





# Technical Bulletin for: Three-lined Leafroller

*Pandemis limitata* (Robinson) • Lepidoptera, Tortricidae • PANLIM TLL



<b>DISTRIBUTION</b>	North America, where it has been recorded from Nova Scotia to British Columbia and from the east coast west to the Rocky Mountains and Arizona. It has also been recorded from Durango in Mexico.
<b>HOSTS</b>	Alders, apple, ashes, aspen, birches, elms, maples, oaks, and many other trees. A pest on apple trees.
<b>DESCRIPTION</b>	
<b>ADULT</b>	Brown with gray and white hind wing. Males are 7 to 9 mm long while females are 9-12 mm in length.
<b>LARVAE</b>	Mature larvae are green and about 20 mm in length.
<b>EGGS</b>	Green masses of up to 150 eggs.
<b>LIFE HISTORY</b>	There are one or two generations over most of its range. Adults are present June through August. Females lay eggs on the upper surface of leaves in large masses that contain between 60-182 eggs. Larvae feed on terminal leaf growth and occasionally on fruit. Those of the first-generation complete development in late July or early August. Pupation occurs in the final larval feeding site and adults emerge in approximately 10 days. Third instar larvae of the second generation construct a hibernaculum in a protected site on small diameter growth and overwinter until the following spring, when they resume feeding on leaves and young fruits.

## MONITORING INFORMATION

<b>LURE ACTIVE INGREDIENTS, SUBSTRATE &amp; FIELD LIFE</b>	Z11-14Ac and Z9-14Ac in a Red Rubber Septum. Lure Longevity: Four (4) weeks.	
<b>TRAP TO USE</b>	Red Paper or Plastic Delta Trap	
<b>MONITORING STRATEGY</b>	In smaller fields, use one trap every 1 to 1 ½ acre. A minimum of two traps should also be used for fields of uneven topography. For larger fields (10 acres or greater) use 1-2 traps per five acres. Traps should be placed at approximately the same height as the crop. Traps should be checked weekly or more frequently, depending on pest population. Check with Cooperative Extension or Master Gardener for local information and recommendations.	
<b>CULTURAL &amp; PHYSICAL CONTROLS</b>	Pruning will remove many egg masses. Prune older, low-density trees to open up the canopy and improve spray penetration and coverage, especially into the upper canopy. Thinning fruit to singles where practical will help reduce the risk of fruit damage.	

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