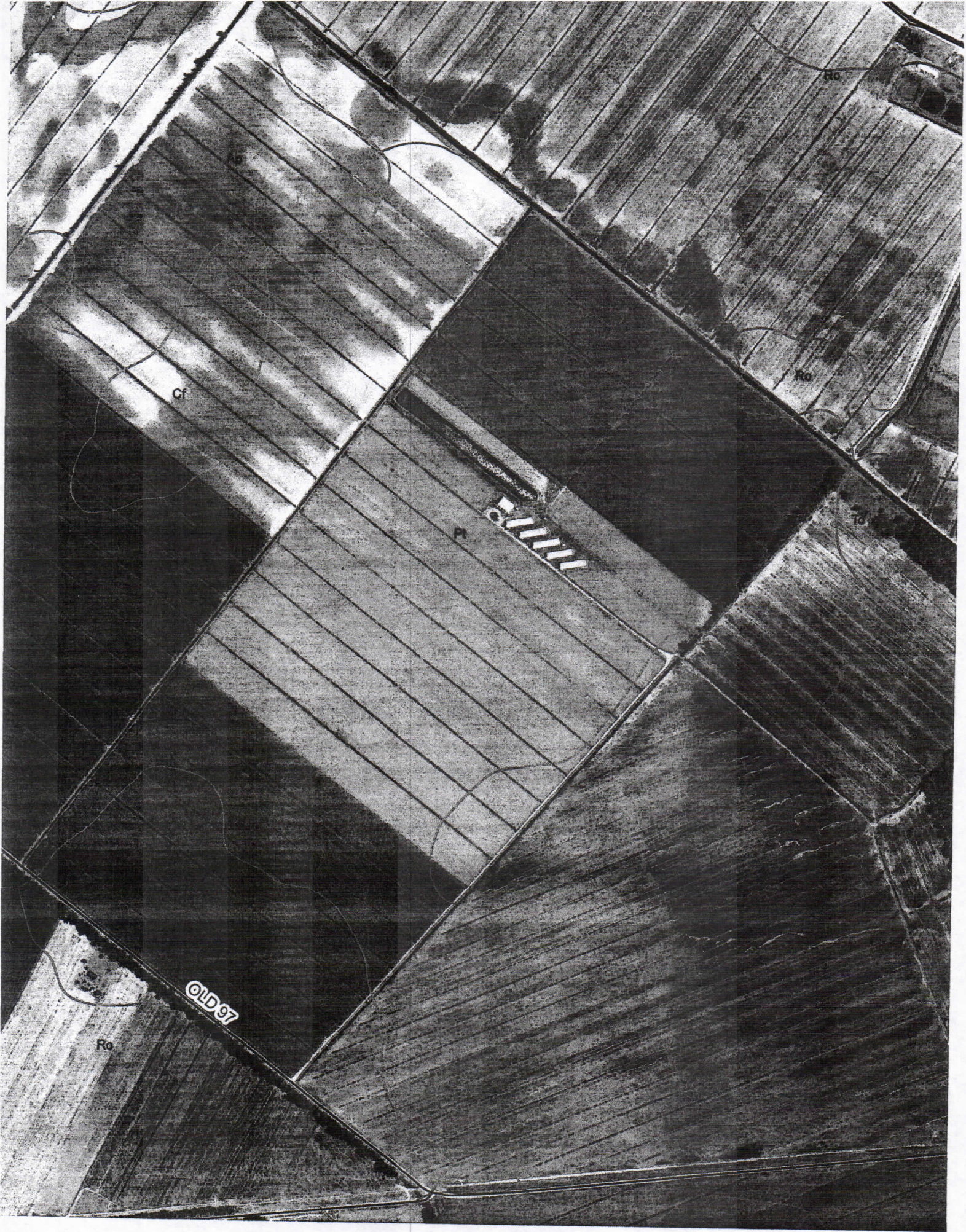
**Beaufort County FSA  
Farm 7694 Tract 2938**



| Parcel | Acres | Crop | HEL |
|--------|-------|------|-----|
| 1      | 18.89 | 15.9 | N   |
| 2      | 15.62 | 13.1 | N   |
| 3      | 17.18 | 14.4 | N   |
| 4      | 17.35 | 14.6 | N   |
| 5      | 16.29 | 13.7 | N   |
| 6      | 7.71  | 6.5  | N   |
| 7      | 4.39  | 8.1  | N   |
| 8      | 15.93 | 13.4 | N   |
| 9      | 16.12 | 13.5 | N   |
| 10     | 16.49 | 13.9 | N   |
| 11     | 15.95 | 13.4 | N   |
| 12     | 15.38 | 12.9 | N   |
| 13     | 15.07 | 12.6 | N   |
| 14     | 16.33 | 13.7 | N   |
| 15     | 15.45 | 12.9 | N   |
| 16     | 15.13 |      | N   |
| 17     | 15.52 |      | N   |
| 18     | 14.22 |      | N   |
| 19     | 4.62  |      | N   |

**Total Cropland Acres  
273.6**





OLD 97

Ro

P

Ro

Ro