

Herbicide treatments are primarily categorized on the basis of the time of application: preplanting, preemergence, and postemergence. Preplanting treatments are applied before the corn is planted either as a surface treatment or incorporated into the soil. Preemergence application is after the corn is seeded but before emergence of the corn or weeds. Preplant and preemergence herbicides, properly selected and applied, prevent weed competition during emergence and early seedling growth. Post-emergence applications take place after the emergence of both the corn and weeds. These are most effective when weeds are small. For currently recommended herbicides for corn, refer to *Weed Control in Vegetable Crops: Sweet Corn*.

Insects

Insects can severely damage all portions and ages of sweet corn plants. More than 50 insect species or groups of species are known to cause economic losses to sweet corn in the United States. Soil insects have been considered the most important pest grouping which consistently causes damage to all types of corn in the United States. In Florida, foliar pests and earworms are also a major concern to sweet corn growers.

Soil pests

Of the soil insects, Florida has different problems than many corn-growing states. *Wireworms* can be a problem and damage is usually noticed as wilted and dying plants, although the larvae feed on all underground parts of the plant, including the planted seed. The adult wireworm is the "click beetle" and is usually not injurious. There are several types of *cutworms* that cause isolated damage each year. Cutworms when disturbed will curl into a tight coil and can be identified easily due to this habit. Cutworms do not feed voraciously on leaf tissue but will cut off small plants, usually those less than 4 to 5 inches in height. A number of plants may be cut off during the evening hours. The cutworm will hide under soil clods or in the soil during the daylight hours.

The *Southern corn rootworm* or *cucumber beetle larvae* also attacks the roots of corn. Control of the worm is difficult and insecticides must be used at planting time or shortly thereafter if the pest is expected to be a problem.

Several other soil inhabiting pests may cause damage to corn. *Soil grubs*, *lesser cornstalk borers* and *webworms* are pests more often when corn follows pasture or where grassy type weeds were abundant before the planting of corn. These pests feed on the roots and lower stems of the corn plants and can cause stunting and uneven stands.

Foliar insects

Corn earworm. The corn earworm is a voracious feeder in the whorl and in the ear of corn plants. The adult moth overwinters in the southern United States and the population will migrate north during the year. The moth lays eggs on the plants (usually on the silks) and young caterpillars will feed on the plants any time during the season. The biggest cause of loss of grade in fresh market corn is worms in the ears. Without control, 100% of the corn in a field may be infested.

Armyworms. Several species of armyworms (fall, southern and beet) are important, especially in the southeast. The fall armyworm is by far the most prevalent and the most serious. On occasion the larvae will migrate in mass, especially across a young field; hence the name 'armyworm'. These caterpillars generally feed on the leaves and whorls of the plants, and are sometimes referred to as budworms. If populations are severe, complete loss of the bud can occur. In the southern United States, armyworms can produce several generations and will also attack the ear. In the early part of the season they may be the most prevalent worm found in the ear. They will enter the ear from not only the silk end but from all sides. In most cases, the armyworm complex is much more difficult to control than earworms.

Aphids. Aphids, or plant lice, are frequent pests of sweet corn. Aphids suck sap from the plants and heavy infestations may cause plants to wilt and fail to produce a marketable ear. Aphids also transport virus diseases, which is probably more damaging than just their feeding alone.

Besides the above insects, *leaf* and *flea beetles* will attack sweet corn foliage. Also economic damage is caused by *thrips*, *chinch bugs* and the *stink bug* or *plant bug* group. Although not an insect, the *spider*