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## EC1554 Sweet Clover Weevil : Adult Sweetclover Weevil

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Joe Pappas

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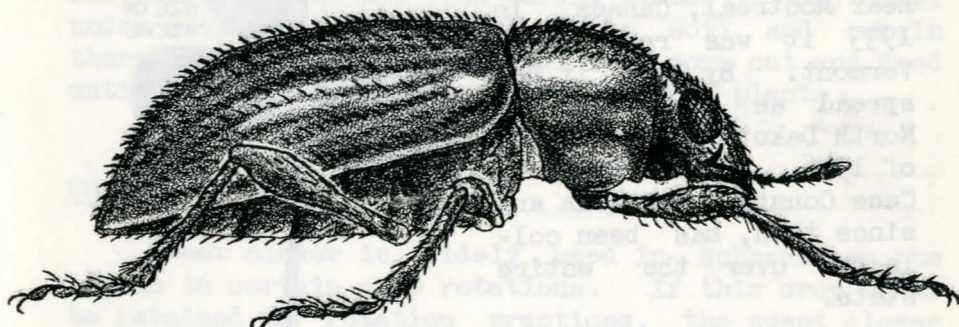
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Feb. 1949

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# SWEET CLOVER WEEVIL



ADULT SWEET CLOVER WEEVIL

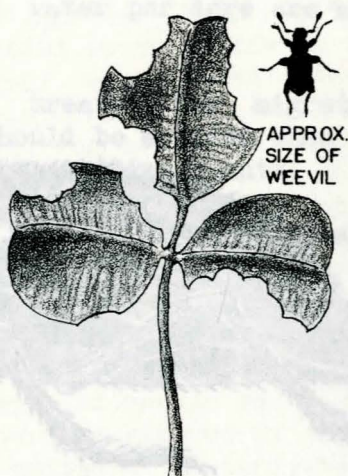
Cooperative Extension Work in Agriculture and Home Economics  
University of Nebraska College of Agriculture, and the United States  
Department of Agriculture cooperating, H. G. Gould, Acting Director,  
Lincoln.

## SWEET CLOVER WEEVIL

Jack Lomax, Joe Pappas

The sweet clover weevil must be added to the long list of insects attacking Nebraska legumes. Although sweet clover is their principal host plant, weevils have been found in limited numbers on alfalfa and other clovers.

Originally a European insect, the sweet clover weevil was first found on this continent in 1924 near Montreal, Canada. In 1933 it was reported in Vermont. By 1941 it had spread as far west as North Dakota. In the fall of 1946, it was found in Cass County, Nebraska and since then, has been collected over the entire state.



### Damage

### TYPICAL DAMAGE ON SEEDLING SWEETCLOVER LEAF

All growth stages of sweet clover are attacked. The adult weevils feed on the margins of the leaves making characteristic circular notches. Although large populations may severely injure second-year clover, the most serious damage occurs in seedling fields. As the seedlings come up they are eaten.

The larvae develop on the roots of the sweet clover plants but experiments indicate that they do little damage.



## Life History

Sweet clover weevils are small greyish brown snout beetles about  $1/5$  of an inch long. The adults overwinter in sweet clover fields. In the spring when the clover begins to grow they emerge and begin feeding.

Mating and egg laying occurs from the last of March until the first of May. The female lays her eggs on the soil at the base of the plant. In ten to fourteen days, the eggs hatch into tiny white grubs or larvae which burrow into the soil to the roots of the sweet clover where they feed and develop. During June, the larvae mature, pupate, and emerge as adults. The new adults do not feed during summer. They crawl under trash or into cracks of the soil and remain there until fall. In the fall they come out and feed until freezing weather destroys the food plants.

## Control

Sweet clover is widely used in Nebraska as the legume in certain crop rotations. If this crop is to be retained in rotation practices, the sweet clover weevil must be controlled.

I. Cultural control is partly effective. Shallow surface tillage after the sweet clover has been mowed for hay exposes the larval and pupal stages of the weevil to the sun and drying effects of the air. This destroys most of them. Planting seedling fields at a distance from second year clover reduces damage from weevils that are migrating from old fields. Plowing under seriously infested fields to a depth of six inches buries the insects so that only a few can emerge.

In areas where they are adapted, red clover and other legumes (which are not seriously attacked by the weevils) can be grown.

II. Chemical control has given good experimental results. Since the adults are present in second-year sweet clover in the spring, a thorough spraying or dusting with any recommended chemical just as the clover leaf buds are opening kills the insects. Dusts should be applied at the rate of 20 pounds 5 per cent DDT or 20 pounds 10 per cent chlorinated camphene per acre. Sprays made up of 2 pounds 50 per cent wettable DDT in 100 gallons of water or 2 pounds technical chlorinated camphene (from either wettable powder or emulsion) in 100 gallons of water per acre are also effective.

If seedling fields are treated for migratory weevils the sprays or dusts should be applied when the first true leaves appear on the seedling plants.

III. Biological control to date has not appeared to be of much importance in Nebraska. However, reports from other states indicate that it is high value, particularly in states where the weevil has been a problem for several years.