Phytopathology 2007, 97 (7) (Supplement): S152

On the morphological identification of pale cyst nematode, *Globodera pallida* associated with potato in the United States. Z. A. Handoo[1], L. K. Carta[1], A. M. Skantar[2], and D. J. Chitwood[1]. [1]Nematology Laboratory, [2]Molecular Plant Pathology Laboratory, USDA, ARS, Plant Sciences Institute, Beltsville, MD 20705. Phytopathology 97: S152.

Because the initial discovery of *Globodera pallida* in Idaho resulted in immediate regulatory action by several countries, the Idaho State Department of Agriculture and USDA APHIS conducted a detailed survey of Idaho potato fields. From more than 29,000 soil samples processed in Idaho from April to December of 2006, a total of 1,261 suspected potato cyst nematode samples were sent to the ARS Nematology Laboratory in Beltsville, MD for further diagnosis. From these samples we found 5,892 cysts of *G. pallida*, 285 cysts of cereal cyst nematode (*Heterodera avenae*), 37 cysts of clover cyst nematode (*Heterodera trifolii*), and more than 7,000 cyst-like bodies distributed across 151, 59, 1, and 1,050 samples, respectively. After the identity of the nematode from Idaho was established as *Globodera pallida* by morphological examination of mature cysts and second-stage juveniles and molecular analysis of juveniles, we performed a detailed morphological evaluation and morphometric analysis of the Idaho population. Variations in tail shape of this population and its relationship to *Globodera rostochiensis* and the *G. tabacum* complex are discussed. To date seven fields in Idaho have been confirmed positive for *G. pallida*. Surveys to acquire additional information about the distribution of this nematode are underway.