

DISCOVERY OF THE SUGAR-BEET NEMATODE IN WESTERN CANADA!C.E. Lilly², A. M. Harper², and E.J. Hawn³

This is a report of the first record of the sugar-beet nematode, Heterodera schachtii Schmidt, in Western Canada. It had previously been found in eastern Canada in two localized areas of southern Ontario, near St. Catharines in 1931 and near Sarnia in 1939.

On June 22, 1961, members of the research staff of the Canadian Sugar Factories drew the attention of the two senior authors to unthrifty sugar beets in an irrigated field near Taber, Alberta. The field was approximately 13 acres in size and the beets on 4 acres were severely stunted and the leaves badly wilted. Numerous white cysts were found on the roots of the stunted plants as well as on the roots of the other sugar beets throughout the field. There was a greatly increased development of small lateral rootlets on the stunted beets, giving a whiskered appearance to the roots. Cysts were also found on mustard and on oak-leaved goosefoot, Chenopodium glaucum L., in the same field. The cysts were identified as those of H. schachtii by Dr. A.D. Baker and R.H. Mulvey, Nematology Section, Entomology Research Institute, Canada Department of Agriculture, Ottawa, Ontario.

In early July sugar beets and soil from the most unthrifty portions of 721 fields throughout southern Alberta were examined in the laboratory for cysts of the nematode but no other infestations were found.

The infested field was ploughed, fumigated with 25 gallons per acre of Shell DD, and planted to alfalfa. Crops that are hosts for H. schachtii will not be grown on this land for 6 years. On the rest of the infested farm a 4-year rotation will be started in which sugar beets or any other susceptible crop will be grown only once every 4 years. Officials of the Sugar Beet Growers' Association and the Canadian Sugar Factories Limited have agreed to adhere to a 4-year rotation in all sugar-beet growing areas of Alberta to prevent serious infestations of this pest developing.

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