LEAFROLLERS IN VINEYARDS

Leafroller damage in grapevines

The overwintering larvae may occasionally cause feeding damage to the buds. In the spring, feeding on developing clusters may cause loss of flowers or newly set berries. In the summer, damage is caused by larvae entering clusters and feeding along the cluster stem and on the berries. Damage to developing and ripening clusters can increase the incidence of Botrytis bunch rot.

Leafroller life cycle and distribution

Orange tortrix is common in coastal vineyards and has three generations a year; omnivorous leafroller is found in hot inland valleys but may also be present in warm coastal areas and can have up to 4 generations a year. Light brown apple moth in its native range does not do well at high temperatures but does thrive in cooler areas with mild summers. Depending on the climatic conditions, LBAM may have from 2 to 4 generations a year.

Overwintering larvae of all three species may be found on weeds or in grape mummies on the vine. The spring generation begins when moths emerge in late winter and early spring. Eggs are deposited on the upper side of the leaf. Larvae emerging from eggs laid in spring "tie" leaves together on young shoots and feed primarily inside these "nests". They may also feed on flower clusters. Summer generation larvae enter the cluster as early as bloom. They form webbing along the cluster stem tying flower parts together and feeding on developing berries.

Monitoring

Pheromone lures for all three species are commercially available and may be used to monitor male moth flights. In early spring, monitor shoots for webbing of leaves and larvae inside the nest. Beginning at bloom, monitor bunches for webbing and larvae.

Sanitation and Control

Cultural control practices can reduce overwintering populations. Mow broad-leaved plants before bud break. Remove cluster mummies when pruning and place them in the row middles to be chopped. Organic and conventional insecticides are registered for leafroller control.

Distinguishing characters

	OT	OLR	LBAM
Egg mass coloration	Yellow	Green	Green
Mature larva coloration			
Body	Yellow-to-straw	Cream to light green	Medium green
Head	Tan	Light-to-dark brown	Light yellow-brown
1st segment*	Tan	Light-to-dark brown	Light greenish-brown
Adult male	Light brown to orange-brown with dark V-shaped and crescent markings.	Dark rusty brown with tan tips with a V-shaped dark marking in between.	Variable, two-tone or light brown with oblique markings.
Wing length	9 mm	7 mm	8 mm
Costal fold	Absent	Absent	Present
Adult female	Orange-brown with a short V-shaped marking mid-wing.	Dark rusty brown with tan tips and V-shaped marking.	Light brown with a dark spot mid-wing.
Wing length	10 mm	9.5 mm	10 mm

* The term "1st segment" on this handout refers to the structure immediately behind the head. Technically that structure is known as the prothorax.