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# Texas Agricultural Extension Service



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TEXAS STATE DOCUMENTS

# Insect and Disease Control On Peaches, Apricots, Nectarines, and Plums

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The health and vigor of fruit trees and the quality of the fruit depend on a well-planned and wellexecuted insect and disease control program. Losses to insects and diseases can be minimized with a spray program and by diligently following orchard sanitation practices.

## When and How to Spray

Preserving the yield and quality of peaches, nectarines, and plums requires following a fairly rigid spray application schedule. The spray schedule given in this publication specifies when to make applications in relation to fruit development. Thorough spray coverage of the tree with each application is essential for effective control.

## **Precautions on Chemical Use**

Select materials for the most effective, safe, economical control. Follow all of the manufacturer's directions for handling and applying pesticides or fungicides.

**Residues.** The Environmental Protection Agency has established pesticide residue tolerances for fruit crops. To keep residues within acceptable limits, certain chemicals should not be applied within a certain number of days before harvest. Always read the product label for specific restrictions.

**Resistance management.** Insect and disease pathogens are known to develop resistance to some pesticides. Alternating chemicals that have different modes of action, tank-mixing products, and limiting use are strategies that help prevent resistance. Strategies to help minimize pesticide resistance are usually described on product labels. Follow these recommendations to ensure good, consistent control. Once resistant pest strains become abundant, a particular chemical or class of chemicals may never be as effective.

*Caution.* All hazards associated with insecticides and fungicides are reduced with proper handling. Use pesticides with caution and store them out of reach of children, irresponsible persons, livestock, and household pets. Dispose of empty containers as prescribed on the label. Properly dispose of leftover spray material. Observe all precautions on the product label.

**Pollination and bee poisoning.** Many agricultural and horticultural crops depend upon pollinating insects. Native bees in certain areas of Texas usually provide pollination. However, if native bee species are not adequate, honey bee colonies can be rented for pollinating tree fruits, cucurbits, vegetables, legumes, and other crops. Growers must take special precautions to protect these beneficial pollinating insects.

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The following suggestions are effective in reducing bee poisoning:

- 1. Mow or shred orchard cover crop blooms before applying pesticides.
- 2. Apply hazardous pesticides only when bees are not foraging. Early morning, late afternoon, and night are periods of least bee activity. Use relatively non-hazardous pesticides whenever possible.
- 3. Do not apply or allow pesticides to drift over wild bee nesting sites or honey bee colonies.
- 4. Contact the beekeeper to remove bees from the area when bee losses are likely.

*Recommendations.* Pesticide use recommendations made by the Texas Agricultural Extension Service and the Texas Agricultural Experiment Station are based on one or more of the following:

\* Effectiveness under Texas conditions.

- \* Avoidance of toxicity to desirable vegetation, animals, and human beings.
- Avoidance of adverse side effects upon beneficial predators, parasites, honey bees, fish and other wildlife, plants, animals, and human beings.
- \* Chemical availability.

Suggested pesticides must be registered and labeled for use by the U.S. Environmental Protection Agency and the Texas Department of Agriculture. Pesticide label clearance is subject to change and may have changed since this publication was printed. County Extension agents and appropriate specialists are advised of changes as they occur. The **user** is always responsible for the effects of pesticide residues on his or her livestock and crops, as well as problems that could arise from drift or movement of the pesticide from his or her property to that of others. Always read and follow carefully the instructions on the container label.

#### Relative Bee Hazard of Pesticides Suggested for Commercial Peaches, Apricots, Nectarines, and Plums.

#### Highly toxic at any time

Azinphosmethyl (Guthion®) Carbaryl (Sevin®) Chlorpyrifos (Lorsban®) Diazinon Esfenvalerate (Asana XL®) Methomyl (Lannate<sup>®</sup>) Parathion (Penncap-M<sup>®</sup>) Permethrin (Ambush<sup>®</sup>, Pounce<sup>®</sup>) Phosmet (Imidan<sup>®</sup>) Methidathion (Supracide<sup>®</sup>)

Hazardous if applied during the day. Not hazardous in early morning or late evening when bees are not foraging. Endosulfan (Thiodan®)

#### Non-hazardous at any time

Oil sprays	Fenbuconazole (Indar 75®)
Sulfur (Superfine Wettable Sulfur ®),	Benomyl (Benlate®)
Microthiol Special <sup>®</sup> , Thiolux <sup>®</sup> ,	Captan (Captan <sup>®</sup> , Captec 4L <sup>®</sup> )
EM-53 Sulfur ®)	Dichloran (Botran®)
Thiophanate methyl (Topsin-M® 85WDG,	Copper hydroxide (Kocide DF®,
Topsin-M 4.5 F®)	Kocide 606 ®, Champion ®,
Iprodione (Rovral <sup>®</sup> , Rovral 4F <sup>®</sup> )	Champ F®)
Triforine (Funginex ®)	Propiconazole (Orbit®)
Chlorothalonil (Bravo 720®,	Myclobutanil (Nova® 40W)
Bravo Ultrex <sup>®</sup> )	Vinclozolin (Ronilan DF®)
Fenbutatin-oxide (Vendex ®)	Ziram (Ziram 76®)
Propargite (Omite®)	Tebuconazole (Elite 45 DF®)

	1 0				
C	hemical Name	Trade Name	Signal Word <sup>1</sup>	Reentry Time <sup>2</sup>	Restricted Use Pesticide <sup>3</sup>
F	ungicides				
	benomyl	Benlate 50 DF	Caution	24 hours	
	captan	Captec 4L Captan 50% WP	Danger Danger	4 days 4 days	-
	chlorothalonil	Bravo 720 Bravo Ultrex Terranil 6L Terranil 90DF	Warning Danger Warning Danger	48 hours 48 hours 48 hours 48 hours	-
	copper hydroxide	Kocide DF Kocide 606 37.5% F Champion 77% WP Champ F 37.5% F	Danger Danger Danger Caution	48 hours 48 hours 48 hours 48 hours	- - -
	dichloran	Botran 75W	Caution	12 hours	
	fenbuconazole	Indar 75WSP	Caution	12 hours	
	iprodione	Rovral 50 WP Rovral 4F	Caution Caution	12 hours 12 hours	-
	myclobutanil	Nova 40W	Caution	24 hours	-
	propiconazole	Orbit	Warning	24 hours	-
	sulfur	Superfine Wettable Sulfur Microthiol Special EM-53 Liquid Sulfur Thiolux	Caution Caution Caution Caution	24 hours 24 hours 24 hours 24 hours	
	tebuconazole	Elite 45DF	Warning	12 hours	
	thiophanate methyl	Topsin-M 85 WDG Topsin-M 4.5 F	Caution Caution	12 hours 12 hours	-
	triforine	Funginex 18.2% EC	Danger	12 hours	
	vinclozolin	Ronilan DF	Caution	12 hours	
	ziram	Ziram 76	Danger	48 hours	-
In	secticides				
	azinphosmethyl	Guthion (All)	Danger	48 hours	+
	carbaryl	Sevin (All)	Caution	12 hours	-
	chlorpyrifos	Lorsban 4E	Warning	24 hours	-
	diazinon	Diazinon 50% WP	Warning	24 hours	
	endosulfan	Thiodan 50% WP	Danger	24 hours	-
	esfenvalerate	Asana XL	Warning	12 hours	+
	fenbutatin-oxide	Vendex 50% WP	Danger	48 hours	-
	methidathion	Supracide (All)	Danger	2-14 days	+
	methomyl	Lannate 1.8 EC	Danger	4 days	+
	methyl parathion	Penncap-M 20.9% F	Warning	48 hours	+
	permethrin	Pounce 3.2 EC Ambush 2 EC	Caution Warning	24 hours 24 hours	+ +
	phosmet	Imidan (All)	Warning	24 hours	-
	propargite	Omite 30% WP or WS	Danger	48 hours	
					3

## Toxicity Rating, Reentry Time, And Purchase Restrictions For Pesticides Used On Fruit.

Toxicity	Rating,	Reentry	y Time,	And	Purchase	Restrictions	For	Pesticides	Used	On ]	Fruit.
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Chemical Name	Trade Name	Signal Word <sup>1</sup>	Reentry Time <sup>2</sup>	Restricted use Pesticide <sup>3</sup>				
Nematicides and Soil Fumigants								
1-3 dichloropropene	Telone II 94% L	Warning	72 hours	+				
1-3 dichloropropene + chloropicrin	Telone C-17 94.4% L	Danger	72 hours	+				
fenamiphos	Nemacur 3	Danger	48 hours	+				
methyl bromide	Brom-O-Gas 98%	Danger	48 hours	+				
metam-sodium	Vapam 32.7% EC	Danger	48 hours					

<sup>1</sup> DANGER means HIGHLY TOXIC. WARNING means MODERATELY TOXIC. CAUTION means LOW ORDER OF TOXICITY.

<sup>2</sup> Reentry time is the length of time from application until workers can reenter the area without protective clothing.

<sup>3</sup> Restricted use pesticides are available only to certified applicators or persons under their direct supervision.

#### Before using any insecticide, read label thoroughly Days from last application and follow all directions and precautions for use. to harvest<sup>2</sup> Peaches. Insects Spray material apricots, Time of per acre unless and and Application Diseases otherwise stated<sup>1</sup> nectarines Plums Remarks Late Fall Diseases: Copper hydroxide (Kocide DF®) NA Apply when leaves begin NA (Oct. 20 to Leaf curl, 8 to16 lb. 61.4% DF to defoliate in the fall. Dec. 15) Coryneum Do not mix Kocide or blight. Champion fungicides with insecticides. or (Kocide 606 ®) 5 to 10 qt. 37.5% F NA NA or (Champion ®) 8 to 16 lb. 77% WP NA NA or (Champ F \*) 2/3 to 1 1/3 gal. 37.5% F NA NA or Chlorothalonil (Bravo 720 ®) NA NA 3 pt. 2 fl. oz. to 4 pt .2 fl. oz. 54% F or (Bravo Ultrex®) 2.8 to 3.8 lb. 82.5% WDG NA NA or (Terranil 6L ®) 3 pt. 2 oz. to 4 pt. 2 oz. 54% F NA NA or (Terranil 90 DF \*) 2.6 to 3.4 lb. 90% WDG NA NA

#### Suggestions for Controlling Insects and Diseases on Commercial Peaches, Apricots, Nectarines, and Plums.

Insects and Diseases	Spray material	Peaches,		
	per acre unless otherwise stated <sup>1</sup>	apricots, and nectarines	Plums	Remarks
Dormant Insects: Season Scale insects, mite and aphid eggs. Petroleum oil: 98% 1.5 to 2 water. To enhance control of pests, tank-mix one of the for insecticides to the oil. Refer label for rates: Chlorpyrifos (Lorsban 4E® or Diazinon (Diazinon 50WP® or Methidathion (Supracide 2		al. NA t	NA	Adding insecticides to oils improves control. <b>Do not</b> use oils when tempera- tures are below 32°F. or above 90°F. <b>Do not</b> combine sulphur sprays with oils on foliage. <b>Do</b> <b>not</b> follow a previous application of sulfur or apply sulfur following an
	or Phosmet (Imidan 50 WP or 70 WP®)	NA	NA	oil spray for at least 30 days.
Insects: Scale insects, mite and aphid eggs and peach twig borer.	Use same combination sprays as in dormant season.	NA	NA	This spray can be effective where heavy scale or peach twig borers are a problem.
Diseases: Leaf curl, Coryneum blight.	Same choices as for late fall including (Ziram 76®) 8 to 10 lb. 76% WP	NA	NC	Apply if late fall application was not made or disease is severe. Ziram is <b>not</b> cleared on plums.
Insects: Peach twig	Azinphosmethyl (Guthion®) 1.75 to 2.25 lb. 50% WP (solupak)	21	21	Pink bud spray for peach twig borer may be neces-
borer.	or 3.5 to 4.5 pt. 2L or	21	21	Timbers, Hill Country, and Seminole areas of Texas.
	Endosulfan (Thiodan®) 2.0 lb. 50% WP	30	30 7 The insect is	The insect is not normally
	or 1.6 qt. 3 EC or	30	7	This spray may be elimi- nated if a delayed dormant
	Esfenvalerate (Asana XL®) 4.0 to 11.6 fl. oz. 0.66 EC	14	14	application is made for this pest.
χ. 	Methyl Parathion (Penncap-M®) 8 pt. or Permethrin (Ambush®) 6.4 to 25.6 fl. oz. 25% WP or 2 EC or (Pounce®) 4 to 16 oz. 3.2 EC or Phosmet (Imidan®) 2 to 3 lb. 50% WP or	14	14	<b>Note:</b> To avoid or delay development of insect resistance, alternate types of insecticides throughout the season.
	Insects: Scale insects, mite and aphid eggs. Insects: Scale insects, mite and aphid eggs and peach twig borer. Diseases: Leaf curl, Coryneum blight. Insects: Peach twig borer.	Insects: Scale insects, mite and aphid eggs. Petroleum oil: 98% 1.5 to 2 gal. per 100 g water. To enhance control of dormant pests, tank-mix one of the following insecticides to the oil. Refer to the product label for rates: Chlorpyrifos (Lorsban 4E *) or Diazinon (Diazinon 50WP *) or Methidathion (Supracide 2E or 25 WP *) or Phosmet (Imidan 50 WP or 70 WP *) Insects: Scale insects, mite and aphid eggs and peach twig borer. Diseases: Leaf curl, Coryneum blight. Insects: Azinphosmethyl (Guthion *) 1.75 to 2.25 lb. 50% WP (solupak) or 3.5 to 4.5 pt. 2L or Endosulfan (Thiodan *) 2.0 lb. 50% WP or 1.6 qt. 3 EC or Esfenvalerate (Asana XL *) 4.0 to 11.6 fl. oz. 0.66 EC or Methyl Parathion (Penncap-M *) 8 pt. or 25% WP or 2 EC or Phosmet (Imidan *) 2 to 3 lb. 50% WP or 1.5 to 2. lb. 70% WP	Insects: Scale insects, mite and aphid eggs.Petroleum oil: 98% 1.5 to 2 gal. per 100 gal. water. To enhance control of dormant pests, tank-mix one of the following insecticides to the oil. Refer to the product label for rates: Chlorpyrifos (Lorsban 4E *) or Diazinon (Diazinon 50WP *) or Methidathion (Supracide 2E or 25 WP *) or Phosmet (Imidan 50 WP or 70 WP *)NAInsects: Scale insects, mite and aphid eggs and peach twig borer.Use same combination sprays as in dormant season.NAInsects: Diseases: Leaf curl, Coryneum blight.Use same choices as for late fall including (Ziram 76 *) 8 to 10 lb. 76% WPNAInsects: Peach twig borer.Azinphosmethyl (Guthion *) 3.5 to 4.5 pt. 2L or Endosulfan (Thiodan *) 2.0 lb. 50% WP or 1.6 qt. 3 EC or Methyl Parathion (Penncap-M*) 8 pt. or Methyl Parathion (Penncap-M*) 8 pt. or Methyl Parathion (Penncap-M*) 8 pt. or Methyl Parathion (Penncap-M*) 8 pt. or to 11.6 fl. oz. 0.66 EC or Methyl Parathion (Penncap-M*) 8 pt. or Methyl Parathion (Penncap-M*) 8 pt. or to 11.6 fl. oz. 0.66 EC or Methyl Parathion (Penncap-M*) 8 pt. or to 11.6 fl. oz. 0.66 EC or Methyl Parathion (Penncap-M*) 8 pt. or to 11.6 fl. oz. 0.66 EC or Methyl Parathion (Penncap-M*) 8 pt. or to 14 or or Permethrin (Ambush *) 6.4 to 25.6 fl. oz. 25% WP or 2 EC or or to 1.5 to 2.1b, 70% WP14 or to 2.1b, 70% WP	Insects: Petroleum oil: 98% 1.5 to 2 gal. per 100 gal. NA NA   Scale insects: water. To enhance control of dormant pests, tank-mix one of the following insecticides to the oil. Refer to the product label for rates: NA NA   Aphid eggs. insecticides to the oil. Refer to the product label for rates: Chlorpyrifos (Lorsban 4E®) or Diazinon (Diazinon 50WP®) or Methidathion (Supracide 2E or 25 WP®) or Phosmet [Imidan 50 WP or 70 WP®) NA NA   Insects: Use same combination sprays as in dormant season. NA NA NA   Diseases: Same choices as for late fall including (Ziram 76®) 8 to 10 lb. 76% WP NA NC   Insects: Azinphosmethyl (Guthion®) 21 21 21   Diseases: Same choices as for late fall including (Ziram 76®) 8 to 10 lb. 76% WP 30 7   or n.5 to 4.5 pt. 2L 21 21 21   Insects: Azinphosmethyl (Guthion *) 2.0 lb. 50% WP 30 7   or n.6 qt. 3 EC 30 7 7   or Esfonvalerate (Asana XL®) 14 14 14   or Permethrin (Ambush®) 6.4 to 25.6 fl. oz. 25% WP or 2 EC or 7 7 7   nor Esforvalerate (Maa ®) 2 t



Before using any insecticide, read label thoroughly and follow all directions and precautions for use.			Days from last application to harvest <sup>2</sup>			
Time of Application	Insects and Diseases	Spray material per acre unless otherwise stated <sup>1</sup>	Peaches, apricots, and nectarines	Plums	Remarks	
Pink Bud (cont.)	Diseases: Brown rot.	<b>Benomyl</b> (Benlate 50 WP <sup>®</sup> ) 1 to 2 lb. 50% WP	3	3	Limit: 4 lb./acre/season.	
		Captan (Captan <sup>®</sup> ) 4 to 8 lb. 50% WP	0	0		
		(Captec 4L®) 2 to 4 qt. 37.4% F (peaches, nectarines), 2 to 3 qt. (plums), 1.5-2.5 qt. (apricots)	0	0		
		Chlorothalonil (Bravo 720®) 3 pt. 2 fl. oz. to 4 pt. 2 fl. oz. 54% F	NA	NA		
		or (Bravo Ultrex®) 2.8 to 3.8 lb. 82.5% WDG or	NA	NA		
		(Terranil 6L <sup>®</sup> ) 3 pt. 2 oz. to 4 pt. 2 oz. 54% F or	NA	NA		
		(Terranil 90 DF®) 2.6 to 3.4 lb. 90% WDG or	NA	NA		
		Iprodione (Rovral®) 1 to 2 lb. 50% WP	0	NA	High-pH water should be buffered. Limit: 5 applications/season.	
		or (Rovral 4F®) 1 to 2 pt. 41.6% F or	0	0		
		Triforine (Funginex <sup>®</sup> ) 36 to 48 fl. oz. 18.2%	EC 0	0	<b>Do not</b> exceed 3 pre- harvest applications. <b>Not</b> cleared for fruit rot phase on plums and apricots.	
and Pi		or <b>Thiophanate methyl</b> (Topsin M 85WDG *) 1.2 to 1.9 lb. 85% WDG (peaches), 1.2 lb. (plums, apricots, and nectarines)	1	1		
		(Topsin-M 4.5 F <sup>®</sup> ) 30 to 45 fl. oz. 46.2% F (peaches), 30 fl. oz. (plums, apricots, and nectarines)	1	1		
		Propiconazole (Orbit®) 4 oz. 41.8% EC	0	0	Limit: 2 preharvest applications.	
		or <b>Fenbuconazole</b> (Indar 75®) 2 oz. 75% WSP	0	NC	Add wetting agent to spray solution. Not cleared on plums. Limit: 1 lb./acre/ season.	
		or <b>Myclobutanil</b> (Nova 40W®) 2.5 to 6 oz. 40% (nectarines and peaches)	6 WP 7	NC	Not cleared on plums and apricots. Only for blossom blight.	
		or <b>Vinclozolin</b> (Ronalin DF®) 1 to 2 lb. 50% D	F 14	NC	Not cleared on plums. Make only one pre-harvest application.	
		or				

Before using any insecticide, read label thoroughly and follow all directions and precautions for use.			Days from last application to harvest <sup>2</sup>			
Time of Application	Insects and Diseases	Spray material per acre unless otherwise stated <sup>1</sup>	Peaches, apricots, and nectarines	Plums	Remarks	
Pink Bud (cont.)		<b>Tebuconazole</b> (Elite 45DF®) 4 oz. 45% DF or	0	NC	Not cleared on plums and apricots.	
		Sulfur (Microthiol Special®) 10 to 20 lb.	30% WP 0	0	Sulfur gives best results when used in areas of moderate to low disease pressure. May discolor fru of nectarine and peach. Microthiol Special ® <b>not</b> cleared on apricots.	
		Thiolux <sup>®</sup> ) 10 to 30 lb. 80% DF	0	0	Not cleared on apricots.	
		or (EM 53 Liquid Sulfur®) 7 pt. 53% F	0	0	Not cleared on apricots.	
		or (Superfine Wettable Sulfur ®) 10 to 16 lb. 94% WP	0	0		
Full Bloom	Diseases: Brown rot.	Same choices as for pink bud.			This spray may be required only during periods of high humidity and frequent rain. <b>Do not</b> apply insecticides during full bloom.	
Petal Fall Insects: when 75% Catfacing	Azinphosmethyl (Guthion®) 1.75 to 2.25 lb. 50% WP (Solupak)	21	21	Plum curculio has not beer a problem in the Lower Ric		
of petals have fallen)	insects (thrips,	or 3.5 to 4.5 pt. 2L	21	15	Grande area of Texas.	
	stinkbugs, plant bugs),	or Carbaryl (Sevin ®) 2 lb. 50% WP	1	1		
	borer, Plum	or	1	1		
	curculio, Oriental	1.25 lb. 80S or				
	fruit moth.	1 qt. XLR per 100 gal. water or	1	1		
		1 qt. 4F per 100 gal. water or	1	1		
		Endosulfan (Thiodan®) 2.0 lb. 50% WP or	30	7		
		1.6 qt. 3 EC or	30	7		
~~~		Esfenvalerate (Asana XL®) 4.0 to 11.6 fl. 0.66 EC	oz. 14	14		
		or Methomyl* (Lannate®) 3 to 6 pt. 2.4 EC	4	NC	*Not labeled on	
		1 to 2 lb. 90 SP	4	NC	prum curcuno.	
		or <b>Methyl parathion</b> (Penncap-M) 1.6 to 4 p or	t. 14	14	7	

Before using any insecticide, read label thoroughly and follow all directions and precautions for use.			Days from last application to harvest <sup>2</sup>			
Time of Application	Insects and Diseases	Spray material per acre unless otherwise stated <sup>1</sup>	Peaches, apricots, and nectarines	Plums	Remarks	
Petal Fall (cont.)	-	<b>Permethrin</b> (Ambush®) 6.4 to 25.6 fl. oz. 2 EC or 2.5% WP	7	NC		
		(Pounce <sup>®</sup> ) 4 to 16 fl. oz. 3.2 EC	7	NC		
		Phosmet (Imidan®) 2 to 3 lb. 50% WP	14	7		
		1.5-2 lb. or 70% WP	14	7		
	Diseases: Scab (peaches, apricots, and nectarines) and Brown rot.	Same choices as for pink bud.			If scab is a primary concern, <b>do not</b> use Funginex, Ronilan, Nova, Elite, or Orbit.	
Shuck Split	Insects: Same as for petal fall.	Same as for petal fall.			Plum curculio can be a serious pest at this stage. Don't eliminate this spray from the schedule.	
	Diseases: Same as for petal fall.	Captan (Captan®) 4 to 8 lb. 50% WP	0	0		
		or (Captec 4L <sup>®</sup> ) 2 to 4 qt., 37.4% F (peaches, nectarines), 2 to 3 qt. (plums), 1.55 to 2.5 qt. (apricots)	0	0		
ped to		or <b>Chlorothalonil</b> (Bravo 720 <sup>®</sup> ) 3 pt. 2 fl. oz. 4 pt. 2 fl. oz. 54% F	to NA	0		
		or (Bravo Ultrex®) 2.8 to 3.8 lb. 82.5% WDG or	NA	NA		
		(Terranil 6L <sup>®</sup> ) 3 pt. 2 oz. to 4 pt. 2 oz. 54% or	F NA	NA		
		(Terranil 90 DF <sup>®</sup> ) 2.6 to 3.4 lb. 90% WDG or	NA	NA		
		Thiophanate methyl (Topsin M 85 WDG 1.2 to 1.9 lb. 85% WDG (peaches), 1.2 lb. (plums, apricots, and nectarines) or	®) 1	1		
		(Topsin M 4.5 F <sup>®</sup> ) 30 to 45 fl. oz. 46.2% F (peaches), 30 fl. oz. (plums, aprico and nectarines) or	1 ts,	1		
		Fenbuconazole (Indar 75®) 2 oz. 75% WP	0	NC	Add wetting agent to spray solution. <b>Not</b> cleared on plums. Limit: 1 lb./acre/ season.	

or

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Before using and follow al	any insecticid l directions ar	e, read label thoroughly ad precautions for use.	Days from last application to harvest <sup>2</sup>			
Time of Application	Insects and Diseases	Spray material per acre unless otherwise stated <sup>1</sup>	Peaches, apricots, and nectarines	Plums	Remarks	
Shuck Split (cont.)	×	Sulfur (Microthiol Special®) 10 to 20 lb. 80% WP	0	0	Sulfur gives best results when used in areas of moderate to low disease pressure. May discolor fruit of nectarine and peach. Microthiol Special ® <b>not</b> cleared on apricots.	
		or (Thiolux ®) 10 to 30 lb. 80% DF or	0	0	Not cleared on apricots.	
		(EM 53 Liquid Sulfur®) 7 pt. 53% F or	0	0	Not cleared on apricots.	
		(Superfine Wettable Sulfur®) 10 to 16 lb. 94% WP	0	0		
1st cover spray at 10 to 14 days after shuck split	Insects: Same as for petal fall.	Same as for petal fall.				
	Diseases: Same as for petal fall.	Same choices as for shuck split.			Supplemental state label allows use of chlorothalonil through first cover spray. Label <b>must</b> be in possession of applicator. <b>Do not</b> use chlorothalonil after first cover spray.	
Remaining cover spray	Insects: Same as for petal fall.	Same as for petal fall.	*			
	Diseases: Same as for petal fall.	Same choices as for shuck split except for chlorothalonil.				
Preharvest Spray (21 days before picking)	Insects: Same as for petal fall.	Same as for petal fall.				
1	Diseases: Brown rot.	Same selection as pink bud excluding chlorothalonil and myclobutanil.				
	Brown rot, Rhizopus rot	Dichloran (Botran®) 1.33 lb. 75% WP/10	0 gal. 10	NC	Apply 18 and 10 days prior to harvest. <b>Not</b> cleared for plums or apricots.	



Before using a and follow all	any insecticid directions ar	e, read label thoroughly ad precautions for use.	Days from last to har	applica vest <sup>2</sup>	ation
Time of Application	Insects and Diseases	Spray material per acre unless otherwise stated <sup>1</sup>	Peaches, apricots, and nectarines	Plums	Remarks
Preharvest (1 week	Insects: Carbaryl (Sevin®) 2 lb. 50% WP per Grasshop- 100 gal. water		1	1	3 days for nectarines and apricots.
picking)	beetles, dried fruit	1.25 lb. 80S or	1	1	
	beetles.	1 qt. XLR per 100 gal. water or	1	1	
		1 qt. 4F per 100 gal. water	1	1	
		Methomyl (Lannate®) 3 to 6 pt. 2.4EC or 1 to 2 lb. 90SP			
	Diseases:	Same as pink bud excluding chlorothaloni myclobutanil, and vinclozolin.	1,		
Preharvest (1 to 3 days before picking)	Insects: Same as for 1 week before picking.	Same as for 1 week before picking.	See Remark	5.	1 day for peaches and plums. 3 days for nectarines and apricots.
	Diseases: Brown rot.	Same as pink bud excluding chlorothaloni myclobutanil, and vinclozolin.	il,		

<sup>1</sup> Rate based on 200 gallons of dilute spray per acre.

<sup> $^{2}$ </sup> NA = Not Applicable.

NC = Not cleared by Environmental Protection Agency.

#### Control of Specific Insect Pests on Peaches, Apricots, Nectarines, and Plums.

Material	Formulation	Rate/100 gal.	Remarks
Peach Tree Borer: from ground level t	Obtain control with one o scaffold limbs.	of the following materials.	Refer to remarks for timing. Spray all bark areas
<b>Endosulfan</b> (Thiodan®)	50% WP or 3 EC	1.5 lb. 1.0 qt.	Best control is obtained with a single application during the first week in September.
<b>Esfenvalerate</b> (Asana XL®)	0.66 EC	2.0 to 5.8 fl. oz.	Apply as a directed spray to trunk and scaf- fold limbs. Thorough coverage of trunk and scaffold limbs is required. Make one appli- cation from mid-August to early September.
Chlorpyrifos (Lorsban®)	4E	3 qt.	Make one application from mid-August to early September. Use a coarse, low- pressure spray to give uniform coverage of tree trunks. <b>Do not</b> allow spray to contact fruit. <b>Do not</b> apply within 14 days of harvest.

**Lesser Peach Tree Borer:** Several products listed under petal fall spray are labeled for lesser peach tree borer control. If this insect is a problem in the orchard, select one of these materials for control. This insect has two generations per year. Moths become active in April-May and again in August-September. Good coverage of cover sprays in April or May is needed for effective control. In heavily infested orchards, two additional sprays in August or September may be needed.

Material	Formulation	Rate/100 gal.	Remarks
Mites: Apply materi may be necessary wi	als listed below as needed to hen mite populations are he	o prevent premature defolia avy.	ation by mites. Two applications 7 days apart
Fenbutan-oxide (Vendex®)	50% WP (water soluble bags)	4 to 8 oz./100 gal. or 1 to 2 bags/400 gal.	<b>Do not</b> apply more than two times per oxide season. <b>Do not</b> apply within 14 days of harvest.
Propargite (Omite®)	30% WP or 30 WS	5 to 15 lb./acre	<b>Do not</b> apply more than two times per year. <b>Do not</b> apply within 14 days of harvest.

## Control of Nematodes on Peaches, Apricots, Nectarines, and Plums.

Nematode	Material	Rate	Remarks
General Nematodes	<b>Fenamiphos</b> Nemacur ® 35% EC	1.66 to 3.33 gal./acre	Banded: Apply material in not less than 10 gallons of solution per acre to the soil with ground equipment and incorporate immediately. Center the band over the row and use a band width of 50% of the row spacing. Cover the feeder root system of the plant. Preharvest interval: 45 days. <b>Not</b> cleared on plums and apricots.
General Nematodes and Soil Fungi	<b>1-3 Dichloropropene</b> (Telone II ®94% L)	15 to 48 gal.	Preplant only. Rate depends on soil type and desired depth of treatment.
	<b>1-3 Dichloropropene</b> (Telone C-17®) 77.9% + 16.5% chloropicrin	17.1 to 54.7 gal.	Preplant only. Rates depend on soil type and desired depth of treatment.
	<b>Methyl bromide</b> (Brom-O-Gas® 98% G)	1 to 2 lb./100 sq. ft.	Individual tree site: Refer to label. Preplant treatment only. Use of Brom-O- Gas will give limited soil fungi control. Auger probe treatment.
	<b>Metam-sodium</b> (Vapam® 32.7% EC)	1qt./100 sq. ft.	Replant sites: Prepare a shallow basin where tree is to be planted. Apply Vapam with water. Add sufficient water to penetrate to a depth of 6 ft. Refer to label for waiting period before planting.
Root Knot Nematodes (only)			Since materials listed above give short-term control, it is suggested that only trees budded on Nemaguard or other nematode resistant rootstock be planted.
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