

Insect Management in Plums ¹

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The most important pests of peaches and plums are common to both crops in Florida; however, the peach tree borer is much less destructive to plums than to peaches. Also the minimum waiting period between last application and harvest of plums is different for some of the insecticides.

Do not use the following insecticides within the indicated days of harvest of plums: Malathion-3, methoxychlor-7, Sevin-1, and Imidan-7. Use materials recommended for dooryard peaches for dooryard plums.

Plum leaf scald is the major limiting factor to plum production in Florida. This disease is spread by leafhoppers but little can be done to control this problem at present. The disease can kill trees in three years or less.

Refer to Table 1 for information on pests and recommendations or to Southern Peach Nectarine and Plum Management and Culture Guide (http://entomology.ent.uga.edu/peach/peach_guide/title.htm).

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1. This document is ENY-807 (IG078), one of a series of the Entomology and Nematology Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Revised: January 1996. Revised: May 2009. Please visit the EDIS Website at <http://edis.ifas.ufl.edu>.
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Table 1. Southern peach spray guide.*

Pest(s)	Material(s)	Rate/ Acre	Effectiveness	REI/PHI	Remarks
DORMANT - After leaves have fallen but before bud swell					
Scale & mites	Superior oil -- 2 applications @ 10-14 day intervals works best.	1-3 gals	+++ (1x) +++++ (2x)	12 hrs/12 hrs	Adjust oil rate downward if you are spraying early or late. A second oil application should be applied for blocks that had scale on the fruit, cultivars ripening with or before 'Harvester,' scale-prone cultivars such as the 'Prince' selections, and blocks that show building infestations or limb die-back.
DELAYED DORMANT - 1-5% bud swell					
Scale & European red mite	Superior oil	1-1.5 gals	+++	12 hrs/	Reduce oil rate as bud development advances to reduce the risk of phytotoxicity. Do not use oil after 5% bud swell.
	Superior oil plus Lorsban 4E	1.5 gals plus 1-2 pts	++++		Lorsban strengthens performance against early crawlers and offers some suppression of lesser peachtree borer.
PINK to 5% BLOOM					
Thrips	SpinTor 2SC	5-8 oz	+++	4 hrs/14 days	SpinTor provides good thrips control in other crops. It has not been well tested on eastern stone fruit. It is a short residual material. After SpinTor dries it is safe for bees. Spray in late afternoon to protect bees. Do not tank mix until trials w/coppers and Ziram have been conducted.
PETAL FALL TO 1% SHUCK SPLIT -- —Warm weather promotes rapid fruit development. However, cold can delay or even re-start flower/fruit development. Immediately after petal fall, insecticides are typically needed every 7-10 days.					
Plant bugs Oriental fruit moth Plum curculio	Endosulfan			1 day/30 days	Endosulfan performs well under cool temperature conditions. It has slightly better plant bug efficacy than Imidan.
	Thiodan 50W	2 lbs	+++		
	Phaser 50W	2 lbs	+++		
	Imidan 70W	2 lbs	+++	1 day/14 days	Oriental fruit moth seldom reaches damaging levels in the lower Coastal Plain areas of GA or FL.
Scale	Imidan 70W	2 lbs	+++	1 day/14 days	

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Pest(s)	Material(s)	Rate/ Acre	Effectiveness	REI/PHI	Remarks
<p>SCAB -- —Scab sprays are critical from shuck split through 2nd and 3rd cover. In well managed orchards with low scab and insect pressure, fungicides may be reduced by ARM application from 4th cover to the first pre-harvest spray. If scales are not a problem, ARM or extended interval insecticide may be considered, especially during May.</p>					
Plum curculio Oriental fruit moth Plant bugs Scale	Imidan 70W	2.5-3 lbs	++++	1 day/14 days	Shuck split and the spray that follows are key insecticide applications.
<p>7 to 10 DAYS AFTER SHUCK SPLIT SPRAY, interval may extend to 14 days for scab and insects if dry.</p>					
Plum curculio, Oriental fruit moth, Scale	Imidan 70W	2-3 lbs	++++	1 day/14 days	
	Guthion 50W	1.75-2 lbs	++++	14 days/21 days	Thinning and picking REI is 14 days. Other activities such as scouting or mowing have a 2 day REI.
<p>SUMMER COVER SPRAYS -- 14 day intervals are standard, may vary from 7-21 days depending on pest pressure/conditions.</p>					
Insects	Imidan 70W	2.25-3 lbs	++++	1 day/14 days	
Spider mite	Vendex 50W	1-1.5 lbs	+++	2 days/14 days	Do not wait until harvest to address mite problems, as miticide PHIs are 7 days or more. Use miticides as-needed. Treat if mites are numerous or for the presence of mites and the on-set of bronzing or webbing. Vendex is slow acting.
	Pyramite 60WP	4.4 oz	+++++	12 hrs/7 days	Do not wait until harvest to address mite problems, as miticide PHIs are 7 days or more. Use miticides as-needed. Treat if mites are numerous or for the presence of mites and the on-set of bronzing or webbing. Pyramite is a very effective miticide.
	Apollo 0.42SC	2-8 oz	++++	12 hrs/30 days	Apollo controls eggs, but not other mite life stages. It is expensive and slow, but it is an effective miticide. It takes at least 5 days to begin lowering mite numbers, but lasts for 6+ weeks.

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PRE-HARVEST -- Typically 14 days before harvest and again 1-7 days before harvest.					
Insects	Imidan 70W (@ 14+ days PH)	2.25-3 lbs	++++	1 day/14 days	Imidan, applied as a complete spray to both sides of each tree row, should be standard at 14 days pre-harvest.
	AS NEEDED 3-7 DAY PRE-HARVEST INSECTICIDE NEEDS				
	Pounce 3.2E	6 oz	++	12 hrs/7 days	The pyrethroids (Ambush or Pounce) and to a lesser degree the carbamate (Sevin) encourage scale and mite outbreaks. Unfortunately, a 14 day pre-harvest Imidan application is sometimes inadequate. If insects are present pre-harvest, they increase brown rot pressure, especially in wet weather. Apply permethrin (Ambush or Pounce) or Sevin only as-needed. Carefully reference labels for PHIs.
	Ambush 2E	10 ozs	++	12 hrs/5 days	
	Sevin 80S	2-3 lbs	++	12 hrs/1 day	
POST HARVEST					
Borers	Lorsban 4E	3-6 pts/100 gals	+++++	1 day/ recommended for post-harvest use only	Lorsban is the material of choice. Use a handgun to drench the trunk and scaffold limbs.
	Endosulfan (2 applications)		++	1 day/ post-harvest use only	If endosulfan borer sprays are made, make 2 applications to ensure adequate borer protection.
	Thiodan 3EC	6 pts/100 gals			
	Phaser	6 pts/100 gals			
Borers and White Peach Scale	Lorsban 4E plus Superior oil	3-6 pts/ 100 gals 0.5 gal/100 gals	+++++	12 hrs/ recommended for post-harvest use only	Carefully directed handgun application of Lorsban plus 1/2% superior oil provides post-harvest borer control and some scale suppression. Take care to direct the spray to the trunk and scaffolds. Direct spray away from this year's wood or foliage.

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Pest(s)	Material(s)	Rate/ Acre	Effectiveness	REI/PHI	Remarks
Scale (alone)	Saf-T-Side summer oil	1-1 1/2 gals/100 gals	+++	4 hrs/ recommened 14 days or more post-harvest	Apply dilute, at least 100 gals per acre. Wait at least 2 weeks after harvest. Use 1 gal/100 gals if summer oil is applied before mid-September. Do not apply if daytime temperatures have not moderated. Do not apply within 2 weeks of applying sulfur, captan or Sevin.
	Superior Oil (early-dormant and dormant)	1-3 gals/100 gals	+++ (1x) +++++ (2x)	12 hrs/ recommended only after leaf fall	Dormant—from leaf fall to first bud break. Adjust oil rate downward when spraying early or late. A second oil application should be applied for blocks that had scale on the fruit, cultivars ripening with or before Harvester, scale-prone cultivars such as the Prince selections, and blocks with increasing infestations or limb die-back.

Rates for insecticides are expressed as the rate per acre for moderate to severe disease and insect pressure. In orchards where insects are less severe, insecticide rates may be cut up to 25%. The amount of water used for application should not affect the amount of chemical used per acre. Remember, water is a carrier to assist in the application and proper coverage of the tree. Without adequate coverage, control may be unsatisfactory.

Growers should use the rate and the gallons of water best suited to their orchard and equipment. Use the formula to determine the rate per acre for trees larger or smaller than 8 feet:

$A/8 \times B = C$. A = height of your tree, B = rate of chemical required for trees pruned to 8 feet (spray schedule), and C = rate of chemical to use per acre. For example, captan is recommended at 4.0 lb per acre for standard 8 foot trees, and in the orchard to be sprayed, the trees are 10 feet high: $10 \text{ (tree height)} / 8 \times 4.0 \text{ (rate from spray schedule)} = 5.0 \text{ lb per acre}$.

Caution: Some labels restrict total pounds per acre per application and per year, thus not permitting adequate rates per acre for large trees or sprays per season. Alternatively, consider using tree row volume, especially for newer high density plantings. See Tree Row Volume section for details. For control of scale insects and shothole borers, use at least 100 gallons per acre and slow tractor speed to 2-3 mph.

This guide is to be used only by commercial growers who will observe all label precautions and recommendations. Brand names of pesticides are given in the spray schedule as a convenience to the grower. They are neither an endorsement of the product nor a suggestion that similar products are not effective.

Effectiveness ratings in the following tables range from +, slightly effective, to +++++, highly effective. However, remember that many factors, such as time of application, coverage with the pesticide, and rates, can influence the level of pest control achieved.

*** Adapted from the 2009 Southern Peach, Nectarine and Plum Management and Culture Guide, a collaborative effort by fruit scientists in the southern region edited by D. Horton, P. Brannen, B. Bellinger and D. Richie**
<http://www.ent.uga.edu/peach/peachguide.pdf>