

Sugarbeet XX

Sugarbeet Cyst Nematode

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Identification and Life Cycle

The sugarbeet cyst nematode, *Heterodera schactii*, was reported as early as 1907 in Colorado, and 1926 in the North Platte Valley in western Nebraska, and is present in economic threshold levels in most of the older sugarbeet areas in the Central High Plains. *H. schactii* overwinters as eggs and juveniles and attack plants when moisture is adequate and temperatures exceed 50 F. After juveniles enter root tips, females become lemon-shaped and sedentary. Males enter soil and are attracted to females where fertilization occurs. When female dies, her body hardens and becomes a lemon-shaped cyst, containing approximately 200 eggs, completing the cycle.

Plant Response and Damage

Fields may be uniformly infested or have localized, circular or oval areas of infestation. Early infections result in greater degrees of damage and may kill seedlings and result in poor stands. Young plants infected with *H. schactii* have elongated petioles and may remain stunted until harvest. Affected older plants have small storage roots, excess fibrous roots, and pronounced yellowing of foliage. The most readily observed sign of infection is the presence of white-plate yellow, lemon-shaped females attached to roots. Damage to plants is greatest a dry summer following a warm, wet spring.

Management Approaches

Biological Control

No biological control strategies have been developed for sugarbeet cyst nematode.

Cultural Control

Do not return tare soil to sugarbeet fields. A combination of rotation with non-host crops (small grains, corn, dry beans, or alfalfa), good weed control, sanitation, and planting a trap crop where practical, will all contribute toward reduction of nematode soil populations.

Chemical Control

Pesticide	Rate	Preharvest Interval, Remarks
Telone II	9-12 gal/A	Restricted use; Preplant interval:
Soil Fumigant	26-35 oz/1000 row ft	1 wk + 1 wk per 10 gal applied
Temik 15 G	27-33 lb/A	Restricted use; PHI 90 days, 120 days
Lock `n Load	18-22 oz/1000 row ft	if tops fed to livestock

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