CHAPTER TWENTY

Cranberry Girdler; Sod Webworm
Chrysoteuchia topiaria

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Insect and hosts

The larval stages of the cranberry girdler commonly feed on the crowns and roots of grasses. Cranberry girdler feeding damage to the root-collar area of conifer seedlings has been reported in Oregon, Washington, and Idaho. Two-year-old Douglas-fir, noble fir, larch, and spruce stock are frequently damaged. Other stock types occasionally damaged are 1+0 and 3+0 Douglas-fir and 1+0 larch.

Cranberry girdler damage may be confused with:
Lower stem canker
Mechanical damage
Rodent feeding
Root weevil damage

Figure 20-1. Cranberry girdler damage to 2+0 noble fir seedlings. Oregon Department of Forestry photo.

Symptoms

In late summer and early fall, cranberry girdler larvae eat patches of bark and cortex from the root collars and roots of seedlings (Figures 20-1 and 20-2). Damage is detected when stock is lifted and graded or when severely damaged seedlings still in the beds turn yellow in the fall.

Insect biology

Adult moths (Figure 20-3) emerge from May to July in grass fields in or next to nurseries. Moths are visible during daylight; 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. Larvae feed in nursery beds from June to October. The feeding of late-instar larvae from August to October causes the most damage to seedlings. In late fall, larvae spin a cocoon in the soil where they overwinter (Figure 20-4).

Cranberry girdler larvae and cocoons usually cannot be found by searching nursery soil. Moths are easily detected in the spring with traps baited with a commercially available attractant. Moth populations vary from year to year because of the effects of predation and disease on overwintering larvae.

Loss potential

Nurseries next to grass fields, which are prime cranberry girdler habitat, are most vulnerable. When the moth population is high, 15 to 20 percent of the seedlings in a single lot can suffer below-ground girdling. Since many foresters will not accept seedlings with cranberry girdler damage, the cull rate for infested seedlings can be high.

Figure 20-2. Cranberry girdler damage to 2+0 Douglas-fir. Note that callus has not formed around wounds, indicating that damage took place in late summer and fall. Oregon Department of Forestry photo.

Figure 20-3. Moth stage of cranberry girdler is present from May to July. Moths are generally 25 mm (1 inch) in length. U.S. Department of Agriculture photo.

Management

CULTURAL

Removing grasses in noncrop areas by cultivating or applying herbicides will eliminate prime habitat and therefore reduce infestation of nursery beds.

BIOLOGICAL

Birds such as starlings, killdeer, sandpipers, and blackbirds feed on overwintering larvae. These birds are common in bareroot nurseries and grass fields. A naturally occurring soil fungus, *Beauveria bassiana*, also kills overwintering larvae.

CHEMICAL

Traps placed in grassy areas next to the nursery will help in timing the applications of insecticides.

Diaz-inon, applied to nursery beds 3 and 5

Cranberry girdler symptoms appear:
2+0
Late summer to lifting

weeks after the male moths are detected in traps, is effective against ovipositing female moths. Applying chlorpyrifos to the soil in August and

igure 20-4. Late-instar cranberry girdler larva in hibernaculum. Larvae ire generally 25 mm (1 inch) in length. J.S. Department of Agriculture photo.

September kills small larvae feeding tear the soil surface.

Selected references

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