



Texas Agricultural Extension Service

The Texas A&M University System

VALLEY PEACH & PECAN NOTES

July, 1995, No. 7

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HIGH TECH SPRAYING -----

On-board computers and sonar or laser images are coming soon to orchards everywhere, judging from grower responses to the introduction of new orchard spraying machines. The reasons: lower pesticide use, reduced cost and lessened environmental impact.

Ag Tec's Treesense system uses a laser to scan the shape and size of trees in the orchard, which the on-board computer then uses to control the spray nozzles on both sides of the machine—all on the go.

Durand-Wayland's Smartspray and Roper's Tree-See both use sonar tracking over multiple zones to sense the presence of trees, which again goes to an on-board

computer to control the spray nozzles.

All three units have a price tag in the range of \$16,000, give or take a few hundred dollars. Makers of all three units claim substantial savings in pesticide costs because of reduced chemical use in the orchard. Although such savings are dependent on a lot of factors, numbers range from 25 to 40 percent in many cases.

The Durand-Wayland Smartspray system was on display at the TCM Mid-Year Meeting here in Weslaco on March 31.

TEXAS A&M HORTICULTURE HEAD -----

Dr. Samuel Cotner has been named head of the Horticulture Department of Texas A&M University, effective May 1, succeeding Dr. Dan Lineberger who stepped down last September to concentrate on other horticultural activities within the department.

Sam is well-known in South Texas and the Valley through his work as Extension Vegetable Specialist and more recently as Associate Department Head—Extension.

HAIL CANNON -----

Several years ago, I heard about a "hail cannon" that prevents crop damage by

Extension programs serve people of all ages regardless of socioeconomic level, race, color, sex, religion, disability or national origin.

The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating

stopping the formation of hail stones. Efforts to find out more about such a device caused some of my Extension colleagues and clientele to question my sanity and personal habits. To the disbelievers, I recommend an article by Jean D. Aylsworth in the June, 1995, issue of American Fruit Grower, pages 15-16.

Basically, the anti-hail cannon uses acetylene to shoot cations into the atmosphere at sonic speed, which creates shock waves that interfere with the crystallization of ice, thereby resulting in rain or sheet, but not hail. It covers a circular area of about 0.3 mile radius, roughly 200 acres.

For further information, Ms. Jeanne Le Pellée of Ollivier, Inc. has offices in San Antonio—phone 800/309-7876 or 800/573-6878.

PECAN CONFERENCE -----

Just a reminder that the 74th Annual Texas Pecan Growers Association Conference & Trade Show is July 9-12 at the Holiday Inn Centre in Odessa. It's probably too late to obtain tickets to some of the special events, but registration for the educational program can be paid at-the-door.

For those who have never attended, you might be interested in the display of pecans which are entered in the State Pecan Show. These entries started out in county shows, then to the three regional shows, with the best of the best making the state show held during the Texas Pecan Growers Conference.

PECAN NUT CASEBEARER MODELS -----

Darrell Sparks at the University of Georgia has added a new wrinkle to the widely-used predictive model developed by

Ring and Harris and others at Texas A&M University. The Texas model has as a starting date 10 days prior to 50 percent budbreak, from which accumulated degree-days are calculated to predict various stages in pecan nut casebearer development to enable better scouting and proper timing of control.

Sparks' model considers the effect of both chilling (December through February) and heating (February 1 forward) together on both pecan budbreak and pecan nut casebearer development. Using data from several years and/or sites, the Sparks model predicted the date of first nut entry within \pm 1 day of the observed date, as compared to the Texas model's \pm 5 days.

While the Sparks model appears to have greater accuracy for South Texas, neither model is recommended as a basis of timing of spray applications—rather, the models should be used to determine when to start scouting for pecan nut casebearer activity, which information can be combined with grower knowledge and estimated crop potential to determine the need for and timing of control efforts.

OTHER PNC INFORMATION -----

According to Bill Ree's Texas Pecan Pest Management Newsletter of May 30, 1995, the Pecan Nut Casebearer Pheromone Study is working well across Texas, with significant catches in some sites.

The best information for the Weslaco site is that there were no captures and only minor activity was observed. The suspicion is that casebearer activity in the Valley is naturally quite low or that casebearer has been significantly impacted by the cotton boll weevil eradication program in the Valley, or both.

PECAN CROP -----

The various associations will be making their estimates of the coming pecan crop at their annual meetings which are held during the summer—with the official USDA estimate coming in September.

According to Dr. George McEachern, writing in the May, 1995, edition of Pecan South, there's a relatively simple way to determine the relative size of your crop. For each block of trees, count 10 easy-to-reach terminals on the south-southwest side of 10 trees and record the number of terminals that have nut clusters. At 20 clusters per 100, the crop is low, 40 is average, 60 is good and 80 is tops.

McEachern advises this count be done in mid-May, for which there is probably a good reason—though I don't know it. I just finished a rough guess of the variety block here at Weslaco—but I didn't need to count terminals to realize that this orchard is dreadfully short on nuts this year.

COMING PESTS -----

If tradition is any indication of what to expect this year, pecan growers to our south will start to see hickory shuckworm damage about the middle of July, which means that this pest will appear in the Valley and deep South Texas sometime during the latter half of July.

To prevent losses, I'd suggest that growers commence cutting a few nuts soon after July 15 to ascertain when half-shell hardening occurs, as that is the time to apply treatments to control hickory shuckworm damage. Half-shell hardening means that the pecan shell is hard halfway down the length of the nut and the other half isn't hard yet.

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