

LOUISIANA RECOMMENDATIONS FOR CONTROL OF PECAN INSECTS

Control of insects is essential for profitable pecan production in Louisiana. Commercial pecan producers must be equipped to spray at the proper time with the recommended insecticides. Knowing how to identify the major insect pests of pecans during the growing season is important in determining if an insecticide application is needed and, if so, when it should be applied.

When using pesticides, it is very important that they be applied only when needed. The correct insecticide should be used for a given pest and it should be applied at the correct rate. The pH of the water being used for spraying should be between 5.5 to 6.5 to insure the optimum efficacy of the insecticide. If the pH of the water does not fall within this range, a buffering agent to adjust should be used to adjust the pH accordingly. Use of a buffering agent will help to maintain the desired pH once insecticides have been added to a solution.

Be sure to follow the directions on the label of the insecticide being used. In addition to what the insecticide can control and the rates to use, the label will provide additional information regarding the use of spray adjuvants, re-entry times following treatment applications, harvest intervals, grazing restrictions, product safety information, and worker protection information.

SPRAY GUIDE FOR CONTROL OF PECAN INSECT AND MITE PESTS

| Insect | Time of Application | Suggested Insecticides and Rates |
|----------------------|--|---|
| Scale insects | Late February until buds first begin to break. | 3 gals of dormant oil/acre. If trees are weak use only 2 gals/acre. |
| Pecan phylloxera | Between the time the buds begin to open and approximately 1/2-3/4 inch of new growth begins to appear; use a hand lens or magnifying glass to make sure phylloxera are present. Treat only those trees previously infested and those adjacent to them. If infestation levels are high, 2 insecticide applications may be needed. | Lorsban 4E: 1.5-2.0 pts/acre Provado 1.6F: 3.5-7.0 fl. ozs/acre Warrior: 2.56-5.12 fl. ozs/acre Centric 40WG: 2.0-2.5 fl. ozs/acre Proaxis: 2.56-5.12 fl. ozs/acre |
| Pecan nut casebearer | Begin scouting for casebearer eggs on May 1. If pheromone traps are used to monitor adult activity, they should be in place by the 3 rd week of April. Once adults are observed in the traps begin inspecting nut clusters for egg lay. Insecticide applications should be made when egg lay is observed on 1%-3% of the nut clusters. A second application may be necessary if infestation levels are high or emergence and egg lay are prolonged. Continue monitoring adult activity and egg lay after the initial insecticide application to determine if a second application is necessary. | Lorsban 4E: 1.5-2.0 pts/acre Imidan 70W: 2.0-3.0 lbs/acre Confirm 2F: 8.0-16.0 fl. ozs/acre Intrepid 2F: 4.0-8.0 fl. ozs/acre Spintor 2SC: 4.0-10.0 fl. ozs/acre Warrior: 2.56-5.12 fl. ozs/acre Dimilin 2L: 8.0-16.0 fl.ozs/acre Ammo 2.5EC: 3.0-5.0 fl. ozs/acre Entrust: 1.25-3.0 ozs/acre** Mustang Max: 3.2-4.0 fl.ozs/acre Proaxis: 2.56-5.12 fl.ozs/acre |
| Pecan spittlebug | Begin treatments when 5%-10% of nut-bearing terminals are infested. Apply treatments when spittle masses first appear. | Provado 1.6F: 3.5-7.0 ozs/acre Imidan 70 WSB: 1.0-1.5 lbs/acre Lorsban 4E: 1.5-2.0 qts/acre Warrior: 2.56-5.12 fl. ozs/acre Proaxis: 2.56-5.12 fl.ozs/acre |

SPRAY GUIDE FOR CONTROL OF PECAN INSECT AND MITE PESTS (cont'd)

| Insect | Time of Application | Suggested Insecticides and Rates |
|------------------------|---|--|
| Hickory shuckworm | Begin treatment applications at half-shell hardening (around August 10-15); 2-3 applications may be needed depending on the severity of the infestation. Insecticide applications should be made 10-14 days apart. | Confirm 2F: 8.0-16.0 fl. ozs/acre Lorsban 4E: 1.5-2.0 pts/acre Spintor 2SC: 4.0-10.0 fl. ozs/acre Warrior: 2.56-5.12 fl. ozs/acre Intrepid 2F: 4.0-8.0 fl. ozs/acre Mustang Max: 3.2-4.0 fl. ozs/acre Proaxis: 2.56-5.12 fl.ozs/acre Dimilin 2L: 8.0-16.0 fl.ozs/acre Imidan 70W at 2.0-3.0 lbs/acre Entrust at 1.25-3.0 ozs/acre |
| Pecan leaf scorch mite | When leaf discoloration (light brown to bronze colored blotches) begins to appear use a hand lens or magnifying glass (at least 10X) to inspect the leaves for the presence of mites. Sample 10 compound leaves on 5-10 trees throughout the orchard. Treat when an average of 8 or more mites per compound leaf are found. | Kelthane MF: 16.0-32.0 fl. ozs/acre Vendex 50WP: 1.0-2.5 ozs/acre Savey 50DF: 3.0-6.0 ozs/acre |
| Yellow aphid | Separate treatments for yellow aphids generally not recommended. If a separate treatment is desired, treat when aphid numbers average 25-30 aphids per compound leaf. Do not treat for yellow aphids before July 1. Sample 10 compound leaves on 5-10 trees throughout the orchard. | Provado 1.6F: 3.5-7.0 fl. ozs/acre Admire 2F: 16.0-32.0 fl. ozs/acre as a soil application (see label). Ammo 2.5EC: 3.0-5.0 fl. ozs/acre Mustang Max: 3.2-4.0 fl. ozs/acre Warrior: 2.56-5.12 fl. ozs/acre Proaxis: 2.56-5.12 fl.ozs/acre Centric 40WB: 2.0-2.5 fl. ozs/acre |
| Black pecan aphid | Treat when there is an average of one black aphid per compound leaf. Sample 10 leaves on 5-10 trees throughout the orchard. | Admire 2F: 16.0-32.0 fl. ozs/acre as a soil application (see label). Ammo 2.5EC: 3.0-5.0 fl. ozs/acre Imidan 70W: 2.0 lbs/acre Warrior: 2.56-5.12 fl. ozs/acre Mustang Max: 3.2-4.0 fl. ozs/acre Proaxis: 2.56-5.12 fl.ozs/acre Centric 40WB: 2.5 fl. ozs/acre Fulfill: 4.0 fl. ozs/acre |
| Pecan weevil | Treatment applications should begin about the time nuts enter the dough stage (around August 20); 2 or 3 applications may be needed. Insecticide applications should be made at 7-10 day intervals. The first treatment should be made following rain because this loosens the soil allowing for weevil emergence. | Sevin 80S: 1.5-2.0 lbs/acre Sevin XLR Plus: 2.5 qts/acre Mustang Max: 3.2-4.0 fl. ozs/acre Proaxis: 2.56-5.12 fl.ozs/acre Imidan 70W: 2.0-3.0 lbs/acre |
| Fall webworm | Normally this insect is controlled when treating for other insect pests within the orchard. The presence of an occasional colony generally does not warrant treatment. However, if a grower decides an insecticide application is needed, it should be made when colonies are first observed and the larvae are small. The larger the colony is, the more difficult it becomes to reach the larvae within the webbing with the insecticide. | Confirm 2F: 8.0-16.0 fl. ozs/acre Intrepid 2F: 4.0-8.0 fl. ozs/acre Spintor 2SC: 4.0-10.0 fl. ozs/acre Javelin WG: 0.25-4.0 lbs/acre** DiPel FS: 1.0-4.0 pts/acre Sevin 80S: 2.5-6.25 lbs/acre Sevin XLR Plus: 2.0-5.0 qts/acre |

SPRAY GUIDE FOR CONTROL OF PECAN INSECT AND MITE PESTS (cont'd)

* Rates are expressed in the amount of material to use per acre. If a sprayer is calibrated to deliver 75 gallons per acre, you should add the amount of material listed to each 75 gallons of water. If your sprayer is calibrated to deliver 150 gallons of water per acre, you should add the suggested amount of insecticide to each 150 gallons.

** Certified for use in organic orchards.

Note: When ground equipment is not available, or when inclement weather prevents the use of ground equipment, insecticides can be applied with aircraft. The rates listed are also the rates to use when applying insecticides by air. The amount of finished spray per acre will vary depending on the type of aircraft being used.

PECAN SPRAY SCHEDULE FOR HOME ORCHARDS

Insects and diseases reduce the quantity and quality of pecans harvested each year by homeowners and reduce the value of pecans as shade trees. Several carefully timed applications of fungicides and insecticides used in conjunction with certain cultural practices can diminish the damage by diseases and insects.

Pest Identification – learning to identify the major insect pests and diseases of pecans is highly desirable and strongly recommended. Many times the choice of pesticides is dependent on the particular pest that is causing damage. Also some chemicals may be eliminated from cover sprays if the certain pests are not present. Fact sheets on some of the major insect and disease pests of pecans are available from the parish extension office.

Cultural practices – pecan trees that are in a vigorous state of growth are less susceptible to certain diseases and insects. Cultural practices such as proper fertilization, proper pruning, and general cleanup around trees are conducive to optimum tree growth. Planting of varieties that are adapted to local areas will reduce the severity of disease attack.

Spray equipment – good spray coverage is essential for disease control and to a lesser extent for insect control. Homeowners with mature pecan trees more than 35 feet tall cannot afford to purchase the type of equipment needed to get adequate coverage. Although custom spraying is available, it is not recommended because the cost is prohibitive for the number of applications normally required on pecans.

Pesticide safety – prior to purchasing or applying any pesticide, read the label. The label contains information about the precautions to follow when using the chemical.

| SUGGESTED MATERIALS | AMOUNT OF FORMULATED MATERIAL/3 GALLONS WATER |
|---|--|
| Malathion 25% WP | 3 TBS |
| Carbaryl 80% WP | 2 TBS |
| *Dimethoate 2.67 lbs/gal EC (Cygon) (June-August only) | 1 TBS |
| Kelthane MF (Dicofol) | 0.05 tsp |
| DiPel DF (also certified for organic use) | 4 TBS |
| DiPel ES | 3 TBS |

Spray Periods:

First spray – when buds open (approximately April 1), use one fungicide plus Malathion or Lindane for control of pecan scab and gall-forming insects.

Second spray – when male blooms turn brown and begin to fall (approximately 6 weeks after the first spray or about May 10); Malathion or DiPel for control of pecan nut casebearer.

Third spray – should be applied 30 days after the second spray; use Dimethoate for control of pecan aphids and mites; use Malathion or DiPel for control of pecan nut casebearer and hickory shuckworm.

PECAN SPRAY SCHEDULE FOR HOME ORCHARDS (cont'd)

**** Fourth spray** – (about August 10-15) use Carbaryl plus Dimethoate for control of pecan weevil, hickory shuckworm, fall webworm, walnut caterpillar, aphids, and mites. If pecan weevils have been severe, two additional applications of Carbaryl should follow at 10-day intervals.

* For yellow aphid and mite control only.

** If pecan weevil and hickory shuckworm have not been serious pests in the past, Carbaryl can be eliminated from this spray.