

SUMMARY/BACKGROUND

- The European Grapevine Moth (EGVM), also known as *Lobesia botrana*, is a serious pest of grapes, causing significant damage to the flowers and berries of grapevines. It will also occasionally feed on the flowers and/or fruit of other crops such as blackberry, cherry, currant, gooseberry, kiwi, olive, nectarine, persimmon, plum, and pomegranate, but populations are not known to rise to damaging levels on these plants.
- Native to southern Italy, the EGVM is a pest of economic importance in vineyards throughout Europe, northern and western Africa, the Middle East, southern Russia, Japan, and Chile.
- The EGVM was recently discovered in the Napa Valley region of California, the first ever recorded detection in the United States.
- The EGVM larvae, not the adult moths, are responsible for the damage to grapes. Larvae that emerge early in the spring feed on grape bud clusters or flowers and spin webbing around them before pupating inside the web or inside a rolled leaf. If heavy flower damage occurs during this first generation, the affected flowers will fail to develop and yield will be reduced. Second-generation larvae feed on developing grapes, and may penetrate the berry and hollow them out, leaving the skin and seeds. Larvae of the third generation — the most damaging — feed on multiple ripening grapes and expose them to further damage from fungal infections, most prominently *Botrytis cinerea*. These infections cause the berries to turn brown and rot, and can cause the loss of the entire grape cluster.

LIFE CYCLE

- The EGVM undergoes two to four generations per year, depending on the temperature.
- EGVM adults are generally active from early spring to fall.
- In Europe, first generation larvae typically occur in May and June and feed on flower clusters. Second generation larvae occur in July and August and feed on green berries. Third generation larvae occur in August and September.
- Eggs are flattened and elliptical, and are laid singly or in groups of two or three on or near the buds, flowers, and fruit of host plants.
- Pupation during the spring and summer occurs inside a thin cocoon usually within a rolled up leaf.
- Larvae from the last generation of the year pupate in more protected places, such as under bark, in soil crevices, or in leaf litter.
- EGVM overwinters as a diapausing pupa and can often be found under the bark of the vine.
- Mature larvae reach a length of 10-15 mm, with the body color varying from light green to light brown, depending on larval food.
- Adults are small, nocturnal moths approximately 6-8 mm long with a wing span of 11-13 mm. The forewings have a mosaic-shaped pattern with black, brown, cream, red, and blue ornamentation.

HOST LIST

- Primary host: Grape.
- Secondary hosts when in proximity to: Blackberry, currant, gooseberry, kiwi fruit, olive, persimmon, pomegranate, stone fruit, European barberry, old-man's-beard or traveler's joy, spurge flax, carnation, false baby's breath, St. John's wort or Aaron's beard, European privet, smooth sumac, rosemary, bladder campion, red clover, sea squill, and jujube.

MORE INFORMATION IS AVAILABLE

CDFA - www.cdfa.ca.gov/phpps/egvm/index.html

CDFA Pest Hotline: 800-491-1899

