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Corn Diseases and Insects

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CORN DISEASES AND INSECTS

by

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A. THE ENEMIES OF THE CORN PLANT:

There are a number of enemies to the corn plant that prevent or retard its development. The losses in United States due to these enemies amount to millions of dollars. Prof. J. R. Holbert of the U. S. Dept. of Agriculture estimates the annual loss due to corn diseases at about 4% of the total crop.

Every corn grower is aware of the damages caused by the corn insects at certain times. A more complete knowledge of insect control would often times be worth hundreds of dollars to corn growers. We are not attempting to include any where near complete information of disease or insect control in this one circular but give just a few for careful study.

B. CORN DISEASES:

"Corn Smut is a fungous disease. It is different from the smut of other cereals in its mode and source of infection and makes its appearance upon any part of the plant above the ground, but the ears and tassels are the parts chiefly affected." S. D. Bulletin 181.

The spores of corn smut may live over in a soil for a number of years especially if there be fresh manure or rotten organic matter present in large quantities.

"The only known method of prevention is to gather smut masses as they appear and destroy them by burning or placing in boiling water. S. D. Bulletin 181.

Some corn authorities also maintain that the proper rotation of crops is very important to control of smut.

Cooperative Extension Work in Agriculture and Home Economics, W. F. Kumlien, Director. Distributed in furtherance of Acts of Congress of May 8 and June 30, 1914.

"The Rot Diseases of roots, stalks and ears of corn cause great losses, are widely distributed, have distinct characteristics, and require special control measures." Fars.Bul.1176.

Prof. Holbert of U. S. Dept. of Agriculture says that the most careful estimates possible indicate that these rot diseases cause greater losses in this country than any others affecting corn. He believes that the rot diseases cause greater damage than all the other corn diseases, smut, rust, brown-spot, etc. combined. Actual losses cannot be determined because infected seed may cause poor stand, stunted growth with a consequent reduced size of ears.

The best control measure of the rot diseases developed to date is proper selection of disease-free seed ears. Diseased ears or even apparently healthy ears from diseased stalks should not be selected for seed. (Complete instructions for proper seed selection can be secured from Farmers Bulletin 1176.)

C. CORN INSECTS:

"Reliable estimates of the average yearly loss of growing corn (not including stored corn) through insect attack in the United States is placed at 10 to 15 % of the total value. In South Dakota the loss is less than 10 per cent, but nevertheless it is a yearly tax of considerable amount upon the farmers of our state and one which can be greatly reduced through proper application of control measures based upon a thorough knowledge of the life of these harmful insects and methods of their work."
H. C. Severin in S. D. Bulletin 178.

A few of the most disastrous insects which prey upon corn include the cut worm, wire worm, white grub and ear worm.

Wire Worms and Cut Worms occur in old sod land. It is best not to plant corn on land infected with these pests until the third year after breaking, when the worms will have largely disappeared. If corn must be planted on land infected with these insects, fall breaking, thorough discing and late planting may destroy many of the worms and reduce the attacks. (For further information regarding control see Extension Circular No. 38, S. D. State College.)

White Grubs. The beetle which produces the white grub lays its eggs in the ground covered with grass or small grain and if such crops are followed with corn the year after the eggs are laid, the crop is likely to be greatly injured by the larvae eating the roots. These grubs require three years to develop to the destructive stage. "When white grubs are working in a field of corn, nothing practicable can be

done to lessen the injury to that particular crop. However, through fall plowing, proper rotation, and use of wild birds and farm animals, injury to corn through these insects during the following years may be avoided or so reduced as to be negligible." H. C. Severin in S. D. Bulletin 178.

The Corn Ear Worm is a serious pest in the middle states. There is little control for this insect. Ears which are well protected by the husks are less liable to be injured. The ear worm hibernates in the surface soil of the corn field. Late fall plowing or deep discing generally practiced in all the corn fields of the infested area should largely destroy these insects.

The Chinch Bug: Although the chinch bugs have not caused widespread damage in South Dakota there are localities where there have been losses due to this insect.

The damage to corn occurs, for the most part in mid-summer, when the growing bugs pass from ripening wheat to corn.

The principal method of control consists of destroying the bugs in their winter quarters by burning infested areas. Furthermore the migrating bugs can be controlled by the use of barriers made of road oil, crude creosote or crude carbolic acid. (Further particulars may be obtained from State Entomologist, Brookings, S. D.)

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REFERENCES:

"Corn Culture in South Dakota", S. D. Bulletin 181.
"Grasshoppers, Cutworms and Army Worms and their Control by Poisoned Bran Mash". Ext. Cir. 38, S. D.State College.
"Control of the Root, Stalk, And Ear Rot Diseases of Corn", Farmers Bulletin 1176, U. S. Dept. of Agriculture.
"Top Notch Corn Crops, by A. M. Ten Eyck, Emerson-Brantingham Implement Co., Rockford, Ill.