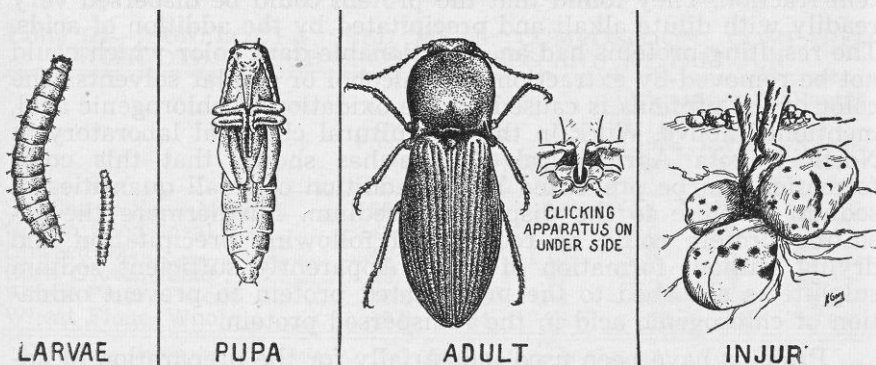


# Wireworm Control By Seed Treatment

By J. A. Munro<sup>1</sup>



Wireworms are annually the cause of serious damage to wheat, corn and various other crops in North Dakota. They feed upon the germinating seed and bore into the underground portions of the plants. Of the various species responsible for crop damage the prairie grain wireworm is the most widespread and troublesome. This species occurs mostly in the lighter and well drained soils.

The parent beetles, often referred to as "click" beetles, are black in color and about one-half inch in length. They are commonly seen in field margins and grasslands during May and June but afterwards enter the soil to lay their eggs. The eggs are laid near the roots of plants upon which the worms feed. The newly hatched worms are light colored but gradually increase in size and change to an amber color. They live and feed in the soil for at least four years before reaching final stages of development. Only the larvae or worms cause crop damage.

Common farm practices which include clean summerfallow (kept free of weeds or other plant growth) have given a high degree of control in tests conducted by the North Dakota Agricultural Experiment Station and has been successfully used by growers in areas where practicable. Wireworm populations tend to increase in fields where cereal crops are grown continuously or are rotated with corn or potatoes, but tend to decrease wherever alfalfa is grown.

A new method which appears to rid wireworms quickly from the soil is to treat the seed with lindane either in the powder or slurry form. Four ounces of a 25 percent lindane powder is the usual rate to be used per bushel of wheat or corn. Since the chem-

<sup>1</sup> Entomologist

ical represents a cost of close to one dollar per acre it is advised to use the seed treatment only on fields which are overrun with wireworms.

Seed treating should be done just prior to seeding as treated seed tends to deteriorate if held in storage. Treat only the amount of seed to be sown or planted because any left over is unfit for feed. The method should not be used in fields intended for potatoes or root crops because of the possibility of taste contamination from the chemical.

Research conducted by the North Dakota Agricultural Experiment Station in 1947 in the Minot and Southam areas demonstrated that Benzene hexachloride effectively reduced wireworm populations. This work was done prior to the development of lindane from the crude Benzene hexachloride.

### **WANTED WIREWORM INFESTED FIELDS**

Locations of wireworm infested fields are wanted by the Department of Agricultural Entomology, NDAC Experiment Station, Fargo, N. D. to test effects of chemical seed treatments under various soil conditions. Write or phone Dr. J. A. Munro, Fargo

### **ROTATION GRAZING IN THE NORTHERN PLAINS**

The Journal of Range Management, Vol. 4, No. 1 issue of January, 1951, published "A Twenty-Five Year Comparison of Continuous and Rotation Grazing in the Northern Plains" by George A. Rogler, Agronomist, Bureau of Plant Industry, U. S. Northern Great Plains Field Station, Mandan, North Dakota.

This is a discussion of long time cooperative investigations by the U. S. Department of Agriculture, Agricultural Research Administration, Bureau of Plant Industry, Soils, and Agricultural Engineering, Division of Forage Crops and Diseases and the North Dakota Agricultural Experiment Station.

J. T. Sarvis of the former Division of Dry Land Agriculture was in charge of the project under which these investigations were carried on from 1915 to 1941, inclusive. Most of the data presented in this paper were collected during that period.

### **BULLETIN ON FARM SIZES**

"Sizes of Farms in the United States", is the title of Technical Bulletin No. 1019 by K. L. Bachman and R. W. Jones, Agricultural Economists, Bureau of Agricultural Economics, U.S.D.A. The 1945 Agricultural Census, and earlier censuses are the principal sources of data. The larger part of the data is reported by regions rather than by states. The regional classification of states is not defined but can be deduced by reference to Figure 7 on page 41. Had it been possible to include the apparently still unavailable 1950 census data, the study would have been much more useful. The bulletin can be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. for twenty-five (25) cents. (H.L.W.)