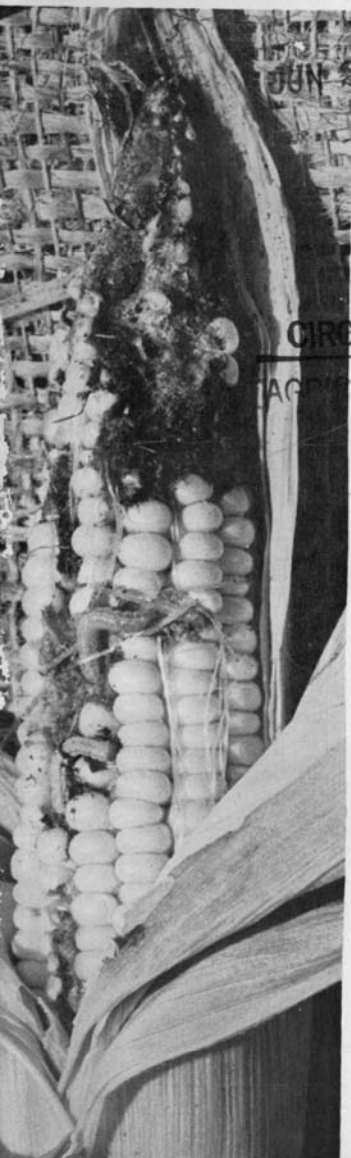


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# **EARWORMS on SWEET CORN**

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**Circular 739**

**UNIVERSITY OF ILLINOIS  
COLLEGE OF AGRICULTURE**  
Extension Service in Agriculture  
and Home Economics  
in cooperation with  
ILLINOIS STATE NATURAL HISTORY  
SURVEY

**THE CORN EARWORM**, known also as the tomato fruitworm and the bollworm, attacks many cultivated crops. It is a serious pest of field corn throughout the world and one of the most important sweet corn pests in Illinois. Sweet corn growers should therefore know how to recognize and control earworm.

### **Life history of the earworm**

The life history of the corn earworm is similar to that of any other moth or butterfly. The insect goes through four stages of development—egg, worm, pupa, and moth. A female moth lays as many as 2,000 eggs which hatch in 2 to 5 days as tiny worms or larvae. These little worms follow the silks into the ear and feed there. When the worms become full grown, they leave the ear, go into the ground, and become pupae (cocoons). After some time, the moths emerge from the cocoons. Development from egg to adult takes about 30 days.

### **When the eggs are laid**

In southern Illinois moths lay eggs from mid-spring until frost. In northern Illinois, eggs first appear in June. Egg-laying of the second generation begins in late July and continues until frost.

Most of the eggs are laid on fresh silks, although before silks appear they may be laid on any part of the corn plant. Then the young worms feed on the stalk and tassel. After the silks are dry, moths may continue to lay eggs on or about the ears.



Four earworm eggs on corn silks. Pencil points to egg at top. Eggs pictured about 4 times actual size.

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## When insecticides should be applied

The first application, which is very important, should be made when about 20 percent of the ears in the field show fresh silks. The crop must be sprayed every 3 to 5 days until two to four, possibly even five, applications have been made. The object is to keep the silks covered with insecticide.



Mature earworm in tassel.  
About natural size.

The number of applications depends on how long egg-laying lasts and how intense it is, how uniformly the ears silk, and how valuable the crop is. Most canning corn in Illinois can be protected by two or three sprayings, but market corn may need three to five. The very early fields in central and southern Illinois and the very late

fields throughout Illinois generally need extra protection.

Space treatments 5 days apart when the weather is cool and silking is slow. When the weather is warm and the silks are developing fast, shorten the time between sprayings. When infestations occur before the ears are in silk and if more than 20 percent of the plants are infested, spray promptly.

## Recommended insecticides and equipment

The most effective earworm insecticide is DDT applied at the rate of 1½ pounds to the acre. To spray an acre, mix 3 quarts of 25-percent DDT emulsion concentrate with 2½ gallons of a highly refined horticultural oil of a mineral type (viscosity 45 to 90 Saybolt). Then add enough water to make 25 gallons of spray.

A high-clearance, self-propelled sprayer that can maintain 50 to 150 pounds of pressure with all its nozzles in operation is recommended. *Constant mechanical agitation of the spray solution is abso-*

lutely necessary. The machine should be equipped with 4 to 6 nozzles per row, preferably 3 nozzles on each side of the row. The nozzles should be directed at the ear zone. The sprayer "drops" should be fairly rigid. A coil spring attached where the drop and the boom join will keep the drops from breaking.

### Hints on planting practices

Corn that matures in midseason is more apt to be free from the attack of earworms than corn that matures early or late. Infestations in early corn are easier to control than those in late corn. In southern Illinois, earworms usually completely destroy late plantings of sweet corn and the cost of protecting the crop is prohibitive. Most Illinois growers of canning corn will be wise to quit planting corn that matures much after September 1.

Since earworms on Country Gentleman sweet corn are very hard to control, this variety should be planted early to miss the heavy egg-laying of the late season.

Satisfactory and economical control of earworms cannot be obtained in any field unless the ears mature uniformly. Good farm practices in selecting seed, applying fertilizer, and planting help to assure control.

**EUROPEAN CORN BORERS and corn earworms often attack the corn plant at the same time. Sprays applied for control of earworms will also control corn borers although one or two treatments before the corn silks will usually be necessary to protect sweet corn from the attack of corn borers.**