Susceptibility of Running Buffalo Clover, an endangered species, to Soybean Cyst Nematode

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Soybean Cyst Nematode (*Heterodera glycines*) (SCN) is among the major diseases of soybeans, causing 1.3 billion dollars in annual crop losses in the United States. SCN is known to infect as many as 100 other species, however, white clover (*Trifolium repens*) is resistant. Running buffalo clover (*Trifolium stoloniferum*) is an Ohio native *Trifolium* species that is federally endangered and it's susceptibility to SCN has not been reported. The objective of this research study was to test the susceptibility of running buffalo clover to SCN. We transplanted running buffalo clover, white clover, and a susceptible soybean variety (control) into field soil known to be infested with SCN at Waterman Research Farm, The Ohio State University, Columbus, Ohio. Species were planted at a rate of 2-10 plants per plot with six replicates in June 2013. In October 2013, plant roots (including soil) were sampled from each plant. Since cysts were ruptured during processing, we counted the resultant number of eggs (and juveniles). We found on average (+/- standard error) 32,300 (+/- 8030), 1480 (+/- 710), 40 (+/- 13.3) eggs (and juveniles) per 100mL of soil for soybean, running buffalo clover, and white clover respectively. Since SCN levels of 100-1000 eggs per 100mL of soil can show yield loss in soybeans, we concluded that running buffalo clover shows moderate susceptibility to SCN and may limit its survival in its native habitat.