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IN A NUTSHELL

Newsletter

March 22, 2006 **Number 2**

Field Day March 31

A pecan clinic presented by LSU AgCenter Pecan Research-Extension Station faculty will be held March 31 from 9:30 a.m. till noon at Natchitoches Pecans (Mark Swanson's) near Cloutierville, LA. Topics to be discussed include: pecan phylloxera and pecan casebearer by Mike Hall, hurricane damage and fertilizer suggestions by John Pyzner, and tree pruning by Charlie Graham. Hilary Langlois will also demonstrate his grafting techniques.

Take the LA Hwy 490 exit off I-49 at Chopin. Travel approximately 1.5 miles northeast on Hwy 490 to LA Hwy 1. Turn left on Hwy 1. Natchitoches Pecans will be on your left in about ½ mile

Pecan Phylloxera

The start of the growing season is just about here and for many growers, that means dealing with infestations of pecan phylloxera. Pecan phylloxera are small aphid-like insects that form galls or knots on the leaf tissue, stems, catkins, and nuts. Severe infestations of pecan phylloxera have been reported to cause reductions in nut quality and quantity, premature defoliation, and dieback of the current seasons shoot growth. In addition to causing damage to the vegetative and fruiting structures of the tree, the galls also serve as host for a multitude of other insects, including the hickory shuckworm, *Cydia caryana* Fitch.

Infestations of pecan phylloxera do not occur every year, so it is very important to inspect new growth in the spring to determine if the insects are present or not. Monitoring for pecan phylloxera should begin at the first signs of bud break and continue through mid-April. Because of their small size, a 10X or higher hand lens or magnifying

glass should be used. Pecan cultivars that are commonly infested include Schley, Success, Stuart, and Desirable.

Insecticides are still the most effective way of controlling infestations of pecan phylloxera. Insecticides should be applied when approximately ½ to ¾ inches of new growth begins to appear. Usually this will be before or just as the leaves are beginning to unfold. A second application, about 7-10 days later, might be needed depending on the severity of the infestation. Treat only those trees previously infested and those adjacent to them. Those cultivars not susceptible to pecan phylloxera do not need to be sprayed.

Suggested Insecticides to use for Controlling Pecan Phylloxera:
Lorsban 4E at 1.5 to 2.0 pt./acre
Provado 1.6F at 3.5 to 7.0 fl. oz./acre
Warrior at 2.56 to 5.12 fl. oz./acre
Centric 40WG at 2.0 to 2.5 oz./acre

Remember that the pH of the water being used for spraying should be between 5.0 and 6.5.

For further information on pecan phylloxera go to the Pecan Research-Extension Station website at www.lsuagcenter.com. There you will find illlustrated fact sheets on many pecan insect pests, including pecan phylloxera. Also you will find an illustrated spray guide for control of pecan insects in Louisiana.

Mike Hall
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Pecan Insect Fact Sheets and Spray Guide Available on the Pecan Research-Extension Station Website

To download pecan insect fact sheets and the illustrated spray guide for control of pecan insects in Louisiana go to www.lsuagcenter.com. When the AgCenter's home page comes up you will see in the upper right column the heading 'Office Locator', click on Research Stations. When the Research Station page comes up scroll down to the list below the state map and click on Pecan. When the Pecan Station page comes up you will see in the upper right column the heading 'Features', click on Research. When the Research page comes up you will see in the upper right column the heading 'Sub-topics', click on Entomology. On the Entomology page you will find the fact sheets on pecan insect pests and the current spray guide.

If you have any problems finding the site contact Mike Hall at mhall@agctr.lsu.edu, or by phone at 318-797-8034, ext 2320.

Early Season Scab

As spring approaches there are several things to think about and prepare for to be ready for this year's pecan crop. In the disease category of things to prepare for, early season scab disease is the primary concern. Scab infection at any time during the growing season can damage yield. However, with respect to a given intensity of infection, the earlier infection occurs on nuts the greater the damage. In addition early season infection makes it more difficult to prevent disease increases during the remainder of the summer. There is a tendency to think that the amount of scab disease that was present in an orchard last year will have a strong influence on the potential for infection the next spring. This seems logical and no doubt there is some effect from carry over on the scab spore production potential. But experience has taught us that the previous year's disease level is not the most significant factor in scab occurrence during the spring. The real determinant for scab development is rainfall. Amount, frequency, and time of rainfall all have important effects on the development of scab. The fungus that causes scab survives the winter in dormant lesions and usually begins producing spores by the time trees begin to break buds in the spring. A single scab lesion can produce thousands of spores as it becomes active in the spring. Spores can infect growing leaf and stem tissue when rainfall that keeps the tissue wet for several hours occurs. Thus, a small amount of rain that occurs late in the evening or at night or with heavy cloud cover may result in more scab spore germination than a larger amount of rainfall that occurs during midday and quickly dries from pecan tissue surfaces. Factors that reduce drying time such as air movement, increased tree spacing, and elevation can help reduce the amount of infection that occurs during a rainfall period.

Following infection of growing tissue, a new scab lesion will appear on the surface in seven to fourteen days and begin to produce spores. Because of the number of spores that each lesion can produce and the short generation time for new spore producing lesions to develop scab disease can go from zero to severe infection in a relatively short time. So even though the level of scab disease last year was generally low because of near drought conditions most of the summer, a damaging level of scab can quickly develop in the spring if the rainfall pattern is favorable.

To prevent infection, fungicides have to be on the trees **before** a rainfall occurs that results in spore germination on growing pecan tissue. Pecan scab control is preventative control. There is often concern about rainfall removing fungicide from trees. It is true that some wash-off can occur with some fungicides (many fungicides now are absorbed into tissue and can't be washed off) but enough usually stays on to prevent infection if the tissue was well covered before the rain and it has not been more than two to three weeks since the application (new tissue grown dilutes fungicide and sunlight also slowly breaks down fungicide). The approach of trying to apply fungicide following a rain period to stop infection will usually not work well. It is difficult to get fungicide applied in time to stop an infection after spores have begun to germinate in wet weather.

Even though preventative application of fungicide is necessary for successful scab control, I think that we sometimes tend to spray too much in the early spring. Just as

frequent rainfall can quickly result in a severe level of scab, no rainfall means no scab disease. This is something we can take advantage of, especially if the orchard cultivars are not extremely susceptible to scab. In most years and on most of our common cultivars the level of scab observed on foliage during April and May is limited. The primary goal is to keep scab off of the nuts which are not present until mid May. Depending on the orchard location, cultivars, disease history, and rainfall pattern it may be possible to make just one preventative fungicide application before pollination and save most of the fungicide for protection of the nuts. It is of course impossible to put into print exactly when any fungicide application should be made or delayed because of all the variables that affect scab development. Because of this, fungicide spray schedules for pecan scab control are written on the conservative side and it is often possible to adjust these schedules to better fit a particular orchard situation.

Sometimes there are questions about which group of fungicide should be sprayed early in the season. All of the fungicides in the recommended list do a more than adequate job of scab control if used properly. Fungicides in Group 3 (DMI) and Group 11 (Strobilurin) are more broad spectrum than organotin or dodine, so if other fungal leaf diseases such as vein spot or downy spot are a regular problem in an orchard it may be useful to apply one of the Group 3 or 11 fungicides early in the season since most of the infection by the pathogens that cause these diseases usually occurs before June.

Good luck with the up coming season. Let’s hope rainfall is enough to grow and fill out the nuts that are present but not so much or poorly timed that scab removes the nuts that are there.

Pecan Fungicides List By Activity Group*		
FRAC GROUP	**PRODUCT**	**RATE / ACRE**
Group 30 **Organotin**	**Agri-Tin** **Super-Tin**	**7.5 oz** **7.5 oz**
Group 3 **DMIs**	**Enable** **Propimax**	**8 fl oz** **6-8 fl oz**
Group M **Guanidine Acetate (Dodine)**	**Syllit** **Elast**	**2 lbs** **51 fl oz**
Group 11 **Strobilurin**	**Abound** **Sovran** **Headline**	**9.5 fl oz** **3.2 oz** **7.0 fl oz**

Group 3 & 30 **DMI + Organotin**	**Orbit/Super Tin** **Enable/Agri-Tin**	**4 oz & 3.75 oz** **1.3 oz & 3.74 oz**
Group 6: Mix of **Groups 3 & 11**	**Stratego** **Quilt**	**10 fl oz** **14 fl oz**

*To obtain the best control and reduce the chances of pathogen resistance, use a rotation of fungicides from different FRAC Activity Groups, or a mixture of fungicides from different groups.

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Insecticide Chart

A pecan insecticide rating chart is provided with this issue of In A Nutshell. The chart is designed to provide information about likely effectiveness of particular insecticides on different insects. Ratings are based on insecticide tests, observations, and label information. The effectiveness of insecticides may vary at different locations. Insecticides will frequently lose effectiveness with time as insects develop resistance.

The chart lists restricted-entry intervals. This is the time interval workers must stay out of a sprayed area unless specified personal protective equipment is worn. The restricted-entry interval is usually given in hours or days. A pre-harvest interval is also given. This is the required time interval between last insecticide application and harvest. It is usually given in days.

Always follow the label when using pesticides.

Sincerely,

John Pyzner,
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2006 Ratings of Registered Pecan Insecticides

(Ratings are based on tests, observations, and label information. Effectiveness may vary at different locations.)

	Yellow aphids	Black aphids	Scorch mites	Green stinkbug	Brown stinkbug	Hickory shuckworm	Pecan nut casebearer	Pecan spittlebug	Fall webworm	Pecan phylloxera	Pecan weevils	Walnut caterpillar	Leaf-footed bug	Re-entry interval (REI)	Preharvest interval (PHI)
Lorsban 4E	P-M		P-M	P	P	G	G	G	L	G-E	P	G-E	P	24H	28D
Provado 1.6F	G	M-G	P	P	P	P	P	G	P	G-E	P	P	P	12H	7Dss
Warrior	G-E	G-E	P	G	G	G	G	G	G	G-E	M	G	G	24H	14D
Centric 40WG	G	G	P			P	P		P	G	P	P		12H	14D
Imidan 70 W		G	P	M	M	G	G	G-E	M-G		M	G	M	24H	14D
Confirm 2F	P	P	P	P	P	G	G	P	G	P	P	G	P	4H	14D
Intrepid 2F	P	P	P	P	P	G	G	P	G	P	P	G	P	4H	14D
Spintor 2SC	P	P	P	P	P	G	G	P	G	P	P	G	P	4H	14D
Dimilin 2L	P	P	P	P	P	G	G	P	G	P	P	G	P	12H	28D
Mustang Max	G	G	P	G	P	G	G	G	G	G	M	G	G	12H	21D
Ammo 2.5 EC	G	G	P	G	P	G	G	G	G	G	P-M	G	G	12H	21D
Entrust	P	P	P	P	P	G	G	P	G	P	P	G	P	4H	14D
Kelthane MF	P	P	M-G	P	P	P	P	P	P	P	P	P	P	12H	7D
Vendex 50 WP	P	P	G	P	P	P	P	P	P	P	P	P	P	48H	14D

	Yellow aphids	Black aphids	Scorch mites	Green stinkbug	Brown stinkbug	Hickory shuckworm	Pecan nut casebearer	Pecan spittlebug	Fall webworm	Pecan phylloxera	Pecan weevils	Walnut caterpillar	Leaf-footed bug	Re-entry interval (REI)	Preharvest interval (PHI)
Savey 50 DF	P	P	G	P	P	P	P	P	P	P	P	P	P	12H	28D
Admire 2F	G	G	P	P	P	P	P	G	P	G	P	P	P	12H	7-15
Fulfill	G	G	P	P	P	P	P		P		P	P	P	12H	14D
Sevin 80S	P	P	P	P	P	G	G	P	G	G	E	G	P	12H	14D
Sevin XLR plus	P	P	P	P	P	G	G	P	G	G	E	G	P	12H	14D
Javelin WG	P	P	P	P	P	M	M	P	M	P	P	M	P	4H	
Dipel D F	P	P	P	P	P	M	M	P	M	P	P	M	P	4H	0D
Penncap-M	M	M	P	E	E	G					P		E	4D	ss
Impulse 1.6 fl.	G	M-G					G			G-E				12H	7Dss
Proaxis	L	L				L	L	L		L	L			24H	14D

E = Excellent control **G** = Good control **M** = Moderate control **P** = Poor control **Blank =** No information **SS** = Prior shucksplit
7-15 = Last application date **L** = Label use