

RUPPEL, E. G. USDA, Agricultural Research Service, 1701 Center Ave., Fort Collins, CO 80523. - Trap crops for the sugarbeet cyst nematode (*Heterodera schachtii*). III. Susceptibility to fungal pathogens of sugarbeet.

Three cultivars of the mustard *Sinapis alba* (3-9001, 3-9002, & 'Maxi') and one radish (*Raphanus sativus* 'Nemex') were planted in pathogen-infested soil or inoculated in the greenhouse with sugarbeet fungal pathogens and evaluated for disease 21 or 30 days later. *Aphanomyces cochlioides* induced 20-26% seedling damping-off in mustards, 50% in radish, and 87% in sugarbeet. Damping-off caused by *Pythium ultimum* ranged from 0-47% in mustards, 22-35% in 'Nemex,' and 37-45% in sugarbeet, whereas *P. aphanidermatum* induced 35-100% damping-off across the trap crops and sugarbeet, stand loss being dependent on environmental conditions. *Rhizoctonia solani* AG-4 caused 45-67% damping-off in trap crops and 92% in sugarbeet. *R. solani* AG-2-2 induced 34-68% seedling loss in the trap crops and 97% in sugarbeet. *Fusarium oxysporum* var. *betae* caused 100% seedling loss in sugarbeet, 19% in 'Maxi,' 8% in 3-9001, and no loss in 3-9002 or 'Nemex.' *F. avenaceum* reduced stands in sugarbeet, 'Maxi,' and 3-9001 by 86, 5, and 8%, respectively; 'Nemex' was not susceptible. *Cercospora beticola* induced a few leaf spots in the cotyledons and older leaves of the trap crops. Powdery mildew, *Erysiphe polygoni* (= *E. betae*), failed to infect the trap crops. Susceptible trap crops, incorporated as green manure, may serve as inoculum reservoirs for subsequent sugarbeet crops.