

Forest Pest Bulletin



DEPARTMENT OF AGRICULTURE
AND NATURAL RESOURCES
DIVISION OF RESOURCE
CONSERVATION & FORESTRY

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COTTONWOOD LEAF BEETLE

CAUSAL AGENT

Chrysomela scripta Fabricius

HOSTS

Most Willows (*Salix* spp.) and Poplars (*Populus* spp.). Quaking aspen (*Populus tremuloides*) is not attacked.

SYMPTOMS

The most obvious indicators of Cottonwood leaf beetle attacks are damage to young branches, damaged leaves, and the presence of adult beetles and eggs in the spring. Later in the summer, entire leaves are consumed. Look for ragged or brown leaves at branch tips. Black droppings on the leaves also indicate cottonwood leaf beetles. The eggs are bright yellow and can be found on the underside of leaves. The adult beetles have very distinct color characteristics. The body of the beetle is a yellow oval about ¼ inch long with black markings on their wing covers. The head and back are also black with red or yellow margins.

LIFE CYCLE

The life cycle of the Cottonwood leaf beetle begins when the adult beetles come out of hibernation in the spring and begin to feed on leaves and buds. After a few days of feeding, the female begins laying yellow eggs on the underside of leaves in clusters of 15 to 75. When the eggs hatch, the new insects immediately begin to feed on the underside of the leaf. These larvae are solid



Figure 1. Damage done by cottonwood leaf beetles.

James Solomon, USDA Forest Service,
www.forestryimages.org



Figure 2. Cottonwood leaf beetle larvae feeding. James Solomon, USDA Forest Service, www.forestryimages.org

black and can mature as soon as 15 days, depending on the weather. Mature larvae are about ½ an inch long (12 mm), are cream colored and have two white spots on each side of their body. These white spots contain scent glands that emit an odor when the larvae are disturbed. The larvae attach themselves to the underside of leaves to pupate or become adults. Depending on the weather, there are one to three generations per year in South Dakota.

MANAGEMENT

In natural situations or where mature shelterbelt Cottonwoods are involved, the Cottonwood leaf beetle is rarely a problem. Predation can greatly reduce the spring generation of beetles. Ladybird beetles feed on the yellow eggs and pupae.

Young, vigorously growing Cottonwood trees are most susceptible to attack. The more vigorous a young cottonwood is, the greater the possible damage. The beetle will feed on the vigorous young twigs and cause up to several feet of dieback.



Figure 3. Ladybird beetle feasting on cottonwood leaf beetle eggs. James Solomon, USDA Forest Service, www.forestryimages.org

Sanitation practices around nurseries can minimize damage. Because Cottonwood leaf beetles hibernate in grass clumps or under bark, exposing them to winter temperatures could greatly reduce the number of beetles reproducing in the spring.

Due to numerous pesticide labels and/or label changes, be sure the product label includes the intended use prior to purchase or use. Please read and follow all pesticide label instructions and wear the protective equipment required. Spraying pesticides overhead increases the risk of exposure to the applicator and increases the likelihood of drift to non-target areas. Consider the use of a commercial applicator when spraying large trees due to the added risk of exposure and equipment needs. The mention of a specific product name does not constitute endorsement of that product by the South Dakota Department of Agriculture and Natural Resources.

For further information contact your nearest South Dakota Division of Resource Conservation and Forestry office. Hot Springs 605-745-5820; Lead 605-584-2300; Mitchell 605-995-8189; Pierre 605-773-3623; Rapid City 605-394-2395; Sioux Falls 605-362-2830; Watertown 605-882-5367.

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