

Redheaded Flea Beetle

Pest management and control in nursery crops

RECIPE FOR SUCCESS

Effective, season-long suppression of redheaded flea beetles (RHFB) in the nursery requires an integrated approach. This approach incorporates the life cycle and other characteristics of the pest and the nursery setting to best select when, what, and how to prevent or minimize significant damage to crops. RHFB adults are shiny black with red heads and oval-shaped bodies and are less than a quarter of an inch long. Like in other flea beetle species the last pair of legs are enlarged for jumping. Females lay their eggs in the soil or growing substrate. There are regional differences in RHFB life history but in the nursery, the egg is the overwintering life stage and there are multiple generations per growing season. After the eggs hatch, larvae develop through three stages before completing development as pupae in the soil. Even moderate levels of feeding injury by the adults may cause significant crop injury and economic loss. A sound pest monitoring program is critical to determine pest numbers and population densities in different crops or different areas, and to identify and prioritize locations needing more attention. Container plants infested with all life stages of RHFB are commonly found during the summer in heavily infested nurseries.



KEYS TO PEST MANAGEMENT OF REDHEADED FLEA BEETLE

1 Identify the most susceptible crops and varieties.

Some of the most commonly affected crops include Hydrangea Paniculata, Holly, Itea, Rose, Osmanthus, Loropetalum, Virburnum, Forsythia, Crape Myrtle, Azalea, Cornus, Gardenia, Buddleia, Prunus, Weigela, Pyracantha, Abelia, Wax Myrtle, Gaura and Illicium.

2 In Spring, when larvae are present in containers or there is a history of seasonal crop damage, treat plants with an insecticide targeting young larvae in the soil

Several insecticides are available for larvae control including systemic, contact, and microbiological insecticides. Granular insecticides may be applied to each container or broadcast over

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the crop; liquid insecticides require drenching the soil profile. Contact insecticide drench applications may require higher water volumes than systemic insecticide applications

3 When adult activity is detected, treat plants with an insecticide to prevent adult feeding damage

Several insecticides are available for adult control that work by repellency, on contact or by ingestion. Applications need to be made as foliar sprays particularly targeting good coverage on the new shoots and leaves. When populations are large, even multiple and frequent foliar applications may not prevent adult damage. Suppressing larvae in the Spring is critical to prevent recurring adult damage during the growing season.

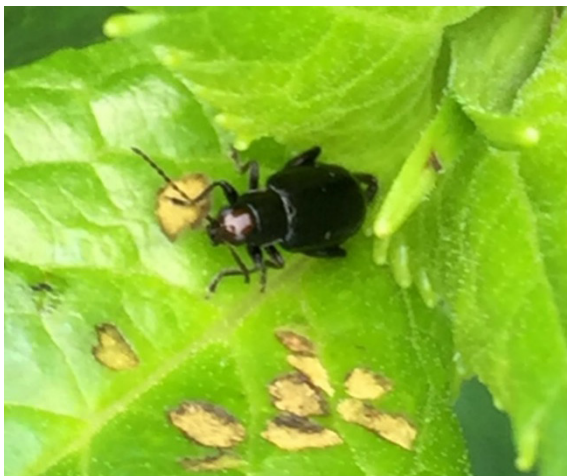


Figure 1. RHFB adult and feeding damage (OHP, Inc.)



Figure 2. RHFB, life cycle (North Carolina Cooperative Extension.)

Application	Application Method	Rate	Remarks
1. Marathon G	Topdress*	0.5 - 4.1 grams per pot (2-12 in.) 5 - 37 grams per pot (1-5 gal.)	Apply in early Spring targeting larvae in the soil.
	Media incorporation*	0.5 - 9.0 lbs. per cu.yd. (2-12 in.) 1.0 - 5.0 lbs. per cu.yd. (1-5 gal.)	
	Broadcast	15 oz. per 1,000 sq./ft.	
2. Sarisa	Spray or Sprench	25 fl.oz. per 100 gal.	Target larvae in the soil and adults on the foliage
3. Azatin O	Spray	16 fl.oz. per 100 gal.	Target adults on the foliage
4. Sarisa	Spray	25 fl.oz. per 100 gal.	Target adults on the foliage

* Please see specimen label for top dress and media incorporation container rates and application .