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IN A NUTSHELL

Newsletter

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June 11, 2009

Number 2

Pecan Phylloxera

Galls of pecan phylloxera on twigs, leaf petioles and nutlets have been opening this past month. The opening and drying of the galls can cause twig dieback, leaf drop and loss of nuts. The damage will look severe for about a month, however the trees should recover unless the tree has other serious problems. Spraying insecticides for phylloxera control during gall opening is usually not economical since gall split occurs over an extended period of time and the phylloxera will cause no additional injury to the tree until next spring.

Phylloxera have traditionally been controlled in early April when leaf buds start opening. Recent observations have shown the presence of phylloxera crawlers (young phylloxera) from mid March to late April. Recent years have shown an increase in the percentage of nutlets with galls. This may be indication of a need to add an additional spray application in some orchards.

Phylloxera are weak flyers and normally do not spread very far from infested trees. Phylloxera control is rarely needed in orchards that did not have phylloxera the previous year or in nearby trees.

Critical Time for Nut Scab Control

Mid-June through July is the period when most of the nut size increase occurs for many cultivars. This rapid growth period is when nuts are most easily infected by the scab fungus. A lot of yield loss from scab typically results from infections that develop in the mid-June through July growth period. It is important to maintain fungicide protection on the nuts at this time. A

fungicide application in early June and again in early July often results in a valuable yield increase compared to yields from orchards that experienced infection periods (rainfall) during the nut sizing period and did not have fungicide protection during this time. Randy Sanderlin, Plant Pathologist, LSU Pecan Research-Extension Station.

June Drop

The June drop is a drop of nutlets that normally occurs from late June through early July. The severity of the drop varies from year to year. The drop is due to the fall of nutlets that have not been pollinated and the feeding of hickory shuckworm and pecan nut curculio in nutlets.

Observations suggest that the pollination drop may be larger than normal this year due to heavy rains during the pollination period. Rains during pollen shed will wash the pollen out of the air and reduce pollination of wind pollinated plants like pecans. Non-pollinated nutlets of the Oconee cultivar were observed this spring at several sites in northeast Louisiana with no known sources of pollen available. This could indicate a heavy June drop in this variety.

Fallen nutlets without punctures are probably the result of poor pollination. Nutlets that have a dark tobacco like stain around the nut puncture are due to nut curculio feeding. The white legless worm can sometimes be found by cutting into the nutlet. Sometimes they are so small that it is difficult to find them. Nutlets with a whitish blotch or no discoloration around a puncture are due to shuckworm. Shuckworm larvae differ from curculio larvae in that they have legs.

Damage from shuckworm is often more severe in areas where pecan phylloxera have been a problem. The first generation of shuckworm feeds inside phylloxera galls which helps build up their population for the second generation which is a factor in the June drop. Shuckworms were observed in galls in an orchard in Northeast Louisiana.

The second generation nut casebearer normally appears the same time as the nut curculio and hickory shuckworm. The second generation casebearer is usually not as destructive as the first, however, it can sometimes cause considerable damage. Casebearer infestations have generally been light, however, moderate infestations were reported from one orchard each in Alexandria, Shreveport and Monroe areas.

Insecticide applications are generally made the third or fourth week in June and two weeks later to control severe curculio, casebearer and shuckworm infestations. Growers may only use one spray or none if they have a heavy nut crop and have not had severe problems with these insects in recent years. The insecticides Imidan 70 W at 2.0-3.0 lbs/acre, Warrior at 2.56-5.12 fl. ozs/acre or Lorsban 4E at 1.5-2.0 pts/acre should give good control.

The June drop can be helpful in thinning nuts in years when pecan trees are overloaded. The thinning will improve nut quality during overloaded years and can also help reduce alternate bearing by evening out the high and low production years. The June drop can also be a disaster when excessive nut drop occurs in a light year.

Leaf Sampling

Pecan leaf analysis should be made in July. Collect the middle pair of leaflets from the middle leaf of the current season's growth. Take samples from shoots, which have terminated their growth for the season and have fully expanded leaves. Continue this procedure until 40 pairs of leaflets have been collected from at least 10 trees. This constitutes one sample. Select shoots that are fully exposed to the sun and near the ends of branches, not small branches growing from large limbs nor shaded branches near the center of the tree. Collect from all sides of the trees. Avoid taking leaflets damaged by insects, diseases or those that are otherwise contaminated. Leaflets in one sample should all be from one variety, but this is not essential.

Separate samples should be taken from different soil types or fertility management areas. Samples from trees that are dying or otherwise not typical of the average orchard tree should not be included with the regular samples. It is also advisable to keep samples from young non-bearing trees labeled separately from samples of older bearing trees. Avoid sampling leaves covered with dust such as those that occur near dirt roads, etc. If major rains have not followed last zinc application rinse the leaves in running water and wipe with damp cloth. Avoid rubber and galvanized containers when collecting leaves, since these could affect results.

Place the leaves in a new clean paper bag for air-drying in a dust-free area. Leave the bags open until leaves are dry. Leaves can also be dried in a kitchen oven overnight with the oven set on warm. Check with laboratory. Most laboratories prefer dry leaves. Some laboratories such as Texas A & M want fresh leaves to allow pre test washing of leaves.

Nutrients normally analyzed are: Nitrogen, Phosphorus, Potassium, Magnesium, Calcium, Sulfur, Zinc, Iron, Manganese, Boron, Copper and Molybdenum. Some laboratories may list the test as plant ag-routine metals plus nitrogen. A number of private and university laboratories perform leaf analyses of pecans. Local state university laboratories performing leaf analyses include:

Plant Analysis Laboratory
LSU Department of Agronomy
126 MB Sturgis Hall
Baton Rouge, LA 70803-2111
(225) 578-1219
<http://www.stpal.lsu.edu>

Agriculture Chemistry Laboratory
Agricultural Chemistry Room 102
LSU Highland Rd.
Baton Rouge, LA 70803
(225)342-5812
(Indicate "Pecan Plant Tissue Group" on Sample)

MSU Soil Testing & Plant Analysis Laboratory
Box 9610
Mississippi State, MS 39762
(662)325-3313

Samples can be sent directly to the laboratory and the results of the nutrient analysis will be returned directly to the grower with an adequate, deficient, or excessive rating given to each nutrient. If you have questions on the results you can contact your County Agent.

Upcoming Events

June 18 – 19: Tri-State Pecan Trade Show and Convention of the Pecan Producers of Louisiana.

The convention will be held at Vicksburg Convention Center in Vicksburg, Mississippi. Registration begins and exhibits open 4:00 p.m. June 18. Additional information can be obtained from Stephen Norman at (318)448-3139 or pecan@pecanproducers.org.

June 26 – 27: Louisiana Pecan Growers Convention and Trade Show.

The convention will be held at the Hilton Hotel in Lafayette, Louisiana. Registration begins 1:00 p.m. June 26. Attending the 2:00 – 4:45 p.m. session on June 26 will quantify individuals to re-new their Chemical Certification Card. Additional information can be obtained from Gary Haggart at (318)248-3400 or ghag106439@aol.com.

Insect Seasonal Occurrence

An insect seasonal occurrence chart is provided. The critical period for root borer and carpenter worm refers to the time when adults are present. The less critical period refers to the time the larvae are boring inside tree roots and trunks and are difficult to control.

Sincerely,

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Issued in furtherance of Cooperative Extension work, Acts of congress of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. The Louisiana Cooperative Extension Service provides equal opportunities in programs and employment.