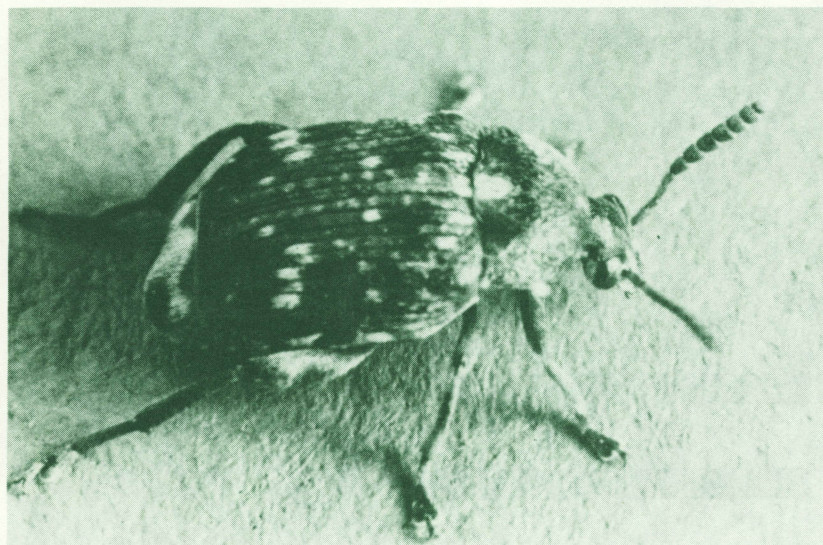




University of Idaho  
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Cooperative Extension Service  
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# PEA WEEVIL AND ITS CONTROL

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Pea weevils are found wherever peas are grown in Idaho. They cause damage to both green and dry peas. Infested succulent green peas show only dot-like entrance holes. In more mature peas, the small larvae are visible just under the skin. Infested peas are unmarketable for canning or freezing. Edible dry peas or seed peas that have been infested exhibit "stings" or pinhole injury at harvest. Later, after the weevil has emerged, a neat, clean circular hole about 1/10-inch in diameter is observed in the pea. Larval feeding destroys seed viability and "weevily" peas are of little commercial value.

## Appearance

The adult pea weevil is a short, chunky beetle about 1/5-inch long. Its overall color is brownish, flecked with white, black and grey patches. The wing covers are short allowing the tip of the abdomen to be seen from above. The egg is orange, oblong and slightly less than 1/16-inch long. The larva is

brown-headed and cream-colored. It has a C-shaped, legless body. The mature larva is approximately 1/4-inch long and changes to a white pupa which looks similar to the adult.

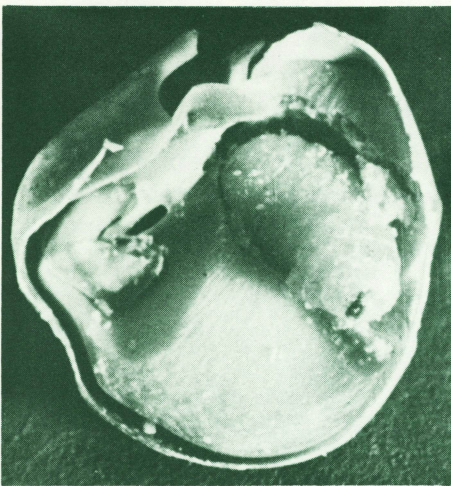
## Life History

Adult pea weevils spend the winter in hibernation. They are commonly found with peas in storage, in protected places such as abandoned buildings, in crevices of fence posts, under bark of trees such as ponderosa pine and in debris of field and forest. In some instances adults may remain in hibernation for 2 years.

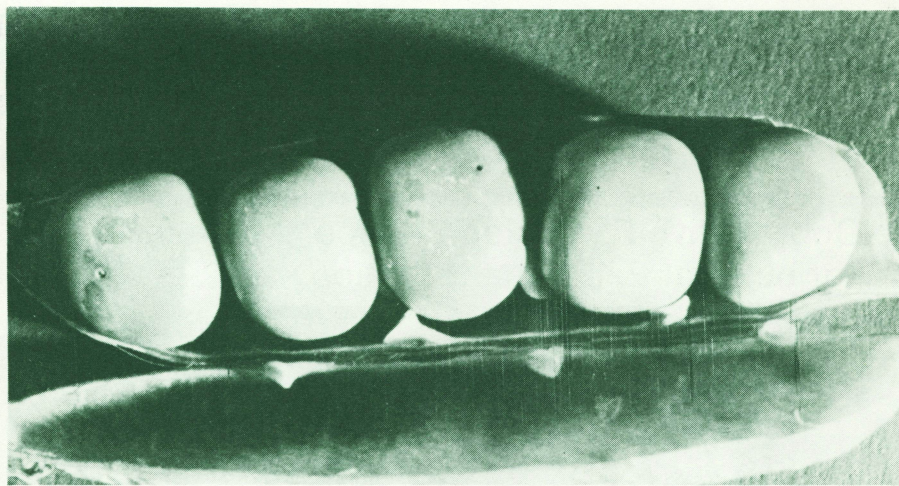
Adults fly to pea fields at about the time peas start to blossom. The adults are strongly attracted to pea flowers and will feed for several days on the pollen before they lay viable eggs. Most often the weevils concentrate on a specific field margin as they move from overwintering sites. However, if weevils move into the fields before bloom, they

will be more evenly distributed in the field. There is little, if any, migration from field to field. Movement within a field, once the weevils have started feeding or laying eggs, is less than 100 feet a day even under ideal insect flying conditions. These behaviors can be used to your advantage when considering insecticide treatments for control of pea weevil.

Egg-laying usually begins on newly formed pods and continues as long as fresh pods are available. The females may lay from 1 to 300 eggs per season. Eggs are usually laid singly, only on the surface of green pea pods. They hatch in 6 to 9 days. The larva burrows directly through the pod and into the developing pea seed. The point of entry is indicated by a small spot on the surface of the pea. Only one larva develops in a single seed and it consumes most of the contents. Larva development takes about 5 weeks. Before pupation the larva prepares a circular exit hole through which the adult emerges. The exit hole is



*Developing larva.*



*Larval entrance: sting.*

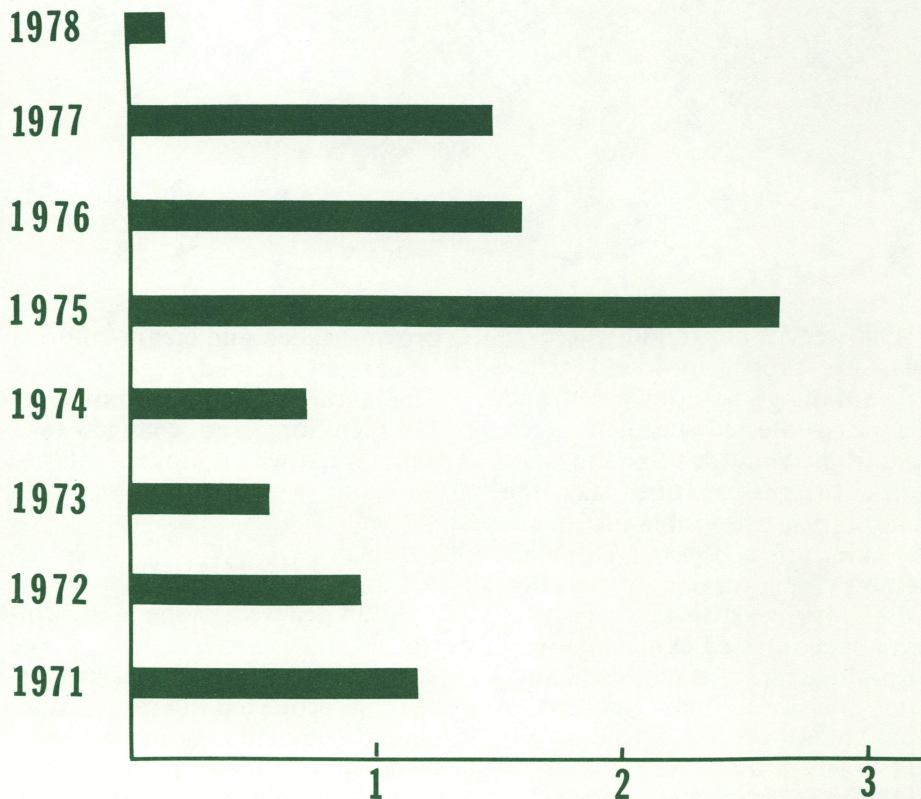
covered by the nearly transparent outer skin of pea. The pupal stage may last from 1 to 3 weeks or longer depending on fall and winter temperatures.

Eggs are never laid in dry peas because adults must have pea pollen for their reproductive system to mature. Consequently, there is no increase in weevil numbers in peas held in storage. Damage to stored peas results only from field infestation early in the growing season.

### Prevention

Control programs for pea weevil must begin with sound preventive practices. Several measures can be used to reduce overwintering pea weevil populations:

1. Destroy or grind into animal feed all light or heavy screenings from processing plants that may contain live weevils.
2. Fumigate dry pea stocks that may contain live weevils.
3. Plant weevil-free seed. Weevils escape from infested seed that has been planted and may later infest the new crop.
4. Plow under field refuse and shattered peas as soon after harvest as possible.
5. Maintain harvested peas in escape-proof containers such as tight bags or closed bins.



Percent seed weevil damage from all samples graded by USDA-FGIS, 1971-1978.

### Damage

Commercial peas have different levels of tolerance for pea weevil injury. Generally, peas grown for processing can tolerate less than 1 adult weevil in 100 sweeps during the flowering stage as measured by a 180° sweep of an insect net 15 inches in diameter. Each process-

ing company may have its own guidelines for treatment of processing peas so check with your fieldman when the first adult weevils are observed.

The trade allows more weevil injury in dry edible peas and seed peas. Some weevils can be mechanically removed when infested peas

are cleaned and prepared for use. Thus, under most field conditions, an average of up to 3 weevils in 50 sweeps (180°) during the flowering stage can be accepted. Higher numbers exceed the economic threshold and can cause serious economic injury. Austrian winter peas are considered more susceptible than spring peas because they often bloom for much longer periods of time.

## Control

### Treating Pea Weevil in Storage

No fumigants are currently registered for treating seed peas for pea weevil. Stored dry peas to be used for food or feed can be fumigated with methyl bromide. Use 1½ to 3 lb/1,000 cu. ft. Rates depend upon size, kind of storage and temperature. Check label for exact rates.

**Table 1. Insecticide recommendations for control of pea weevil on blossoming peas.**

Insecticide	Dosage rate	Remarks
Imidan	1 lb.	Do not apply within 7 days of harvest. Do not graze or feed forage to livestock within 7 days of application. Do not cut treated fresh pea forage for hay.
Methoxychlor	1 lb.	Do not apply within 7 days of harvest.
Malathion	1¼ lb.	Do not apply within 3 days of harvest. Do not apply within 7 days of harvest if forage is fed to livestock.
Malathion ULV	8 fl. oz.	Do not apply within 14 days of harvest.
Parathion	½ lb.	Do not apply within 10 days of harvest. Do not apply within 15 days of harvest for peas used for forage.

*College of Agriculture publications are revised and updated frequently to provide the latest available information. Trade names are used where necessary for clarity.*

*Users are urged always to read the label before using any chemical and follow label directions.*

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## Danger — Poison

All insecticides are poisonous and must be handled with care to protect the operator, livestock, adjacent property and the consumer. Read and follow the label carefully each time a material is used. Keep accurate records of the pesticides you apply.

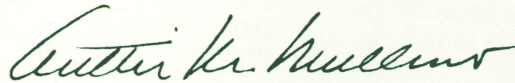
**Pesticide Residues.** These recommendations are based on the best information currently available for each chemical listed. If followed carefully, residues

should not exceed the tolerance established for any particular chemical. Follow label instructions carefully with respect to dosage levels, number of applications and minimum interval between application and harvest.

The grower is responsible for residues on his crops as well as for problems caused by drift from his property to other properties or crops.

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Auttis M. Mullins  
Dean, College of Agriculture  
University of Idaho



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