Jamal Faghihi

Research and Extension Nematologist

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Education:

Ph.D.	Entomology	1983	Purdue University
M.Sc.	Plant Pathology	1978	McGill University
B.Sc.	Plant Protection	1973	Shiraz University

Awards and Honors

2000	Outstanding service award
2001	FinOvation award
2001	Dean's team award

Research Program

Management of soybean cyst nematode occupies most of my research activities. Several collaborative research efforts are underway to devise new and innovative management strategies for SCN. A major contribution of this research is development of a broad based resistant germ plasm known as CystX®. In collaboration with several other scientists we are trying to characterize nature of this resistance. I am also participating in research activities with colleagues in other universities in north central region of the United States.

Extension/Outreach Activities

My extension responsibilities include diagnosis and making recommendations for plant parasitic nematode problems in Indiana. These include a variety of nematode pests of greenhouse and ornamental plants, several turf pest nematodes in golf courses, root knot nematodes and nematodes associated with field crops. Most of my extension activities revolve around soybean cyst nematode. We process several thousand samples for this nematode every year.

Selected Publications

Faghihi, J., R. A. Vierling, J. M. Halbrendt, V. R. Ferris, and J. M. Ferris. 1995. Resistance genes in a 'Williams 82' X 'Hartwig' soybean cross to an inbred line of *Heterodera glycines*. Journal of Nematology 27: 418-421.

Ferris, V.R., L.I. Miller, J. Faghihi, J. M. Ferris. 1995. Ribosomal DNA comparison of *Globodera* from Two Continents. Journal of Nematology 27: 273-283.

Li, Jianbo, Jamal Faghihi, J. M. Ferris, and V. R. Ferris. 1995. The use of RAPD amplified DNA as markers for virulence characteristics in soybean cyst nematode. Fundamental and Applied Nematology 19: 143-150.

Vierling, R. A., J. Faghihi, V. R. Ferris, and J. M. Ferris. 1995. Association of RFLP markers with loci conferring broad-based resistance to soybean cyst nematode (*Heterodera glycines*). Theor Appl Genet 92:83-86.

Wilcox, James R., John M. Ferris, Jamal Faghihi, and T. Scott Abney. 1995. Registration of 'Bronson' Soybean. Crop Science 35: 1207-1208.

Ferris, V. R., E. Krall, F. Faghihi and J. M. Ferris. 1999. Phylogenetic relationships of Globodera millefolii, G. artemisiae, and Cactodera salina based on ITS region of ribosomal DNA. Journal of Nematology 31:498-507

Workneh, F., G. L. Tylka, X. B. Yang, J. Faghihi, and J. M. Ferris. 1999. Regional assessment of soybean Brown Stem Rot, *Phytophthora sojae*, and *Heterodera glycines* using area-frame sampling: prevalence and effects of tillage. Phytopathology 89: 204-211.

Wang, J., Donald, P. A., Niblack, T. L., Bird, G. W., Faghihi, J., Ferris, J. M., Jardine, D. J., Grau, C., Lipps, P. E., MacGuidwin, A. E., Melakeberhan, H., Noel, G. R., Peirson, P., Riedel, R. M., Sellars, P. R., Stienstra, W. C., Tylka, G. L., and Wysong, D. S. 1999. Soybean cyst nematode reproduction in the North Central United States. Plant Disease 84: 77-82.

Faghihi, J and J. M. Ferris. 2000. An Efficient new device to release eggs from *Heterodera glycines.* Journal of Nematology 32: 411-413.

Faghihi, Jamal, Xuefen Jiang, Rick Vierling, Steve Goldman, Susan Sharfstein, Jeffrey Sarver, and Paul Earhardt. 2001. Reproducibility of the high-performance liquid chromatographic fingerprints obtained from two soybean cultivars and a selected progeny. Journal of Chromatography A 915:61-74.

Chen, H., Hogue, P.K., Miller, K.L., Faghihi, J., Ferris, V.R., and Vierling, R.A. 2005. A SNP linked to the major QTL of SCN resistance. Seed Technology 27:269-272.

Creech, J. Earl, William G. Johnson, Jamal Faghihi, Virginia Ferris, and Andreas Westphal. 2005. First report of Soybean Cyst Nematode Reproduction on Purple deadnettle under Field conditions. Crop Management, July 2005.

Donald, P.A., Pierson, P.E., St. Martin, S.K., Sellers, P.R., Noel, G.R., Macguidwin, A.E., Faghihi, J., Ferris, V.R., Grau, C.R., Jardine, D.J., Melakerberhan, H., Niblack, T.L., Stienstra, W.C., Tylka, G.L., Wheeler, T.A., Wysong, D.S. 2006. Assessing *Heterodera glycines*-Resistance and Susceptible and Cultivar Yield Response. Journal of Nematology. 38(1): 76-82.

Faghihi, Jamal, Richard A. Vierling and Virginia R. Ferris.2006.Effect of Selected Fungicides on Development of Soybean Cyst Nematode. Journal of Nematology (submitted).

Creech, J. E., W. G. Johnson, J. Faghihi, V. R. Ferris. 2006. Survey of Indiana Producers and Crop Advisors: A Perspective on Winter Annual Weeds and Soybean Cyst Nematode (*Heterodera glycines*). Weed Technology (Submitted).

- Extension Publications:

Faghihi, J., and V. R. Ferris. 2003. Nematodes. Purdue University Cooperative Extension Service. E-79.

Faghihi, J., and V. R. Ferris. 2004. Soybean cyst nematode. Purdue University Cooperative Extension Service. E-210.

Faghihi, J., and V. R. Ferris. 2002. Needle nematode. Purdue University Cooperative Extension Service. E-215.

Patent

"Methods for Conferring Broad-based Resistance to Soybean Cyst Nematode". Inventors: Richard A. Vierling, Jamal Faghihi, Virginia R. Ferris and John M. Ferris. Patent #08/764,857. August 2000.

Invention

I have invented a mechanical device to extract eggs from cysts of soybean cyst nematode. This method is faster and more accurate compared to previous techniques. It has been adopted as a standard extraction method by nemtologists in north central region of the United States.