

28. Cranberry Girdler

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Hosts

The cranberry girdler (*Crysothecia topiaria*) commonly damages 2-0 nursery stock of Douglas-fir, noble fir, larch, and spruce. Other stock occasionally damaged include 1-0, 3-0, and 2-1 Douglas-fir and 1-0 larch.

Distribution

The cranberry girdler has been observed in bareroot conifer nurseries in Oregon, Washington, and Idaho.

Damage

Larvae of the cranberry girdler feed on the roots and lower stems of seedlings and in some cases may completely girdle and kill the plant. Damage is most likely to occur in nurseries adjacent to grass fields, which are prime habitats for this insect.

Diagnosis

On the lower stem and taproot of seedlings, look for patches where the bark and cortex have been removed (fig. 28-1).

Damage to seedlings is usually noticed during lifting operations or when severely damaged seedlings change color in the fall. At that point, control is ineffective.

Biology

Adult moths (fig. 28-2) emerge in grass fields from May to July. Moths are visible during the day. They fly in quick, jerky movements for short distances. Female moths deposit eggs on and around nursery stock. Eggs hatch in 3 to 5 days, and larvae (fig. 28-3) feed in nursery beds from June to October, when they spin the cocoons where



Figure 28-1—Feeding damage of the cranberry girdler on lower stem and roots of Douglas-fir seedlings.

they overwinter. What damages seedlings is feeding by the late instars in August to October.

Moth populations vary from year to year because of the effects of predation and disease on larval survival. Birds such as starlings, killdeer, sandpipers, and blackbirds feed on overwintering larvae. A naturally occurring soil fungus, *Beauveria bassiana*, also kills overwintering larvae.

Control

Cultural—Avoid using cover crops that might provide host material for the cranberry girdler or other sod webworms. Cultivate or apply herbicides to noncrop areas to control weeds and grasses.

Chemical—Traps baited with an attractant and placed in grassy areas adjacent to the nursery can be used to monitor populations and to time insecticide applications for moth control. Applying diazinon to



Figure 28-2—Male adult of cranberry girdler.



Figure 28-3—Larva of cranberry girdler.

nursery beds 3 and 5 weeks after the start of moth flight reduces seedling damage. Additional seedling protection is obtained by soil applications of chlorpyrifos in August and September.

Selected References

- Kamm, J.A.; Robinson, R.R. 1974. Life history and control of sod webworms in grass seed production. Ext. Circ. 851. Corvallis, OR: Oregon State University Extension Service. 2 p.
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- Tunnock, S. 1985. Suppression of cranberry girdler damage in beds of Douglas-fir seedlings, Coeur d'Alene Nursery, Idaho Panhandle National Forest. Rep. 85-4. Missoula, MT: U.S. Department of Agriculture, Forest Service, Northern Region. 7 p.