

HAFEZ, SAAD L.\*, University of Idaho Research and Extension, 29603 UofI Lane, Parma, ID 83660.

**Sugarbeet cyst nematode management using tolerant varieties, biological seed treatments, new compounds and chemistries.**

Sugarbeet cyst nematode (*Heterodera chitwoodii*) can cause major economic and yield losses for sugarbeet growers in the Pacific Northwest, these losses are extrapolated when sugarbeet cyst nematode (SCN) populations are high. The objective of this study was to determine the efficacy of tolerant varieties, new biological seed treatments, and new compounds and chemistries alone or in different combinations on SCN in naturally infested fields in Southwest Idaho. Fields infested with SCN were selected and sampled to determine initial populations before trial initiation. After planting and applications fields were allowed to grow under normal field conditions until harvest. Yield and sugar content data was taken to determine efficacy for each treatment. Most tolerant varieties increased overall yield with two varieties exhibiting signs of being resistant to SCN as compared to the standard commercial variety. Biological seed treatments increased both overall yield and sugar content when combined with a tolerant variety as compared to the susceptible untreated control. New compounds and chemistries also increased overall yield as compared to the untreated control. These results show promising strides in SCN management for the Pacific Northwest.