Philadelphia Orchard Project



Pest & Disease Monthly Plan: Plum Curculio

PLUM CURCULIO



Plum Curculio (*Conotrachelus nenuphar*) impacts fruits such as apples, plums, apricots, peaches, cherries and other pome and orchard stone fruits. The small weevil or snout beetle, inflicts damage at every stage of its life cycle. Adult weevils leave characteristic crescent-shaped scars on the fruit's surface as they puncture it to feed and lay eggs. Upon hatching, the larvae tunnel into the fruit, causing the fruit to drop and for the larvae to overwinter in the soil. Plum Curculio has been reported as an increasing pest of concern and leading cause of crop damage at POP orchards.

Month	Та	sks	Observations & Dates Completed
Feb - Mar	1.	Remove and destroy any remaining fruit "mummies" on tree or on orchard floor to reduce sites for overwintering.	
	2.	Using a garden tool such as a hoe, cultivate soil under tree up to 4 inches to kill overwintering larva (as an alternative, this is also a good time to run any avian allies such as chickens or ducks through the orchard for pest control!)	
Apr	1.	Plum curculio may emerge from overwintering site and will begin feeding on leaves and flowers. At first sign of fruit on tree, plum curculio will begin laying eggs. At this stage, implement the shake method - place sheets under the trees, shake trees (including branches) to knock plum curculio to the ground, quickly gather sheets and place them in soapy water. Repeat this twice a day for 2-3 weeks during active season. NOTE: 40-60% of plum curculio emergence will happen in a single day. Pest activity is usually highest in the morning.	
	2.	Apply Kaolin clay (Surround) to protect vulnerable trees. Kaolin clay protects trees by providing a protective barrier on plant surfaces and making the tree a difficult environment for insects to land, feed and lay eggs. Be mindful of timing, do not apply kaolin clay during full bloom when bees are present! Apply 5 days after full bloom during <i>petal fall</i> or 14 days after petal fall when the papery covering (calyx) that covers baby fruit splits open. Reapply every 2 weeks for 2 months and after rain. Read more about <u>kaolin clay</u> on the POP blog!	

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Month	Tasks	Observations & Dates Completed
May - Jun	 As fruitlets form and grow, thin clusters to allow for sunlight, airflow and healthier fruit. Thinning also helps reduce the spread of disease and insects injuring fruit by feeding and laying eggs within clusters. Continue kaolin clay applications and for severe infestations, consider a pyrethrin spray. Pyrethrin sprays are organic pesticides containing chemicals taken from chrysanthemum flowers that can be effective at killing certain orchard pests. NOTE: While they are less toxic than chemical pesticides, they should be used with caution and only when non-chemical controls have not been effective. Learn more about <u>pyrethrin sprays</u> on the POP blog! 	
Jul - Oct	 As fruit develops, be on the lookout for crescent-shaped scars on fruit. These markings are an indication that eggs have been laid in the fruit. Remove and dispose of them immediately. Practice consistent orchard sanitation every other day by picking up any dropped fruit on the orchard floor to avoid second generation larvae tunneling into the ground and re-emerging in July and August. This is a great time to collaborate with avian allies such as chickens and/or ducks! Timed orchard hours for avian allies can help with managing fallen fruit and larvae. Second generation will continue emerging through October. Continue practice of picking up dropped fruit, removing scarred fruit and implementing the shake method. 	
Nov	Spray beneficial nematodes to help manage larvae in the soil.	

Resources Used:

Monthly Orchard Task List — Plum Curculio: A Pome and Stone Fruit Pest — Kaolin Clay Sprays for Fruit Trees — Pyrethrin Orchard Sprays — Controlling Plum Curculio (The Natural Gardener)