



Georgia Pecan Nut News *Summer 2009*

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Mechanical Fruit Thinning

Lenny Wells

With an “on” crop this year, you may want to consider fruit thinning at least a portion of your orchard. For certain cultivars, fruit thinning may be the best bet of ensuring a strong return crop in 2010.

We conducted a two-year fruit thinning trial in 2007 at an orchard in Irwin County on ‘Sumner’ and ‘Cape Fear’ pecan trees. Five trees of each cultivar were mechanically thinned by trunk shaking to remove approximately 30%-40% of the fruit on each tree on 1 Aug. 2007, and five trees were non-thinned.

The OFF year return crop and return crop value of both ‘Cape Fear’ and ‘Sumner’ was increased by mechanical thinning in the ON year. This enhanced the total 2-year value and 2-year average value of both cultivars. The return production of thinned trees was 20 times more than the un-thinned ones. Each thinned tree’s value increased by \$300 the year after thinning. By comparison, the value of the crop from thinned trees in the year of thinning was only reduced by \$25 per tree.

Increased profitability of these cultivars with mechanical fruit thinning results primarily from higher yields and prices in the OFF year of production, which offsets the minimal loss in yield and/or crop value generated by fruit thinning in the ON

2009 Crop Potential

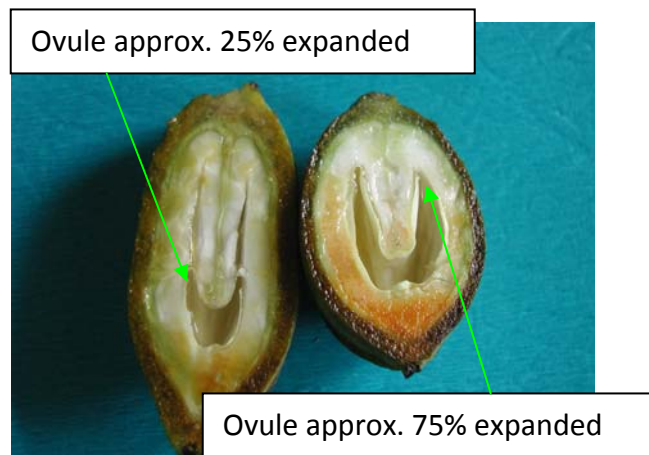
Lenny Wells

The 2009 pecan crop looks to be a pretty good one in my estimation. Although the crop will not meet the high bar set by the 2007 pecan crop, I would estimate that Georgia has the potential to produce 100-110 million lbs. This will likely depend largely on our need and ability to manage scab from here on out. Scab pressure was high during May and although, leaf scab is apparent in some areas, it does not appear to be as bad as we would have anticipated. As we enter into the nut sizing period, protection from scab should be everyone’s top priority. Although June has started off dry, this can always change. From conversation with other pecan scientists from around the country, most other states appear to be in fairly good shape at the moment as well.

year.

If you are considering fruit thinning your pecan crop this year, begin evaluating your crop in early July. The nuts should be large enough to allow a precise evaluation at that time. Count the number of fruiting terminal branches out of 50 to 100 terminal branches per tree. This will allow you to come up with a percentage of fruiting terminals. Generally, if more than 60% of the terminals are bearing fruit, then shaking some nuts off the tree would be of benefit for many cultivars.

Proper timing of fruit thinning is the key to achieving the desired results. In most years, there is a window of only 10 days to 14 days in which fruit thinning can be done successfully. Research has shown that in order to realize the full benefit of mechanical fruit thinning, nuts should be removed beginning when the ovule (cavity in the photo below) is about 50% expanded, but before the kernel enters the dough stage (See Photo). For most cultivars grown in Georgia, the timing may be from the end of July through early August.



Herbicide Use

Lenny Wells

Many growers use pre-emergence herbicides in their spring and fall herbicide strip applications; however, pre-emergence herbicides would be beneficial with every herbicide strip application. We have many options available for pecans. These include Surflan, Prowl, Simazine, and Diuron. For mature trees on heavier soils, Diuron and/or Simazine have worked well over the years. For the large acreage of young plantings out there, Surflan or Prowl would make better options. It is safe to use both of these herbicides during the 1st season of growth, as opposed to 2 years after establishment for Simazine and 3 years after establishment for Diuron. Both Surflan and Prowl mix well with glyphosate. Surflan may be better suited to orchards with drip or microjet irrigation than Prowl because Prowl must be watered in within 7 days for effective control. Surflan may go as much as 21 days before watering in. Since we cannot always rely on rainfall to activate these herbicides, these factors need to be taken into account. In addition, trees grown on sandier soils should not be as sensitive to these herbicides as they may be to Diuron or Simazine.

Growers having difficulty managing nutgrass or pigweed may want to consider using Sandea in a tank mix with glyphosate for these hard to kill weeds. Sandea is a little expensive but is probably the most effective post-emergence material we have available for nutgrass control. It is also effective on pigweed. Aim is another post-emergence material that provides effective control of pigweed and other hard to manage broadleaf weeds.

Shuckworm

Will Hudson

With summer's arrival, growers should be looking for dropped nuts under their trees. Of particular concern are those nuts that drop due to Hickory Shuckworm or Nut Curculio feeding. Shuckworm damage usually leaves a small hole with a white powdery residue around it on the side of the nut. Curculio damage leaves a hole with a brown liquid ("tobacco juice") stain around it. Curculio is a fairly uncommon and sporadic pest that many growers never have a problem with, but hickory shuckworm is widespread and can cause significant losses. By the time a grower realizes nut curculio is active there is probably little that can be done. Curculios can be controlled with the same treatments used for weevils, but applying Sevin or a pyrethroid in June is likely to cause more problems with mites and aphids than the curculio itself would cause. Shuckworm can be controlled effectively with the same materials used for casebearer.

Stressed Trees/Boring Beetles

Lenny Wells

We have seen an abundance of boring beetle attacked trees this year. Most often these are either shothole borers or Asian ambrosia beetle.

Shothole borer:

The mining of the shothole borer can interfere with the movement of fluids through the cambium layer between the wood and the bark. Infested trees are usually weak and will be further weakened

by the damage. Eventually, the tree will be girdled and killed. Young, healthy trees may also be attacked if they are close to a large source of beetles, such as a pile of prunings. A typical scenario is where an old orchard is removed in the fall, the cut wood is stacked near the edge, and new trees are planted in the spring.

Ambrosia beetles:

The telltale sign of ambrosia beetle is the small tube of sawdust, resembling toothpicks, sticking out of the tree, where the beetles have attacked. Usually the beetle attacks weak or damaged trees, but young, vigorous trees can also be infested. Trunks and large branches may become completely riddled with galleries.

On infested trunks and limbs, there often will be holes about 1/12 inch (2 mm) in diameter, oozing sap and sawdust. Holes without fresh sawdust are most likely from previous years and no longer contain beetles. Pay special attention to areas that have a history of attacks, that are near hedges, brush piles or wooded areas, or that have had freeze damage. Bear in mind that the beetles attack primarily unhealthy trees.

Healthy, vigorous trees that are well cared for are less subject to attack. Give sickly trees adequate water and fertilizer. Sanitation is one key to successful borer control. In winter, remove and burn infested and diseased trees or branches of both orchard trees and other nearby hosts. This will prevent beetle populations building up to the point where they might attack healthy wood.

Several chemicals are registered for use

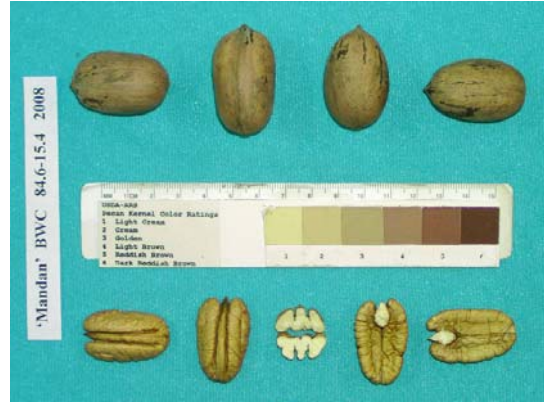
against borers, most of which are directed at adult beetles. Chemical controls can be applied whenever adults are present, from late March to September. However, they are of limited value, and the best control method is to keep trees healthy.

Cultivar Profile---‘Mandan’

Lenny Wells

(Info from USDA Pecan Breeding Program, College Station, TX)

Growers are always looking for new cultivars to consider for planting. One cultivar just released from the USDA breeding program is ‘Mandan’. “mandan” is a ‘BW-1’ X ‘Osage’ cross. USDA chose to release this cultivar based on its high nut quality, high yield potential, early maturity, and excellent scab resistance in the West. In Brownwood, TX, ‘Mandan’ had yields similar to ‘Pawnee’ and better than ‘Desirable’. Its alternate bearing habit appears to be less than that of ‘Pawnee’. One of the most attractive characteristics of this cultivar is its very early nut maturity, which is about one week BEFORE ‘Pawnee’. Nut size is good at 53 nuts/ lb and 62% kernel. ‘Mandan’ shells out well into attractive, full halves. It has a very late spring budbreak, providing a measure of escape from spring freezes. ‘Mandan’ is a Type I cultivar (protandrous) with early to mid season pollen shed and mid to late season pistil receptivity. Tree structure is good with strong limb angles. ‘Mandan’ has medium susceptibility to yellow and black aphids.



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