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Corn Smut

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Corn Smut

Corn smut is commonly found wherever corn is grown, and is probably the best known corn disease because of its easily recognized symptoms.

CONDITIONS FAVORING SMUT

Incidence of smut varies from year to year. But usually it is more abundant following a dry spring and early summer. Smut also develops readily on corn grown in soil that is excessively high in nitrogen and organic matter. Hail damage or mechanical injuries from cultivation increase infection, and pollination failures favor smut development on the ear shoots.

SYMPTOMS AND DAMAGE

Smut infects any above-ground portion of the plant. It first appears as white, glistening galls or knobs. The interior of these galls soon becomes powdery black; and finally the entire gall turns into a mass of sooty spores.

Smut may attack and destroy the entire ear; it may reduce ear size; or it may cause complete barrenness. The amount of damage depends on the location and size of the galls. Those on or above the ear are usually more destructive than those below. Those resulting from detasseling are usually small and cause little damage.

Corn smut is caused by the fungus Ustilago maydis, which overwinters in the field on decaying corn refuse. Smut does not overwinter on or in the seed. Summer spores produced from infected refuse are carried by air to infect the new crop.

CONTROL

Chemical seed treatment will not reduce the presence and severity of corn smut. Maintaining uniform growth of the corn throughout the season will help control it. To accomplish this, at least in part, keep soil fertility in balance.

Most inbred lines are sufficiently resistant to smut, with the exception of the lines TR 38-11 and P-8.
Smut on corn ear

Smut on corn leaf sheath and blade

Smut on corn tassel