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FS 197
February 1973

Red-Backed Cutworm in Oregon

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Importance

The red-backed cutworm, *Euxoa ochrogaster* (Guenee), was a particularly serious pest on peppermint and alfalfa during 1971 and 1972 in Jefferson and Crook counties of Oregon. This species occurs across Canada from Newfoundland to Vancouver Island. In the United States it is distributed in the northern tier of states and, in the mountains of the West, southward at least as far as Colorado. This cutworm has a wide host range in addition to mint and alfalfa, including clover, barley, wheat, oats, peas, potatoes, sugar beets, and asparagus.

Abundance

It has been suggested that serious outbreaks of this pest are cyclic, but there are no reliable methods of predicting outbreaks. Contributing to this periodicity are:

√ An unusually hot and dry August the previous year provides the best conditions for moth-feeding activity at flowers, which is critical for egg production and egg laying.

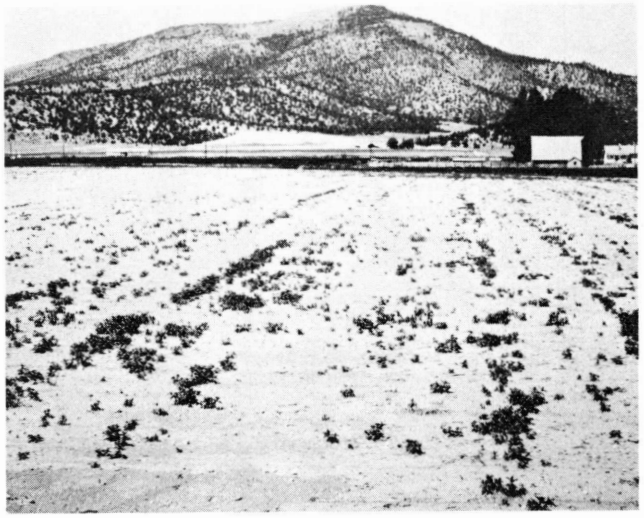
√ The availability in August of suitable egg-laying situations, especially where soil is loose and dry.

√ A warm period early in the spring, followed by a cool, dry spring usually results in increased damage.

√ The relative prevalence of disease and fluctuations in the abundance of natural enemies, principally parasites. Both of these factors are closely correlated with weather conditions, the former particularly with rainfall and temperature in May and June.

Damage

The larvae of the red-backed cutworm cause serious damage during a period from early May to mid-June. The plants usually are cut at or just above the surface and the tops of smaller plants are usually entirely consumed. The cutworms come above the surface of the soil at night in search of food, and usually feed above the surface at that time, especially if the soil is not too dry. Sometimes the cutworm burrows beside a plant and cuts it off just below the surface, often dragging the leaves into the soil to feed on them.



Cutworm damage on peppermint

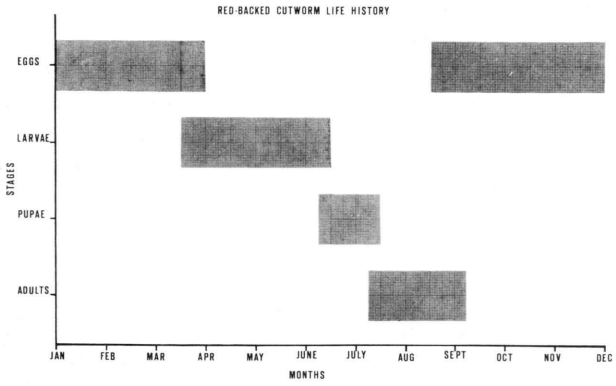
Larval stage of cutworm

OREGON STATE UNIVERSITY EXTENSION SERVICE

Extension Service, Oregon State University, Corvallis, Lee R. Kolmer, director. This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U. S. Department of Agriculture, and Oregon counties.

Life history

The red-backed cutworm overwinters in the soil as an egg in a state of diapause. Diapause is a resting stage characterized by a suppression of physiological activity. The eggs, which are deposited during the summer, undergo embryonic development immediately but do not hatch until the first extended warm period the following spring, when soil temperatures rise to 41° F or above.



Larvae are tiny at first, but as the soil temperature increases the larvae grow rapidly. Generally, the larvae do the greatest damage, feeding from early May to mid-June. The larvae mature and cease feeding in mid-June. They form a firmly cemented cell at a depth of 1 to 2 inches in the soil and transform into the inactive, dark reddish brown pupae. Adult moths begin emerging three to four weeks later and are present in large numbers for about seven weeks (July-August).

Females are capable of laying eggs 14 to 16 days after emerging, and they deposit eggs for about 20 days or until death. The number of eggs deposited by individual females during this period averages about 400. Moths lay their eggs at night near vegetation that will provide suitable food for the larvae when they hatch the following spring. The moths favor loose, dry soil, weedy stubble, or fallow fields for egg laying. Eggs mature in the fall and undergo diapause until they hatch the following spring.