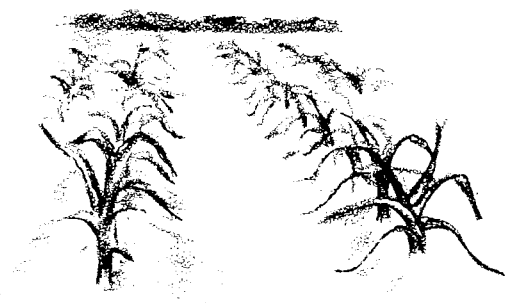
Bacterial leaf blight. Bacterial leaf blight, caused by *Pseudomonas avenae,* has been epidemic in Florida-produced sweet corn. It causes linear lesions on the leaves, and blotchy and water ear and husk rots. It cannot be controlled effectively with currently available chemicals. Elimination of vaseygrass around field perimeters and along ditches has reduced a major source of inoculum. Varieties vary in susceptibility but such evaluations have not been made in recent years.

Common smut. Common smut is caused by the fungus *Ustilago maydis.* The disease appears as galls on any portion of the plant above the ground. Galls may become several inches across or be as small as BB shot. At first galls are white and fleshy throughout, and later massive spore formation inside the galls causes the inside of the gall to be black. Varieties differ greatly as to their susceptibility to this disease. Adequate resistance is available for incorporation into commercial varieties. Any kind of mechanical injury may contribute to infection by this fungus. Injuries from blowing soil, hail, insects (chewing), cultivation, detasseling and other causes have apparently contributed to increased amounts of smut. The use of resistant varieties is imperative.

Ear rots. Ear rots from fungi are not common in Florida-produced sweet corn. However, in field corn, ear rots are common. Many fungi cause ear rots. Often ear rots occur because of inadequate natural husk covering or from prior insect injury. Variety selection and insect control aid in control of ear rots. A bacterial ear rot has occurred in Florida. See the section above about bacterial leaf blight.

Downy mildews. The two downy mildew diseases seen in Florida-produced corn are sorghum downy mildew, caused by *Peronosclerospora sorghi,* and crazy top, caused by *Sclerophthora macrospora.* Crazy top has not been a major problem and has occurred most frequently in field corn in Escambia County. Crazy top causes extreme plant distortion and crinkling. Sorghum downy mildew almost became a serious problem in Florida-produced sweet corn. However, controls were used in time to offset widespread epidemics. Infections by *P. sorghi* occur while the plants are in the seedling or young plant stage. Another source of inoculum is a condidium (spore) that forms on the surface of leaves. In Florida, corn and a sorghum x Johnsongrass weed *(Sorghum almum)* have been infected with this fungus and both have produced these aerial spores. Symptoms include chlorotic leaf striping, stunting, some plant deformation, and downy growths of fungus on leaf surfaces. Control is by use of a seed treatment that includes metalaxyl (Apron) and rapid destruction of infected corn or the above-mentioned weed. Also, avoid rotations with sorghum and use resistant varieties if they are available.

Viral diseases. Diseases caused by viruses occur in Florida-produced corn but they have been primarily a problem in field corn in Dade County. The intense spraying of sweet corn with insecticides has probably reduced viral disease incidence as several are transmitted by insects in a semi-persistent manner. In the Alachua County area, sweet corn has been infected by maize dwarf mosaic virus. This virus is transmitted in a nonpersistent manner by aphids. They attain the virus from nearby Johnsongrass. Maize dwarf mosaic virus, maize stripe virus, maize rayado fino virus, and maize mosaic virus are the viruses that have been identified in corn in Florida. Viral diseases in corn are typified by stunting, and yellow, variable green, and reddish-purple colorations. Absolute identification of virus diseases in the field can not be done reliably. Johnsongrass should be eliminated near production fields.



Nematodes

Sweet corn can be severely injured by several kinds of nematodes. Unlike diseases and insects, nematodes usually do not cause easily recognized symptoms. Visual observation of a plant and its roots can often indicate nematode problems, but it is necessary to have soil and root samples examined to be sure they are present. Nematode injury usually results in irregularly shaped areas of stunted plants in a field. Plants may be chlorotic and may wilt during hot weather, even when soil moisture is adequate. Nematodes may cause short, stubby, or galled roots which may also have brown or colorless lesions. The sting, stubby-root, awl, rootknot, lesion and lance nematodes are more common on mineral soils. The most severe in organic soils include stubby root, spiral, stunt and root-knot nematodes.