



## DISEASES AND PESTS OF SUGARBEET Vol. 1

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Addressing the greatest disease and yield threats to the sugarbeet, this DVD uses 3D animations to depict the complete life cycles of pathogens as well as means of control. Students, farmers, technical advisors, and teachers are sure to find the videos fascinating and informative.

There are 2 videos on this DVD:

### 1.1 *Cercospora beticola* & *Ramularia beticola* (9:15 min)

The most important pathogens causing leaf diseases of sugarbeet are *Cercospora beticola* and *Ramularia beticola*. The disease cycles of these pathogenic fungi are illustrated in photo-like 3D animations and real-image video sequences. Particularly, the mode of infection as well as pathogen spread are exhaustively shown. The use of epidemiological threshold values as a decision-making aid for the selective application of fungicides is explained. By growing varieties of sugarbeet that are less susceptible to *Cercospora* and *Ramularia beticola* the course of infection can be delayed.

### 1.2 The Beet Cyst Nematode *Heterodera schachtii* (12:30 min)

The pest that poses the greatest threat to sugarbeet yield, particularly in warm and sufficiently moist soils, is the beet cyst nematode, *Heterodera schachtii*. The movie depicts the complete life cycle of this pathogen – from the hatching of juveniles, infection of sugarbeet roots, induction of feeding cell systems (syncytia) to the development of adult males and females, followed by fertilization and cyst formation. Since chemical controls (nematicides) are frequently uneconomical or unavailable, the movie also explains cultural means of control, like long rotations with non-host crops and growing of trap crops, most notably nematode-resistant cultivars of mustard and radish.



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The AGROFILM Festival is organized by the Ministry of Agriculture and Rural Development of the Slovak Republic.

