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Georgia Pecan Nut News

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Shuck Decline and Orchard Management

Lenny Wells

Dry weather and a heavy crop load led to significant problems with shuck decline late in the 2005 season. Additional stresses contributing to this problem include cloudy weather conditions for much of the growing season, late season aphid and mite pressure, and scab. All of these factors caused tree stress, which combined, made for a difficult year.

Shuck Decline is not a disease. Secondary pathogens like *Phomopsis* and *Glomerella* may colonize nuts already aborted from tree stress, but these organisms are not the culprits here.

Forecasters predict more of the same weather patterns over the next 20 years. That means more of the same environmental stresses on the trees. Although environmental stresses are often out of our

control, there are some things that can be done from a horticultural standpoint to alleviate stress on the trees.

We've suffered from cloudy conditions and low levels of sunlight over the past three years. This can lead to severe alternate bearing and poor quality in the on year, especially in crowded orchards. Therefore, it is imperative that we open up orchards to more sunlight. Trees need to be removed from crowded orchards in the winter before an "on" year to help with this problem. Sunlight should reach 50-60% of the orchard floor at mid-day in order for the trees to receive adequate sunlight. The decision to thin the orchard is a difficult one for many growers to make and many put off removing trees beyond the proper time to do so. We are at a point that we simply must remove trees from crowded orchards to improve Georgia's pecan production and quality.

Many drip irrigated orchards suffered as much as dryland orchards during the September drought. This brought to light the inadequacy of many drip irrigation systems. Growers need to make sure that their drip systems can supply at least 3600-4000 gallons of water per acre per day and that they do not fall behind in their scheduling. Solid set irrigated orchards did not suffer as

many problems from the drought as drip and dryland.

We need to take a serious look at fruit thinning prolific varieties like Stuart and Cape Fear. Dr. Darryl Sparks has been quoted as saying “Until mechanical fruit thinning of Stuart becomes widespread, Georgia production will alternate with the “on” and “off” fruiting cycle of Stuart”. We need to get in the habit of producing a moderate crop of good quality nuts year in and year out rather than alternating heavy and light years.

In addition, growers need to ensure good leaf retention into the fall and manage for pecan scab.

Pecan Fertility Survey

Lenny Wells

With the help of many of you, a pecan fertility survey was conducted during July/August of 2005. This survey revealed that approximately 80% of well managed orchards in Georgia are K deficient, which can lead to leaf scorch/defoliation, a reduction in cold tolerance, and poor kernel filling.

This, of course, is related to high levels of Ca and Mg in the orchard soil due to liming. Since pH must be maintained in the soil, growers should lime only when necessary. In addition, those who have low K leaf levels should reduce the amount of N applied until the K levels are back in the sufficient range. K should also be applied as a foliar Potassium Nitrate Spray (3lbs/100 gallons water/A) for at least 5 sprays.

Nickel was a big question during 2005. Leaf nickel levels ranged from 1-11 ppm in surveyed orchards. Even orchards which had received Ni sprays, had low Ni levels, unless they had been recently sprayed

when samples were taken. Leaf Ni levels should be kept below 15 ppm.

The pH levels of approximately ½ of our orchard soils was low as well, which may also have an influence on the uptake of nutrients by the trees.

Variety Choices

Lenny Wells

One of the most common questions I receive is “What variety would you plant”? The answer to this question depends a lot on the grower and his ability to control scab and manage the crop load.

Based on Dr. Patrick Conner’s variety trials, we suggest Caddo, Forkert, Pawnee, Desirable, Kanza, Sumner, Elliott, Oconee, and Cape Fear.

My personal favorites out of that group are Elliott, Cape Fear, Oconee Sumner, and Desirable (if scab control is not a problem).

Elliott provides excellent scab resistance and kernel quality and although it is small, generates a good price. Its only problems are alternate bearing and it is a little late coming in to bearing.

Cape Fear begins bearing early, at 4-5 years old, has good scab resistance, and produces a good quality nut; however, it is sensitive to crowding, so they need to be thinned on time. Additionally, Cape Fear begins to overbear when it reaches maturity; leading to poorer quality; however, fruit thinning can resolve this problem.

The only disadvantage that I see for Oconee and Sumner is that they both are preferred by black aphids over other varieties.

Desirable, of course, is a consistent nut, which brings a premium price. Its only downfall is scab, but that’s a big downfall, and unless a grower has a proven scab control program, I would hesitate to continue recommending it. With the current weather patterns that we are facing, most pecan

research and extension specialists feel that scab will become more and more difficult to control on this variety.

For most serious pecan producers planting a new orchard, I would recommend that a combination of these varieties be planted in the same orchard. Their pollination characteristics complement each other and a well managed orchard composed of these varieties would be a consistent producer

Other varieties to consider are Kiowa and Sioux. There is a good variety recommended for trial at this time called Excel, which is a seedling out of Pierce Co. It has good size, quality, and scab resistance but all the trees out there are quite young at this time and we can't say for sure how it will produce and what quality it will have over the long term as a mature tree.

New Miticides

Will Hudson

As we look to next season, there are a couple of new miticides to consider. Envidor, from Bayer, was labeled last year and some growers had a chance to try it. In Jim Dutcher's trials, Envidor has performed well compared to the standard dicofol treatments. The price is higher, but in most cases a single application gave relief for the rest of the season. Depending on mite pressure and time of the season, that may justify the additional cost.

New this year is Zeal, from Valent. This same active ingredient, etoxazole, has performed well on mites attacking ornamentals in my trials in nurseries. Zeal is primarily active against eggs and young larval stages, and should be used early in the cycle of mite outbreaks.

Phylloxera

Will Hudson

If there were phylloxera in your orchard last year, remember that you should add an insecticide to your first (bud break) fungicide spray. The window for controlling these pests is narrow, and there is nothing that will get them once the galls form. Chlorpyrifos (Lorsban, etc.) is effective, as are aphicides, like Provado and Centric.

NEW PECAN PUBLICATION ON THE WEB

Mouse Ear of Pecan can be found at

<http://pubs.caes.uga.edu/caespubs/pubcd/pubs/c893.htm>

DATES TO REMEMBER

Southeastern Pecan Growers Association
Annual Meeting
Panama City, FL
March 10-11, 2006

Georgia Pecan Growers' Annual Conference
Perry, GA
May 4, 2006

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