

# Leek Moth (*Acrolepiopsis assectella*) Survey

## DISTRIBUTION AND HOSTS

The leek moth (LM), *Acrolepiopsis assectella* Zeller, is a known pest of *Allium*, including leek, onion, chives, green onion, shallot, garlic, elephant garlic, etc. While it may be able to adapt to native, western *Allium* species, the leek moth has demonstrated a distinct preference for cultivated *Allium* species. Approximately 60 species of wild and cultivated *Allium* are described in North America, most of which are distributed in the West. The leek moth, native to Europe, was introduced into North America where it was first identified in Ontario in 1993. The distribution of the pest now includes Asia, Africa, Europe, and Canada. The leek moth is considered a serious pest on leeks and onions in parts of Europe and Canada.



Leek Moth Adult Male

## DAMAGE

Leek is the preferred host of the pest, though other *Allium* crops can be attacked. The larvae tunnel mines in the leaf tissue, sometimes causing distortion, and are reported to attack the bulb and stems occasionally. In garlic, the larvae will also attack the scape. Damage to the leaves of leek can make them unmarketable and damage to garlic cloves may predispose them to secondary bacterial or fungal diseases. On leek, larvae prefer to feed on the youngest leaves. They bore through the folded leaves towards the centre of the plant, causing a series of pinholes on the inner leaves. Larval mines in the central leaves become longitudinal grooves in the mature plant. On onion, they feed inside the hollow leaves, forming “windows” on the plant surface. Occasionally, larvae attack reproductive parts of the host plant such as the seed stalk but usually avoid the flowers, which contain a saponin compound that inhibits the growth of the insect. Feeding at the base of the flower stalk may cause it to break off.

## BIOLOGY AND LIFE CYCLE

In Europe, the insect overwinters as pupae or adults in sheltered areas such as plant debris, hedges, or buildings. The small whitish eggs are laid in the spring on leaf surfaces of host plants. Larvae are yellowish-green, with 8 small greyish spots on each segment, and possess a pale brown head capsule. They reach 13-14 mm at maturity. The reddish brown pupa is encased in a loosely netted cocoon. Most cocoons are found on the leaves but they can also be found on decaying plant matter and on neighboring vegetation. The cocoon is similar in size and appearance to those of other moth pests such as the diamondback moth.

## BASIC IDENTIFICATION

The leek moth adult is a small (12-15 mm wingspan; 5-7 mm long with wings folded at rest) reddish-brown moth with a white triangular mark on the middle of the folded wings and with a scattered dusting of white. The hindwings of the moth are heavily fringed and are pale to dark gray in color.



Leek Moth Adult

Leek Moth Larva

## SURVEY

A statewide survey for leek moth will begin in June and continue through August. The survey objectives are to identify potential sites for LM introduction and to determine if LM is present in Oregon. Any field with cultivated *Allium* sp., especially leek, is an ideal site for trap placement. The best sites are those that practice organic growing methods without pesticides. Traps will generally be placed at commercial production sites, including leek, elephant garlic, onion, shallots, garlic, chives, green onion, and wild garlic fields. Home gardens are typically neither large enough nor visible as trap sites. An ODA technician will place a wing trap on a stake near the host. The traps will be serviced approximately every two weeks.

If you have any questions about leek moth, the survey program, or other questions please contact us at the number provided below.

*Thank you for your support with this survey.*

(503) 986-4636 or 1-800-525-0137    TTY (503) 986-4762    <http://egov.oregon.gov/ODA/PLANT/>

