Imported willow leaf beetle

Plagiodera versicolora
Order Coleoptera, Family Chrysomelidae; leaf beetles
Introduced pest

Host plants: Willow, cottonwood and poplar

Description: Adult beetles are 4–5 mm long, metallic to greenish blue in color, and oval in shape. Fully grown larvae can reach 6 mm in length and are black, or very nearly so, with rows of tubercles along the body.

Life history: There are two generations a year.

Overwintering: Adults in protected places.

Damage symptoms: Adult beetles chew holes in leaves or notches at leaf margins. Adults prefer new leaves. Larvae feed in groups or rows, skeletonizing leaves, preferring older leaves.

Monitoring: Adults emerge in late April to early May when PJM rhodendron blooms (Midland, Michigan) and Eastern redbud and crabapple bloom (Wooster, Ohio) (Herms). Monitor for adults in May. Look on new leaves for adults and for the holes caused by their feeding. Look for larval skeletonization of older leaves. Also look for clusters of oval, yellow eggs on leaves beginning in May.

Cultural control: Pubescent varieties tend to be resistant.

Chemical control: *Bacillus thuringiensis* var. *tenebrionis* is effective against early instar larvae. Summer sprays of horticultural oil or insecticidal soap are effective against larvae. A residual insecticide might be sprayed, if late instar larvae are present in large numbers and damage cannot be tolerated. Damage is often masked in wet summers by continuing tree growth, so that spraying may not always be necessary.

Biological control: Few parasitoids exist and do not offer control. *Harmonia axyridis*, the Asian lady beetle, consume eggs. Assassin bugs consume larvae.

Plant mortality risk: Low

Biorational insecticides: azadirachtin, *Bacillus thuringiensis* var. *tenebrionis*, horticultural oil, insecticidal soap, spinosad

Conventional insecticides: acephate, bifenthrin, carbaryl, chlorpyrifos (nursery only), cyfluthrin, deltamethrin, fluvalinate, imidacloprid, lambda-cyhalothrin, malathion, permethrin

Imported willow leaf beetle adult. (151)
Photo: Mike Raupp

Imported willow leaf beetle larvae skeletonizing lower side of leaf. (152)
Photo: David Laughlin

Imported willow leaf beetle larva and eggs. (153)
Photo: David Laughlin