



Hibiscus Bud Weevil

Anthonomus testaceosquamosus

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Problem:

This tiny weevil has the potential to cause significant loss of hibiscus flower buds. It was first collected in Miami-Dade County in 2017 and since has been collected in Broward, Duval, Hernando, Hillsborough and Sumter Counties. The damage by this weevil can be confused with damage caused by the hibiscus bud midge. Nurseries are at risk of a “hold order” if their hibiscus is found to be infested with this weevil.

Biology:

Adult weevils may feed on buds and leaves but the female lays eggs in young buds. The eggs hatch and the larvae feed within the bud. The bud drops as a result of feeding and the insect continues its development in the dropped bud. The timing of the life cycle of this weevil is unknown, however, based on closely related weevils, the life cycle is likely 3-4 weeks depending on weather. Larvae are probably feeding on the pollen within the bud for approximately 10-14 days. The adults of these types of weevils are poor fliers which may lead to aggregated areas of infestation. Peak activity for the pepper weevil, a closely related weevil, is March through June.

Nursery Management:

Sanitation: Remove as many dropped buds as possible. In Texas, they found that removing these dropped buds was critical to their success. They used leaf blowers to concentrate the buds for pick up. Although buds may drop daily, it will take the weevil time to finish its development and emerge as an adult so buds do not need to be collected daily.

Growing Cycle: In Texas the two most successful methods of controlling this pest was sanitation (removal of buds described above) and to break the plant growing cycle by not growing hibiscus continuously in one area; i.e. if possible rotate with other plants within an area.

Pheromone: The pheromone to attract boll weevil, a similar weevil, into traps was shown to not work in Texas, however, there were extenuating circumstances that may have contributed to not catching weevils. The pheromone is currently used for pepper weevil and should be further investigated for potential use for this weevil.

Systemic Insecticides: Apply a systemic insecticide via drenching after cutting hibiscus back to increase movement into new buds. There has been heavy reliance on the systemic neonicotinoid insecticides for control of several pests in ornamental production. However, due to concerns on the impact on pollinators these insecticides are becoming unacceptable to buyers or banned from use. Other systemic insecticides that may work include acephate (i.e. Orthene) and cyantraniliprole (Mainspring).

Contact Insecticides: Use foliar (contact) sprays for adult weevils as buds develop; every 7-10 days during bud development. Rotate products with different modes of action (MOA). Reliance on some contact insecticides such as pyrethroids, can flare mite populations.

The following table provides insecticides recommended for weevil control in nurseries and greenhouses.

MOA	Systemic	Active Ingredient	Trade Name	
1A		carbaryl	Sevin SL	
1B	S	acephate	Orthene	
			Lepitect	
		chlorpyrifos	Dursban 50W	
			DuraGuard ME	
	S	Dimethoate	Dimethoate 4E, 4EC	
3A		bifenthrin	Menace GC	
			Talstar S Select	
			Talstar Nursery G	
			cyfluthrin	Decathlon
			lambda-cyhalothrin	Scimitar GC
			fenpropathrin	Tame 2.4 EC
			tau-fluvalinate	Mavrick Aquaflo
			permethrin	Astro
			Perm-up 3.2 EC	
3A + 4A		cyfluthrin + imidacloprid	Discus N/G	
4A	S	acetamiprid	TriStar 8.5 SL	
	S	dinotefuran	Safari 2G	
			Safari 20SG	
	S	imidacloprid	Xytect 75WP; 2F	
			Marathon 11; 60WP	
			Discus tablets	
	S	thiamethoxam	Flagship 25WG	
5		spinosad	Conserve	
			Enrust	
6		abamectin	Aracinate TM	
7B		fenoxycarb	Preclude	
15		diflubenzuron	Dimilin 25W; 4L	
28	S	cyantraniliprole	Mainspring	
Unknown		azadirachtin	Azatin O; XL	
			Azatrol EC	
			Ornazin EC	

The following insecticide active ingredients have been used with some success for similar weevils in other cropping systems. Labeled products for ornamental use are included in parentheses.

Thiamethoxam (Flagship)	Cyantraniliprole (Mainspring)
Dinotefuran (Safari)	Chlorantraniliprole (Acelepryn is a landscape product)
Imidacloprid (Marathon, numerous generic products)	Permethrin (i.e. Astro)
Clothianidin (Aloft is a landscape product that also contains bifenthrin)	Bifenthrin (i.e. Talstar)

For more information and photos go to the FDACS Pest Alert:

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