

CHERRY/PEACH/PLUM INSECT CONTROL—COMMERCIAL

Insect	Material and Formulation	Amount to Use/Acre	Remarks/Precautions	Days to Harvest
DELAYED DORMANT				
Mites	Superior oil	2 gal	Apply after leaves drop in the fall or before buds swell in the spring.	
San Jose Scale	Superior oil plus Assail 30 SG Esteem 35WP	1.5 gal 5.3-8 oz 4-6 oz	Esteem applied with oil at delayed dormant is reported to provide very good scale control. Esteem does not kill adult scale, but suppresses hatch of eggs they lay. Therefore, in season use of Esteem may not protect fruit from blemishes by scale (small red dots develop around young scale).	7 14
PINK				
Tarnished Plant Bug	See PETAL FALL			
BLOOM				
SAVE THE BEES! DO NOT APPLY INSECTICIDES DURING BLOOM.				
BY MARCH 15				
Initiate Oriental Fruit Moth and San Jose scale Scouting Program	Place 2 or 3 Oriental fruit moth pheromone traps in orchard interior and check twice weekly to record first consistent moth emergence (late March) = OFM biofix . Keep trap bottoms clean and replace lures monthly or every two months for long-life lures. After OFM biofix date, begin calculating number of daily degree days (DD) using base 45°F = DD = (maximum daily temperature + minimum daily temperature) / 2 – 45.			
	Place 2 San Jose scale pheromone traps in orchard interior in tops of trees known to have a live SJS infestation (conspicuous red spots on apples last year) and record first date in early to mid-April when you consistently capture SJS males on traps = SJS biofix . Remove scale trap in May. After specific biofix dates, begin accumulating DD (base 51°F for SJS) to predict crawler spray periods (hatch).			
Plum curculio dispersal	Plum curculio adults disperse from overwintering sites in adjacent woods into orchard and begin feeding on and laying eggs in fruit between 100-400 DD accumulated after temperatures exceed 70°F for two days in late March = PC biofix . After PC biofix date, begin accumulating DD to predict dispersal period by calculating number of daily DD using base 50°F = DD = (maximum daily temperature + minimum daily temperature) / 2 – 50.			
BY LATE MARCH				
Initiate Plum Curculio and Lesser Peachtree Borer*** Scouting Programs	Tie gray plum curculio pyramid trap to each of 3 or 4 perimeter orchard tree trunks adjacent to woods (overwintering site) and check twice weekly for plum curculio adults. Place 2 lesser peachtree borer pheromone traps in interior trees and check weekly to record moth flight beginning and peaks. Keep peachtree borer trap bottoms clean and replace lures monthly or every two months for long-life lures. After specific biofix dates, begin accumulating DD (base 50°F for CM) to predict spray periods (hatch). Calculate number of daily degree days (DD) using proper base = DD = (maximum daily temperature + minimum daily temperature) / 2 – base.			
PETAL FALL				
Tarnished Plant Bug Stink Bugs	Belay	6 fl oz	Stink bug and plant bug catfacing are worse where control of flowering weeds is poorest. Keep spring flowering broadleaf weeds mowed regularly to reduce orchard attractiveness to stink bugs and tarnished plant bugs.	21
	Baythroid XL	5.5 fl oz	Use of pyrethroids (Asana, Baythroid, Mustang Maxx, Pounce, Proaxis, Renounce, Warrior) will kill	7
	Besiege	6-12 fl oz	mite predators and cause mite outbreaks.	14
	Imidan 70W	2-4.25 lb	DO NOT use Imidan on sweet cherries. Use Imidan in blocks with scale infestations.	14
	Mustang Maxx	1.28-4 fl oz		14
	Sevin XLR	3 qt		3
	Warrior	2.5-5.12 fl oz		14
Lesser Peachtree Borer***	REFER TO LATE MARCH AND SECTION ON BORERS.			

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SHUCK SPLIT TO 7-10 DAYS AFTER				
Oriental Fruit Moth	Actara 25WP	4.5-5.5 oz	Oriental fruit moth egg hatch period for each generation occurs so many DD after OFM biofix: 400-700 DD (late April), 1300-1700 DD (late May) and after 2300 DD. Belay can be applied 2 times per season against scale, stink bugs and plum curculio.	14
	Altacor	3-4.5 oz		10
	Asana XL	4.8-14.5 fl oz		14
	Assail 30 SG	2.5-8 oz		7
	Besiege	6-12 fl oz		14
	Delegate 25 WG	6-7 oz		14
	Exirel	10-20.5 fl oz		3
	Imidan 70W	2-4.25 lb	DO NOT use Imidan on sweet cherries. Use Imidan in blocks with scale infestations.	14
	Intrepid 2 F	10-16 fl oz		7
	Rimon EC	20-40 fl oz		8
	Entrust 2SC (OMRI*)	4-6 fl oz		14
	Deliver (OMRI*)	0.5-2 lb		0
Plum Curculio	Products listed in PETAL FALL or		Plum curculio: Apply insecticide after shuck split if greater than 1 plum curculio adult per 4 traps per week or begin sprays when you first detect fruit feeding damage in perimeter trees.	
	Apta	21-27 fl oz		14
	Avaunt 30 WG	5-6 oz		14
	Besiege	6-12 fl oz		14
	Imidan 70 WP	2.13-4.25 lb		14
San Jose Scale	Admire Pro (foliar)	1.4-2.8 fl oz	Time spray against San Jose scale crawlers. Monitor for crawlers by wrapping double-stick tape around scale-infested limbs in early May. Inspect the tape weekly for yellow crawlers. The crawler period persists 2 to 3 weeks in May. Apply crawler spray at 10-day intervals as long as crawlers are detected.	7
	Assail 30 SG	5.3-8 oz		7
	Belay	6 fl oz		21
	Centaur 70W	34.5 oz		14
	Esteem 35 WP	3-5 oz		14
	Movento	6-9 oz		7
	Aza-Direct (OMRI*)	1-2 pt		0
BY MAY 1	REFER TO SECTION ON BORERS.			
Initiate Peachtree Borer*** Scouting Program			Place 2 peachtree borer pheromone traps on interior trees. These traps will indicate when moth flight begins and peaks. Delay peachtree borer trunk drench spray until you consistently catch peachtree borers in traps for at least two weeks.	
European Red Mite Twospotted Spider Mite	Acramite 50 WS	0.75-1 lb	Mite spray thresholds: Miticide spray recommended if mites exceed 2.5 mites per leaf in May, 5 mites per leaf in June and 7.5 mites per leaf in July. Repeat spray once 10 days later if live mites still exceed threshold. Use low rate of Acramite for twospotted mite or high rate for European red mite. Acramite can only be applied once per season.	3
	Agri-Mek 0.7 SC	0.5-1 fl oz	Agri-Mek is most effective if applied before leaves harden off.	21
	Apollo 4 SC	2-8 oz	Apollo is most effective on eggs and newly hatched nymphs. Limit use to one Apollo application per year.	21
	Envidor 2 SC	16-18 fl oz		7
	Nexter 75 WP	4.4 oz	Use low rate of Nexter for European red mite or high rate for twospotted mite.	7
	Onager 1 EC	12-24 fl oz		7
	Zeal 72WP	2-3 fl oz		7

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Oriental Fruit Moth	SEE SHUCK SPLIT			
Plum Curculio	SEE SHUCK SPLIT		Plum curculio: Egg hatch of 2nd and 3rd generation Oriental fruit moth occurs from 1400-1700 DD (late May) and after 2300 DD have accumulated since the OFM biofix in mid-March. Plum curculio sprays are justified when you detect new fruit feeding damage in perimeter trees after 1200 DD (usually in early June) have accumulated since the PC biofix in late March.	
PREHARVEST				
Oriental Fruit Moth	Assail 30 SG	5.3-8 oz		7
Japanese Beetle	Admire Pro (foliar)	1.4-2.8 fl oz		7
(late June to August)	Exirel	10-20.5 fl oz		3
Green June Beetle	Sevin XLR	2 1/8-4 1/2 lb	Sevin is suggested here since it can be used one day before harvest. Sevin and pyrethroid formulations may encourage mite outbreaks. Recommend spray against Oriental fruit moths if you averaged more than 5 mites per trap since the last spray.	7
(July to August)	Aza-Direct (OMRI*)	4-8 fl oz		0
Spotted Wing Drosophila**	Malathion	2.4 pt		7
	Sevin XLR	2-3 qt		7
	Entrust	4-8 fl oz		7
	Pyganic 5 EC (OMRI*)	4.5-17 fl oz		0
SPECIAL PROBLEM/PEST OF CHERRY AND MAYBE LATE PEACHES				
*OMRI = Organic Materials Review Institute lists compounds approved for organic production.				
** Spotted Wing Drosophila (SWD) is a new invasive insect pest that was detected in ripening and ripened fruit in many Midwest states, including Arkansas, in 2013. The SWD larvae feed inside and damage ripening soft-skinned fruit, especially blackberry, blueberry, raspberry and strawberry . See the Spotted Wing Drosophila site: http://www.ipm.msu.edu/invasive_species/spotted_wing_drosophila or the Arkansas SWD fact sheet: https://www.uaex.edu/publications/PDF/FSA-7079.pdf				
*** BORERS OF TREES – The peachtree borer and lesser peachtree borer often infest peach, apricot, cherry and plum trees. The lesser peachtree borer lays eggs on bark near scaffold wounds where larvae hatch and bore into wounds. This species appears to have two generations per year. This attack further weakens limbs. The peachtree borer lays eggs near trunk base and larva bores in trunk below the soil line. Some of the regularly applied insecticide cover sprays aid in suppressing lesser peachtree borers. However, adequate control of both pests requires a drench spray of the trunk and/or scaffold limbs. Pheromone traps are available to monitor moth emergence of both pests. Where lesser peachtree borers have been a problem, spray 7-14 days after moth emergence begins in April and repeat in June for second generation hatch.				
Lesser Peachtree Borer***	Asana XL	4.8-14.5 fl oz	Where lesser peachtree borer has been a light to moderate problem, apply insecticide once at the peak of the second moth flight (in June or July). Where lesser peachtree borer has been a moderate to heavy problem, make two applications: one 7 to 14 days after emergence of first-generation moths begins (spray mid-April to mid-May) and the second at the peak of the second generation moth flight (often in June or July).	14
	Lorsban Advanced	1.5-4 pt	Lorsban 50W is for sour cherries only.	14
	Lorsban 50 W	2-3 lb	Lorsban is not labeled for use on plums.	14
	Mustang Maxx	1.28-4 oz		14
	Pounce 25 WP	6.4-25.6 oz	Use only Pounce, Ambush or Warrior on plums.	14
	Warrior	2.56-5.12 fl oz		14
Peachtree Borer***	Asana XL	4.8-14.5 fl oz		14
	Lorsban Advanced	1.5-4 pt	DO NOT exceed one application of Lorsban per year in June.	14
	Besiege	6-12 fl oz		14
	Warrior	2.56-5.1 fl oz		14

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<p>GRANULATE AMBROSIA BEETLE – The granulate ambrosia beetle <i>Xylosandrus crassiusculus</i> (Mot.) is a relatively new pest in Arkansas and can cause significant damage in nursery, landscape and orchard settings. Female beetles bore into the sapwood of stems and young trees. Though attracted to damaged, stressed or transplanted trees, the granulate ambrosia beetle also attacks seemingly healthy, thin-barked hardwoods or branches from 1.0-2.5 inches in diameter (sometimes larger). Visible symptoms include wilted foliage and strands of boring dust protruding from small holes. These insects make galleries directly into the heartwood of the tree, which they inoculate with an ambrosia fungus (<i>Ambrosiella</i> spp.) which is used as their food source. In addition, they can introduce or create entry points for pathogenic fungi such as <i>Fusarium</i> spp. Death is more likely related to these pathogenic fungi that block xylem vessels. Young infested trees often die, while more established trees may survive. Infestations can be identified by toothpick-like strands of boring dust protruding up to 1.5 inches from the host plant. The strands are produced by the female beetle as she excavates her gallery. The strands are fragile and are easily broken off by wind or rain leaving only pencil-lead sized holes. Heavily infested plants or plant parts should be removed and destroyed. Once trees are infested, the beetle cannot be killed within the plant, and fungicides are ineffective against the fungus. Protective sprays on trunks may be attempted on susceptible nearby plants. Trunk/limb sprays of a labeled insecticide containing chlorpyrifos or a pyrethroid insecticide may be effective as a preventative, but multiple applications of the pyrethroids may have to be made during the time the beetles are active. Always read and follow label directions for the insecticide used. Keep trees healthy and avoid any unnecessary tree stress (drought, injury, nutrition, etc.). Check trees frequently beginning early March and treat accordingly. Use ethyl alcohol based traps to monitor for adult beetles in the spring (see UA Extension Fact Sheet FSA-7064). Use a protective insecticide as soon as beetle activity starts.</p>				
<p>RED IMPORTED FIRE ANTS (ALL FIRE ANT BAITS) – Apply when ants are active and soil temperature is above 60 degrees F. DO NOT treat if rain is anticipated within 6 hours.</p>				
Non-Bearing Trees	Fenoxycarb (Award)	1-3 Tbsp/mound 1.0-1.5 lb/acre	Mound-to-mound treatment rate. Broadcast rate. This is an IGR.	
	Hydramethylnon (Amdro Pro)	2-5 Tbsp/mound 1.0-1.5 lb/acre	Mound-to-mound treatment rate. Broadcast rate.	
	Pyridine (Distance)	1-4 Tbsp/mound 1.0-1.5 lb/acre	Mound-to-mound treatment rate. Broadcast rate. This is an IGR.	