





# Technical Bulletin for: Western Spruce Budworm

*Choristoneura occidentalis* (Freeman) • Lepidoptera, Tortricidae • CHOOOC



<b>DISTRIBUTION</b>	Found throughout much of the United States and Canada.
<b>HOSTS</b>	Douglas fir, white fir, grand fir, white spruce, Engelmann spruce, ponderosa pine, Norway spruce, Scotch pine, lodgepole pine, western hemlock and others.
<b>DESCRIPTION</b>	
<b>ADULT</b>	Adults are approximately 12.7 mm in length and have gray or orange-brown forewings with a wingspan of 22 -28 mm.
<b>LARVAE</b>	Yellow-green with brown heads, later turning orange or cinnamon-brown with black heads.
<b>EGGS</b>	Light green, oval and about 1.2 mm in length. Mature larvae are 25-32 mm in length.
<b>LIFE HISTORY</b>	Generally, one generation per year throughout most of its range. Winter is spent as a minute caterpillar protected within a silken hibernaculum under bark flakes or among lichens. In late May or June, they begin to feed, mining old needles, tunneling into buds or developing cones. Following bud break the larvae move to the new growth. Larvae mature about 30 to 40 days after feeding begins in spring. Pupation occurs among foliage and adults emerge in July and early August to mate and lay eggs. Eggs are laid in shingle-like masses on the underside of needles. Eggs hatch in about 10 days and the resulting larvae immediately spin small overwintering cocoons on the bark.

## MONITORING INFORMATION

<b>LURE ACTIVE INGREDIENTS, SUBSTRATE &amp; FIELD LIFE</b>	Z11-14Ac, E11-14OH, E11-14Ald and E11-14Ac in a Gray Rubber Septum. Field life: thirty (30) days.	
<b>TRAP TO USE</b>	Red Paper or Plastic Delta Trap	
<b>MONITORING STRATEGY</b>	Use 10 traps for 500 acres or smaller, 10-20 traps for 500-10,000 acres, 20-30 traps for 10,000 – 25,000 acres and up to 50 traps for up to 100,000 acres. Traps should be spaced a minimum of 20 m apart and hung in the lower crown of open-grown Douglas firs. Check with local forester for recommendations suitable for your location.	
<b>CULTURAL &amp; PHYSICAL CONTROL</b>	It may help to reduce the prevalence of host species by increasing the number of pine or larch trees. Keep larch to below 30% of tree stand. Check with local forester for further information.	

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