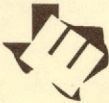


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TEXAS AGRICULTURAL
EXTENSION SERVICE

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Texas Pecan Pest Management Newsletter

Government Publications
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92-2

Pecan Nut Casebearer Model

Starting with this issue the pecan nut casebearer model will accompany each newsletter until early June. In a previous issue I mentioned the model may have a different look this year. Well, it is taking longer than we thought to coordinate the new method and work the "bugs" out of the system.

When we are able to get all of our ducks lined up the model will be a map of Texas with cline lines.

The casebearer prediction model is a method of predicting development of the different life stages of the casebearer. Insects develop according to temperature rather than calendar days so the model is based on the accumulation of heat units.

The model should be used to help coordinate scouting activities rather than to predict an automatic spray date. To use the model locate a city close to your orchard and note the date under "First Significant Nut Entry". Back up from this date about 5 days and intensify scouting activity.

The model will be updated approximately every week.

The date in the upper left hand corner will be the date the model was run. As the model is updated the date for first significant nut entry may change. If the weather has been warm the date may be earlier whereas if a cold front has passed through the date may be later.

Using Bt. Products For The Pecan Nut Casebearer

It is not often that a new use for a product makes its way to pecan, but lately has been some interest in using products containing *Bacillus thuringiensis* var. *Kurstaki*, commonly referred to as Bt., for controlling pecan nut casebearer.

There are several Bt. products labeled for foliage feeding lepidoptera insects but only one that is currently labeled for the pecan nut casebearer. Sandoz Ltd. has recently received a label for Javelin® WG for casebearer control. There are two rates listed on the label. For a single application it is recommended to use 0.75 to 1.00 pound per acre or used as a split application at 0.50 pound per acre 7 to 10 days apart. For small volume use

one pound per acre equals 2 teaspoons per gallon.

To date there have only been a limited number of tests in Texas with Bt. products for casebearer control. So far the tests look "promising" but more evaluations are needed before this type of product is added to our recommended list. Several tests are planned for 1992 and I will keep you posted on the results.

If Bt. products are to be used for casebearer control application and coverage have to be good. For these products to work the larvae have to ingest the material.

As with any type of product there are advantages and disadvantages. For Bt. products the advantages are selectivity of target pests (only larvae of moths and butterflies); will not harm beneficial insects; low risks to applicators and no grazing restrictions. Some disadvantages are a short residual; cost and need for excellent coverage.

Pecan Fungicide Outlook For 1992

Prepared by: Dr. Jerral Johnson
Extension Plant Pathologist

There have been some changes in the pecan fungicide labels since 1991. Duter® is no longer available. Super Tin 4L® is the only formulation of triphenyltin hydroxide available for use on pecans. The label has been changed to include the requirement that the tractor used to pull the sprayer have an enclosed cab.

Benomyl fungicide sold as Benlate® will be available for the 1992 growing season. However, only the wettable formulation will be on the market. Benlate® should be used as one of the fungicides in control of pecan diseases. To reduce the possibility of fungicide resistant races from developing, it should not be used exclusively. Benlate® has the advantage of being approved for use where cattle are grazing. It is the most effective material that is approved for use in cattle/pecan operations.

Thiophanate methyl fungicides are available as Topsin M® 70WP, Topsin M® 85 WDG and Topsin M® 4.5F. They are similar to Benlates in activity. Like Benlate®, repeated use of any of the products can result in fungicide resistant races of the pecan scab fungus. It is not approved for use in cattle/pecan operations. Thiophanate methyl fungicides or benomyl containing fungicides are recommended for use around the home landscape. Both fungicides are approved for use on most fruit crops. Benomyl materials are approved on a wide variety of vegetables but is not currently labeled for use on ornamental plants. Thiophanate methyl fungicides are approved on a

limited number of vegetables but are approved for use on ornamental.

Propiconazole is sold as Orbit®. It is one of the most effective materials approved for use on pecans. It has shown good activity against the pecan scab fungus and has a good level of activity against the downy spot fungus and also organisms associated with fungal leaf scorch. It is suggested for use only on commercial plantings. The tractor used to pull the sprayer must have an enclosed cab to protect the applicator from drift. It is not approved for use in areas where cattle are grazed.

Syllit® 65W is a new name for an old fungicide. The chemical is known as dodine and was once sold as Cyprex® 65W. It does not have a grazing label. The product is used in the Southeast due to the development of races of the pecan scab fungus that are resistant to the benzimidazole fungicides, Benlate® and Topsin M®. Any one using the product should read the label carefully. Dodine applied as a tank mix with some of the insecticides used on pecans can cause foliage burn.

Ziram® contains zinc as part of the active ingredient. Use of this product has resulted in a higher zinc level in the foliage. Nuts from trees sprayed with this product are sometimes larger than those from trees sprayed with other fungicides. Ziram® does not have the same level of activity against the scab fungus as some of the other fungicides. It should be used in the mid summer spray

program when disease pressure is not great. It can be used on varieties that have a good level of resistance to the scab fungus or in the more western production areas where scab is not as severe a problem. It is not suggested for use if the applicator will be exposed to excessive drift. It causes a temporary burning of the skin. It does not have a grazing restriction.

Basicop® is a copper sulfate containing fungicide that is approved for use on pecans. It is a product that should be used in areas of low disease pressure or on varieties that have a good level of resistance to the scab fungus. It can be used in areas where cattle are grazed. Texas Department of Agriculture restrictions allow the use of copper sulfate fungicides on products that are sold as organically grown, there is a possibility that pecans sprayed with this product can be considered organically grown. It should not be used in areas where scab is a major problem or on varieties that have little or no resistance to the fungus.

Before using any fungicide be sure to read the label carefully. Intervals between sprays should be followed as well as the rate per acre. 1991 was a bad year for scab due to above normal rainfall during the growing season. 1992 is starting off similar to 1991 and could be an even worse year for scab. Disease inoculum level is much higher than normal in many orchards. Early season applications will have a major impact on pecan scab severity.

Fungicides Approved For Use On Pecans

Fungicide	Grazing	Scab Control	Requires Cab
Basicop	Yes	++	No
Benlate	Yes	++++	No
Orbit	No	+++++	Yes
Super Tin	No	++++	Yes
Syllit	No	++++	No
Topsin M	No	++++	No
Ziram	Yes	+++	No

Scab Control: - No activity, + limited activity, ++ slight to moderate activity, +++ moderate activity, ++++ Good activity, +++++ Excellent activity.

Upcoming Meetings

April 15

Blanco County Spring Grafting and Pest Management Meeting.
Todd Swift CEA (512)863-7167

April 16

Wharton County Spring Pecan Meeting. Bernard Mitchell
CEA
(409)532-3310

April 29

Fayette/Colorado Counties Spring Meeting.
Larry Nickle CEA(409)968-5831
Rick Jahn CEA (409) 732-2082

April 30

Spring Pecan IPM Workshop
Luling Foundation
Luling, TX (512) 875-2438

May 1

Bastrop County Spring Meeting and IPM Workshop
Ron Lindsey CEA(512)321-2184

May 2

Washington County Spring Pecan Meeting.
Spencer Tanksley CEA
(409) 836-6128

June 21-23

Oklahoma Pecan Growers Annual Conference
Lake Texhoma Lodge
Lake Texhoma, OK
Bill Ihle (918)367-5529

July 12-15

Texas Pecan Growers Annual Conference, Seguin, TX
Texas Pecan Growers Assoc.
(409) 846-3285

The information given herein is for educational purposes only. References to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied.

07 Apr 92
Prediction

Location		First Significant		Location		First Significant	
		10% Adult Emergence	Nut Entry			10% Adult Emergence	Nut Entry
ABERNATHY		MAY 29	JUN 9	ABILENE		MAY 17	MAY 28
ADA	OK	MAY 25	JUN 6	ALAMOGORDO	NM	MAY 28	JUN 9
ALBUQUERQUE	NM	JUN 8	JUN 20	ALICE		APR 24	MAY 5
ALTUS	OK	MAY 21	JUN 2	AMARILLO		MAY 23	JUN 2
AUSTIN		MAY 5	MAY 17	BEAUMONT		APR 30	MAY 13
BEEVILLE		APR 25	MAY 7	BIG SPRING		MAY 18	MAY 30
BROWNFIELD		MAY 28	JUN 9	CARLSBAD	NM	MAY 22	JUN 3
CHAMA	NM	JUL 21	AUG 7	CHILDRESS		MAY 23	JUN 4
CLOVIS	NM	JUN 4	JUN 17	COLLEGE STATION		MAY 4	MAY 16
CORPUS CHRISTI		APR 24	MAY 5	CROSBYTON		MAY 29	JUN 10
DALHART		JUN 10	JUN 23	DALLAS		MAY 13	MAY 25
DELLCITY		MAY 17	MAY 29	DELRIO		APR 27	MAY 8
DILLEY		APR 26	MAY 7	DIMMITT		MAY 25	JUN 8
DURANT	OK	MAY 23	JUN 4	EAGLE LAKE		MAY 1	MAY 13
EL PASO		MAY 14	MAY 26	FARMINGTON	NM	JUL 21	AUG 7
FLOYDADA		MAY 17	MAY 30	FORT SILL	OK	MAY 24	JUN 5
FORT WORTH		MAY 15	MAY 27	FRIONA		MAY 28	JUN 10
GAGE	OK	JUN 4	JUN 16	GALVESTON		APR 29	MAY 11
GOODWELL	OK	JUN 9	JUN 20	GUYMON	OK	JUN 13	JUN 25
*HASKELL		MAY 20	MAY 31	HEREFORD		JUN 9	JUN 21
HOBART	OK	MAY 27	JUN 8	HOBBS	NM	MAY 27	JUN 8
HONDO		MAY 6	MAY 18	HOUSTON		APR 29	MAY 11
JAYTON		MAY 27	JUN 8	JUNCTION		MAY 20	MAY 31
KINGSVILLE		APR 22	MAY 3	LAHOMA	OK	MAY 27	JUN 8
LAMESA		MAY 28	JUN 9	LAREDO		APR 21	MAY 2
LAVON DAM		MAY 19	MAY 31	LEVELLAND		JUN 3	JUN 15
LITTLEFIELD		JUN 2	JUN 15	LONGVIEW		MAY 13	MAY 25
LUBBOCK		MAY 29	JUN 10	LUFKIN		MAY 13	MAY 25
MARFA		MAY 17	MAY 30	MATADOR		MAY 28	JUN 9
MCALESTER	OK	MAY 25	JUN 6	MIDLAND		MAY 20	JUN 1
MORIARTY	NM	JUN 8	JUN 20	MORTON		MAY 29	JUN 10
MULESHOE		JUN 8	JUN 20	MUTUAL	OK	JUN 3	JUN 15
OKLAHOMA CITY	OK	MAY 26	JUN 8	OLTON		JUN 2	JUN 15
PADUCAH		MAY 28	JUN 9	PAGE	OK	MAY 23	JUN 4
PLAINVIEW		JUN 2	JUN 15	PONCA CITY	OK	MAY 27	JUN 8
POST		MAY 27	JUN 8	RATON	NM	JUL 1	JUL 14
ROSWELL	NM	MAY 28	JUN 9	*RUIDOSA	NM	JUL 4	JUL 22
SAN ANTONIO		MAY 2	MAY 14	SAN ANGELO		MAY 13	MAY 25
SEMINOLE		MAY 27	JUN 8	SILVERTON		JUN 4	JUN 17
SILVERCITY	NM	JUN 2	JUN 14	SOCORRO	NM	JUN 6	JUN 18
SPAVINAW	OK	MAY 27	JUN 9	SPUR		MAY 30	JUN 11
STEPHENVILLE		MAY 14	MAY 26	SNYDER		MAY 27	JUN 7
TEXARKANA		MAY 16	MAY 28	TINKER	OK	MAY 31	JUN 11
TOHOKA		MAY 29	JUN 9	TRUTH OR CONSEQ	NM	JUN 4	JUN 15
TUCUMCARI	NM	JUN 5	JUN 17	TULIA		JUN 3	JUN 16
TULSA	OK	MAY 27	JUN 8	TUSKAHOMA	OK	MAY 26	JUN 7
UVALDE		MAY 4	MAY 15	VICTORIA		APR 26	MAY 8
WACO		MAY 10	MAY 22	WICHITA FALLS		MAY 20	JUN 1
WINK		MAY 16	MAY 27				

* Indicates that prediction was made using only historical temperatures
 Predictions prepared by John A. Jackman, Extension Entomologist, TAEX. Weather provided by Southwest Agricultural Weather Service at College Station, an agency of The Oceanic and Atmospheric Administration/National Weather Service.