Turn Rows

A newsletter covering the Southern Piedmont of North Carolina

March 2013

Volume 7: Issue 2

Union County, 3230-D Presson Road Monroe NC 28112 704-283-3739 www.union.ces.ncsu.edu

Stanly County, 26032-E Newt Road Albemarle NC 28001 704-983-3987 www.stanly.ces.ncsu.edu

Anson County, 501 McLaurin Street Wadesboro NC 28170 704-694-2915 www.anson.ces.ncsu.edu

Topics:

- Wheat Tissue Sampling
- Cereal Leaf Beetle
- Soil Health
- Winter Burn-down/ Residuals

Contact:

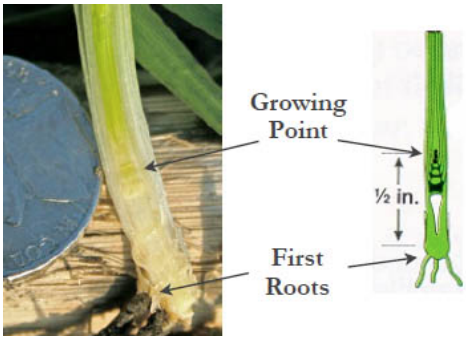
Jessica Anderson
Extension Agent-Anson
Agriculture
jessica_a_anderson@ncsu.edu

Andrew Baucom
Extension Agent-Union, Stanley
Agriculture
andrew_baucom@ncsu.edu

Wheat Tissue Samples

Wheat tissue samples assure proper spring nitrogen rates. Properly timed nitrogen applications are essential to the growth and development of wheat. To determine this rate, collect wheat tissue and biomass samples at growth stage 30 (GS-30) and submit them to the NCDA&CS Division Plant/Waste/Solution/Media Section for testing.

Wheat growth and development varies with conditions such as planting date and weather. Therefore, the timing of tissue sampling to determine nitrogen need is not based on a specific calendar date but should coincide with wheat reaching GS-30. To make this determination, note when wheat begins to stand up tall and straight, and then pull several plants. Carefully split the stems from the top to the base and look for the growing point.



- the **tissue** samples include whole wheat plants cut about half and inch above ground from 20-30 areas throughout the field. remove dead leaves and weeds. two large fistfuls usually make up a good sample.
- The **biomass** sample contains all the above-ground wheat tissue from one 36inch section of a row. in broadcast fields collect all plants from one square yard. place biomass sample in separate paper bag from tissue sample. label both samples.

The plant sample information sheet is located at this link: http://www.ncagr.gov/agronomi/pdffiles/isplant.pdf

NC State University
A&T State University
COOPERATIVE EXTENSION
Empowering People · Providing Solutions

Cereal Leaf Beetle

Scouting:

- take samples from a minimum 10 sites in the interior of the field. at each site examine 10 stems for eggs and larvae. this will result in 100 stems per field being examined.
- eggs may be on the leaves near the ground. record the number of eggs and larvae counted at each sample site and then calculate the total number of eggs and larvae found in the field.
- if there are more eggs than larvae, scout again in 5-7 days. this is important because egg mortality can be very high. a large number of egg population doesn't mean a high larvae population.
- if there are more larvae than eggs, there is not reason to scout again. a decision about applying insecticide for cereal leaf beetle control can now be made.

Threshold:

When the scouting results show that there are more larvae than eggs, peak egg laying has passed and it is the correct time to use the spray threshold. If there are 25 or more eggs plus larvae on 100 stems, the threshold has been met.

Insecticide Class	Active Ingredient	Trade Name	Formulation/A
Carbamates	methomyl	Lannate LV	0.75 to 1.5 pt
		Lannate SP	0.25 to 0.5 lb
Organophosphates	malathion	Malathion 57 EC	1.5 pt
Pyrethroids	beta-cyfluthrin	Baythroid XL	1.6 to 2.8 fl oz
	lambda-cyhalothrin	Karate Z or Warrior II	1.28 to 1.92 fl oz
	zeta-cypermethrin	Mustang Max EC	1.6 to 4 fl oz
Spinosyns	spinosad	Tracer Naturalyte	1 to 3 fl oz

Soil Health

In Case You Missed It…… Dr. Carl Crozier, NCSU Soil Scientist Summary

Corn Summary

Several research studies conducted by the NCSU specialists from across the state were discussed, starting with Nitrogen rate responses and row widths in corn. There were significant N rate responses found through the research, although the degree of response differed among sites, which were located throughout the state. When looking at short term tests (only a couple years) there is often substantial residual N affecting the results, however when looking at long term N deficiency, a severe yield reduction is observed. When it comes to row width and the timing interaction, narrow row side-dress N application had the highest overall yields, when compared to narrow rows at planting and wide rows side-dress and at planting.

When considering both phosphorous and potassium, deficiencies result in a substantial yield reduction. Phosphorous deficiency will depend on site differences and soil texture.

Poultry Litter

Litter can come from many different sources and in many different ways. The composition of litter will depend on whether it came from turkeys, broilers or layers, whether it is litter, fresh or composted, and also be variable depending on the poultry diet, management and storage methods. Because of the variability of the product, the amount of nutrients that litter can provide to the soil varies considerably. Several recent studies that analyzed the nutrients available in various types of litter were compiled. **Figure 1** shows the amount of available nutrients in lbs/ ton.

Source	Nitrogen	Phosphorous	Potassium	Sulfur	Zinc
Broiler litter	27	33	44	10	1
Layer manure compost	40	34	35	5	0.4
Fresh layer manure	66	38	36	11	1
Turkey litter compost	12	11	4	18	0

When it comes to wheat, there is a wide application window when it comes to utilizing poultry litter, from pre-plant to pre-joint. However, most litters have a relatively low N availability for wheat (<50%) possibly due to lower temperatures. There is a potential to utilize both manure and inorganic N top-dressed to maximize yields.

With corn, the Nitrogen availability is more similar to the standard, around 50-60%. When studied over several years, there was still some residual nitrogen from the litter in 2nd and 3rd year crops. When litter was studied on cotton, erratic Nitrogen responses were seen, without a pattern emerging to predict the effects of litter.

Winter Burndown and Residuals

- First application should have been made in December thru January.
- Second application should be made in March thru early April.
- Burndown products: Glyphosate, Gramoxone, Liberty
- Several residual options for both applications: Leadoff, Valor, Sharpen, Canopy
- Keys to success:

1. burndown in both applications
2. growth regulator in 2nd application for added control
3. do not use 2 of the same modes of action

NORTH CAROLINA STATE UNIVERSITY
NC STATE UNIVERSITY

North Carolina Cooperative Extension Service
Anson County Center
501 McLaurin Street
Wadesboro, North Carolina 28170