Fruit and Nuts – Commercial

Pecan Spray Schedule

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.

Many generic insecticides are now available. Carefully read the label to make sure the correct active ingredient is being used for the insects or mites being controlled.

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 ensure the optimal 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. The 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 Insects and Mite Pests

Insect	Time of Application	Suggested Insecticides and Rates*
Scale insects	Late February until buds first begin to break.	3 gallons of dormant oil/acre. If trees are weak use only 2 gallons/acre.
Pecan phylloxera	Between the time the buds begin to open and approximately ½-¾ 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 (chlorpyrifos): .5-2.0 pints/acre Provado 1.6F (imidacloprid): 3.5-7.0 fl. ounces/acre Warrior (lambda-cyhalothrin): 2.56-5.12 fl. ounces/acre Warrior II (lambda-cyhalothrin): 1.28-2.56 fl. ounces/acre Centric 40WG (thiamethoxam): 2.0-2.5 fl. ounces/acre Proaxis (gamma-cyhalothrin): 2.56-5.12 fl. ounces/acre Fulfill (pymetrozine): 4.0 fl. ounces/acre Endigo ZC (lambda-cyhalothrin + thiamethoxam): 5.0-6.0 fl. ounces/acre Admire Pro(imidacloprid, foliar application): 1.2 – 2.4 fl. ounces/acre Movento (spirotetramat): 6.0 – 9.0 fl. ounces/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 3rd 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.	Imidan 70W (phosmet): 2.0-3.0 pounds/acre Confirm 2F (tebufenozide): 8.0-16.0 fl. ounces/acre Intrepid 2F (methoxyfenozide): 4.0-8.0 fl. ounces/acre Spintor 2SC (spinosad): 4.0-10.0 fl. ounces/acre Warrior (lambda-cyhalothrin): 2.56-5.12 fl. ounces/acre Warrior II (lambda-cyhalothrin): 1.28-2.56 fl. ounces/acre Dimilin 2L (diflubenzuron): 8.0-16.0 fl. ounces /acre Ammo 2.5EC (cypermethrin): 3.0-5.0 fl. ounces /acre Entrust (spinosad): 1.25-3.0 ounces/acre** Mustang Maxx (zeta-cypermethrin): 3.2-4.0 fl. ounces /acre Proaxis (gamma-cyhalothrin): 2.56-5.12 fl. ounces /acre Altacor (chlorantraniliprole): 2.0-4.5 ounces/acre Endigo ZC (lambda-cyhalothrin + thiamethoxam): 5.0-6.0 fl. ounces/acre Voliam Xpress (lambda-cyhalothrin): 6.0-12.0 fl. ounce/acre Proclaim (emamectin benzoate): 3.2-4.8 fl. ounce/acre

Fruit and Nuts – Commercial

Insect	Time of Application	Suggested Insecticides and Rates*
Pecan spittlebug	Begin treatments when 5%-10% of nut-bearing terminals are infested. Apply treatments when spittle masses first appear.	Provado 1.6F (imidacloprid): 3.5-7.0 ounces/acre Imidan 70 WSB (phosmet): 1.0-1.5 pounds/acre Warrior (lambda-cyhalothrin): 2.56-5.12 fl. ounces/acre Warrior II (lambda-cyhalothrin): 1.28-2.56 fl. ounces/acre Proaxis (gamma-cyhalothrin): 2.56-5.12 fl. ounces/acre Voliam Xpress (lambda-cyhalothrin): 6.0-12.0 fl. ounces/acre Admire Pro (imidacloprid, foliar application): 1.2-2.4 fl. ounces/acre Endigo ZC (lambda-cyhalothrin + thiamethoxam): 5.0-6.0 fl. ounces/acre
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 (tebufenozide): 8.0-16.0 fl. ounces/acre Spintor 2SC (spinosad): 4.0-10.0 fl. ounces/acre Warrior (lambda-cyhalothrin): 2.56-5.12 fl. ounces/acre Warrior II (lambda-cyhalothrin): 1.28-2.56 fl. ounces/acre Intrepid 2F (methoxyfenozide): 4.0-8.0 fl. ounces/acre Mustang Maxx (zeta-cypermethrin): 3.2-4.0 fl. ounces/acre Proaxis (gamma-cyhalothrin): 2.56-5.12 fl. ounces /acre Dimilin 2L (diflubenzuron): 8.0-16.0 fl. ounces /acre Imidan 70WSB (phosmet): 2.0-3.0 pounds/acre Entrust (spinosad): 1.25-3.0 fl. ounces/acre Altacor (chlorantraniliprole): 2.0-4.5 ounces/acre Endigo ZC (lambda-cyhalothrin + thiamethoxam): 5.0-6.0 fl. ounces/acre Voliam Xpress (lambda-cyhalothrin): 6.0-12.0 fl. ounces/acre Proclaim (emamectin benzoate): 3.2-4.8 fl. ounces/acre Brigade WSB (bifenthrin): 8.0-32.0 fl. ounces/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.	Vendex 50WP (fenbutin-oxide): 1.0-2.5 fl. ounces/acre Savey 50DF (hexythiazox): 3.0-6.0 fl. ounces/acre Portal (fenpyroximate): 32.0 fl. ounces/acre Epi-Mek (abamectin): 2.5-5.0 fl. ounces/acre Onager (hexythiazox): 12.0-24.0 fl. ounces/acre
Yellow aphid	Separate treatments for yellow aphids are generally not recommended. If a separate treatment is desired, treat when aphid numbers average 25-30 aphids per compound leaf. Do not treat yellow aphids before July 15. Sample 10 compound leaves on 5-10 trees throughout the orchard.	Provado 1.6 (imidacloprid): 3.5-7.0 fl. ounces/acre Ammo 2.5EC (cypermethrin): 3.0-5.0 fl. ounces/acre Mustang Maxx (zeta-cypermethrin): 3.2-4.0 fl. ounces/acre Warrior (lambda-cyhalothrin): 2.56-5.12 fl. ounces/acre Warrior II (lambda-cyhalothrin): 1.28-2.56 fl. ounces/acre Proaxis (gamma-cyhalothrin): 2.56-5.12 fl. ounces/acre Centric 40WB (thiamethoxam): 2.0-2.5 fl. ounces/acre Admire Pro ((imidicloprid, foliar application): 1.2-2.4 fl. ounces/acre Movento (spirotetramat): 6.0-9.0 fl. ounces/acre Endigo ZC (lambda-cyhalothrin+thiamethoxam): 5.0-6.0 fl. ounces/acre Assail 30SG (acetamiprid): 2.5-9.6 ounces/acre Fulfill (pymetrozine): 4.0 fl. ounces/acre Brigade WSB (bifenthrin): 8.0-32.0 fl. ounces/acre

Fruit and Nuts – Commercial

Insect	Time of Application	Suggested Insecticides and Rates*
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.	Ammo 2.5EC (cypermethrin): 3.0-5.0 fl. ounces/acre Imidan 70WSB (phosmet): 2.0 pounds/acre Warrior (lambda-cyhalothrin): 2.56-5.12 fl. ounces/acre Warrior II (lambda-cyhalothrin): 1.28-2.56 fl. ounces/acre Mustang Maxx (zeta-cypermethrin): 3.2-4.0 fl. ounces/acre Proaxis (gamma-cyhalothrin): 2.56-5.12 fl. ounces/acre Centric 40WB (thiamethoxam): 2.5 fl. ounces/acre Fulfill (pymetrozine): 4.0 fl. ounces/acre Provado 1.6 (imidicloprid): 8.0 fl. ounces/acre Admire Pro ((imidicloprid), foliar application): 2.8 fl. ounces/acre Dimethoate 4E (dimethoate): 11.0 fl. ounces/acre Endigo ZC (lambda-cyhalothrin+thiamethoxam): 6.0 fl. ounces/acre Brigade WSB (bifenthrin): 8.0-32.0 fl. ounces/acre
Pecan weevil	Treatment applications should begin when nuts enter the dough stage (around August 20), and adult weevils are present; 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 (carbaryl): 1.5-2.0 pounds/acre Sevin XLR Plus (carbaryl): 2.5 quarts/acre Mustang Maxx (zeta-cypermethrin): 3.2-4.0 fl. ounces/acre Proaxis (gamma-cyhalothrin): 2.56-5.12 fl. ounces/acre Imidan 70WSB (phosmet): 2.0-3.0 pounds/acre
Fall webworm	Normally, this insect is controlled when treating 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, the more difficult it becomes to reach the larvae within the webbing with the Insecticide.	Confirm 2F (tebufenozide): 8.0-16.0 fl. ounces/acre Intrepid 2F (methoxyfenozide): 4.0-8.0 fl. ounces/acre Spintor 2SC (spinosad): 4.0-10.0 fl. ounces/acre Javelin WG (*Bacillus thuringiensis*): 0.25-4.0 pounds/acre** DiPel FS (*Bacillus thuringiensis*): 1.0-4.0 pints/acre Sevin 80S (carbaryl): 2.5-6.25 pounds/acre Sevin XLR Plus (carbaryl): 2.0-5.0 quarts/acre Proclaim (emamectin benzoate): 3.2-4.8 ounces/acre

* 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 every 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 every 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.

Treatment decisions: For information on the use of pheromone traps and a degree day model for making treatment decisions go to http://pecan.ipmpipe.org. Go to the toolbox and click on the section on insect monitoring and control.