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The University of Georgia

## Cooperative Extension Service

### College of Agricultural and Environmental Sciences

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# Georgia Pecan Nut News

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cool spring) favoring more scab on this variety for whatever reason. Insect damage has been light across the state for much of the year. As I write this weevils are beginning to emerge and mites, yellow, and black aphids are popping up in places as well. We were fortunate to miss the worst of Hurricane Katrina. We still have about a month and a half or a little more to go before harvest begins, so we're not out of the woods yet with regard to any possible hurricane damage. Overall the crop still looks pretty good where scab has been controlled as shells harden.

### ***Crop Situation***

*Lenny Wells*

The large crop set we had earlier in the year still looks pretty good but we will be losing some nuts to scab. The good news is that based on the size of the nuts out there, even with lesions on them, scab hit later in nut development in many locations. When looking at these nuts growers should keep in mind that it generally takes 25% scab covering the nut before that nut suffers any loss of quality. The most puzzling thing related to scab this year has been the amount of scab on Stuart nuts in some orchards. I've heard a few different theories on this, the most promising of which seems to be the possibility of a late bud break (result of a

### ***Nickel Levels in Tissue Analysis***

*Lenny Wells*

With the help of numerous county agents across the state, I have been conducting a leaf tissue and soil survey to examine current nutrient levels in Georgia orchards. One question I've received more than once this year has been "What levels of nickel should we be looking for in our tissue analysis?"

No sufficiency ranges have been set for nickel as of yet but Dr. Bruce Wood at the USDA lab in Byron has suggested 3-15

ppm. We still don't know for sure what, if any, effect nickel has on trees that appear otherwise healthy.

At the present time, I don't know that we have enough information to recommend the application of nickel for anything other than mouse ear. We have some on farm trials underway now that may help to shed more light on this.

In the survey, I have seen tissue levels in orchards sprayed with nickel range from 1-11 ppm. This variation is probably due to the amount of time that passed between application and sampling or the number of applications. Unsprayed orchards are generally at 1 ppm. The main thing right now is to keep these levels below 15 ppm so that we don't develop any toxicity with regard to Nickel.

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### ***Late Season Black Aphids***

*Will Hudson*

We all know the importance of keeping the leaves clean of aphid and/or mite damage late in the season. One thing to keep in mind with regard to black aphids is that you may continue to see damage develop after you have sprayed. A black aphid only has to feed for a few minutes in order to cause the development of the characteristic yellow spots, so their damage may become evident after the aphids have been killed.

Be sure you are treating black aphids and not old damage when you are making spray decisions. Also, keep in mind that as we move into October, these insects will be preparing for the winter, mating and laying eggs under bark and in cracks. You don't want to let black aphids get out of hand but you want to be sure that you are using your insecticide efficiently. Base all spray decisions on sound scouting.

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### ***Leaf Anthracnose***

*Jason Brock*

Leaf anthracnose, caused by *Glomerella cingulata*, has been observed in multiple locations around Georgia. Symptoms appear as large, irregular blotches. The lesions may start at the margin of the leaf, but this is not always the case. Many times circular lesions are found on the leaf, away from the margins. The symptoms of this disease are similar to bacterial leaf scorch, scorch caused by nutrient imbalance, and scorch mite damage. We are confident that anthracnose has been a problem due to a couple of factors. First, a response to fungicide applications was observed in trials for control of pecan scab. Second, the pathogen was isolated from samples submitted to the Tifton Plant Disease Clinic.

*Glomerella* is also known to cause lesions on the shucks late in the season. If leaf anthracnose is found in an orchard, growers are encouraged to continue their fungicide program for

1-2 applications past shell hardening. Fungicides applied for the control of pecan scab may also reduce the incidence of anthracnose.



*Leaf anthracnose images by Forrest Connelly, Berrien County Extension Service*

**Late Summer Applications  
of Liquid Fertilizers**

*Paul Sumner*

Applying supplemental N to pecans can be done either with dry granules or liquid. Normally liquid N is applied by a low pressure sprayer. Liquid N is heavier than water and flows slower. Therefore a higher pump pressure or larger nozzle must be used to apply N for similar application rates of water.

Typical nozzles used are extended range falt-fan, flood and turbo flood. Liquid N normally has particulates in the solution that have not fully dissolved. Large nozzles should be used at low to medium pressure. Filtration is very important to ensure nozzles do not stop flowing during application. Filters should be monitored and cleaned often.

Use water to calibrate your sprayer to apply liquid N. Most nozzle selection charts provided by the manufacturer are based on spraying with water. The figures will not be correct if you are using liquid fertilizer. Table 1 is provided to help you adjust the figures to fit your situation. Most nozzle manufacturer's catalogs provide this chart as well.

For selecting a nozzle, multiply the values on the chart by the conversion factor from the table to determine the correct value for the solution being sprayed.

**Table 1. Conversion factor for solutions other than water**

Weight (lbs/g) of Solution	Specific Gravity	Conversion Factor
8.34 (water)	1.0	1.0
9.0	1.08	1.04
10	1.2	1.10
10.65 (28%N)	1.28	1.13
11	1.32	1.15
12	1.44	1.20
14	1.68	1.30
16	1.92	1.39

**To calculate a conversion factor for a weight not given in table 1:**

1. Determine weight of solution in lbs/g. Measure a gallon of material in a container. Weigh the container plus material in lbs. Subtract container weight. Your supply dealer can also supply this information.

2. Determine specific gravity of solution. Divide weight of solution per gallon by the weight of water per gallon:

$$SG = \frac{\text{Weight of solution (lbs/g)}}{8.34}$$

3. Calculate conversion factor by taking the square root of the specific gravity.

**For calibrating a sprayer**, divide the values on the nozzle charts by the conversion factor from the table to determine the correct value for the solution being sprayed

**Ex:** You have calibrated with water. It has an application rate of 22 GPA at 30 psi. You plan to apply 28% N solution. The actual application is:

$$\text{GPA of solution} = \frac{\text{GPA (water)}}{\text{Conversion Factor}}$$

$$\text{GPA (28\% N)} = \frac{22 \text{ GPA (water)}}{1.13 \text{ (Conversion Factor)}}$$

$$\text{GPA (28\% N)} = 19.5$$

### **Determine Actual N rate (lbs/A)**

$$\text{lbs/A} = \frac{\text{GPA (solution)} \times \%N \times \text{lbs/g}}{100}$$

$$\text{lbs/A} = \frac{19.5 \times 28 \times 10.65}{100} = 58.1 \text{ lbs N/A}$$

If the amount of N (lbs/A) is not the desired rate, then adjust pressure or nozzle size or ground speed.

### ***Dates to Remember***

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Georgia Pecan Growers Association Fall  
Field Day  
September 8, 2005  
Rural Development Center  
Tifton, GA  
A noon meal will be served  
Call 229-386-3410 for information

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Edited by  
*Lenny Wells*  
Extension Horticulturist-Pecans  
**Contributors:**

***UGA PECAN TEAM***  
**Jason Brock, Ext. Pathologist-Pecans**  
**Will Hudson, Ext. Entomologist-Pecans**  
**Paul Sumner, Ext. Ag. Engineer-Pecans**  
**Lenny Wells, Ext. Horticulturist-Pecans**