

FRANK JOHN LOUWS

Director; Center for Integrated Pest Management
Professor, Department of Plant Pathology
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Education

Dordt College		1980-1982
University of Guelph	Horticulture	B.Sc. (<i>with distinction</i>), 1984
University of Guelph	Plant Pathology	M.Sc., 1987
Michigan State University	Plant Pathology	Ph.D., 1994
Michigan State University	Microbial Ecology	postdoc, 1993-1995

Employment History

2011-present Director, NSF Center for Integrated Pest Management.
1996-present Assistant, Associate, Full Professor, Department of Plant Pathology, North Carolina State University, Raleigh, NC

Scholarly and Professional Honors and Awards

Honors and Achievements

- 2010 North Carolina Cooperative Extension Service Foundation Grange Search for Excellence Award winner. (Team Leader)
- Outstanding Service Award. 2009. North Carolina Strawberry Growers Association
- American Society for Horticultural Science (ASHS) Outstanding Extension Paper Award. 2009.
- Senior Editor, *Phytopathology*. 2006-2009.
- Section Editor, *Canadian Journal of Plant Pathology*. 2005-present.
- Outstanding Service Award. 2003. North Carolina Strawberry Growers Association.
- College's Faculty and Student Organization Resource Development Award. Center for Environmental Framing Systems Research Team (Team member: F.J. Louws).

Professional Memberships

- Sigma Xi, The Scientific Research Society
- The American Phytopathology Society
- Canadian Phytopathology Society
- International Society for Horticultural Science
- Phi Beta Delta Honor Society for International Scholars
- Phi Kappa Phi Honor Society

Professional and Scientific Service

- Co-organized and co-taught 2 graduate level courses in sustainable agriculture
- Managed a graduate level course in Methods and Diagnosis (Fall 2005 and yearly)
- Advised 8 graduate students; Committee member on 29 additional committees; mentored 39 undergraduate students and 14 postdocs or senior scientists. Recently enjoyed 5

Biographical Sketch

trained personnel secure faculty positions.

- Published 166 research publications including 42 peer reviewed journal publications, 3 research review publications, 53 contributions to books or published proceedings, and 9 book chapters in addition to 107 published abstracts; Citation Index = 1342.
- Published 281 extension publications including 31 extension bulletins (many with annual updates), 59 applied research-peer reviewed papers and 246 industry or extension newsletters/popular press articles while at NCSU
- Presented over 542 in-state and out-of-state research-based extension talks on disease management in strawberry and vegetable production systems. Organized multiple agent training programs. Diagnosed 5300+ samples through our clinic program.
- Panel member for National Scientific Panels in IPM (CAR/RAMP) and served as Panel Manager for a USDA-ARS national programs evaluation; Team member of a Land Grant Departmental Review.
- Director of the Center for IPM – a center that generates \$4-5 million per year with 30-35 employees. Managed an external review (2012).

Editorial Boards

- Senior Editor, *Phytopathology*. 2006-2009.
- Section Editor, *Canadian Journal of Plant Pathology*. 2005-2010.
- Ad-hoc reviewer for numerous scientific agencies (domestic and international) and journals in *Plant Pathology*, *Horticultural Science*, *Environmental Microbiology* and *Farming Systems* journals.

Grants Received:

Dr. Louws has been PI or CO-PI on \$13.4 million to support work in IPM , Plant Pathology and Farming Systems Research; over 95% in competitive funds and the remainder in commodity based grants and gifts.

Refereed Publications (n=42; last 4 years)

1. Sydorovych, O. C.L. Rivard, S. O'Connell, C. D. Harlow, M. M. Peet, and F.J. Louws. 2012. Growing organic heirloom tomatoes in the field and high tunnels in North Carolina: comparative economic analysis. *HortTech* (in press).
2. S. O'Connell, C.L. Rivard, M.M. Peet, C. Harlow and F.J. Louws. 2012. High tunnel and field production of organic heirloom tomatoes: Yield, fruit quality, disease and microclimate. *HortScience* 49:1283-1290.
3. Liu, B., D. Roos, S. Butler, B. Richter, and F. J. Louws. 2012 Vegetable seedling diseases associated with earthworm castings contaminated with *Phytophthora capsici* and *Pythium attrantheridium*. *Plant Health Progress*. doi:10.1094/PHP-2012-02-0421-01-RS.
4. Rivard, C.L., S. O'Connell, M.M. Peet, R.M. Welker, and F.J. Louws. 2012. Grafting tomato to manage bacterial wilt (caused by *Ralstonia solanacearum*) in the southeastern United States. *Plant Disease*: 96:973-978.
5. Liu, B. F.J. Louws, T.B. Sutton and J.C. Correll. 2011. A rapid qualitative molecular method for the identification of *Colletotrichum acutatum* and *C. gloeosporioides*. *Eur. J. Plant Pathol.* 132:593-607.
6. Liu, B. M. Munster, C. Johnson and F.J. Louws. 2011. First report of anthracnose caused by *Colletotrichum fragariae* on cyclamen in North Carolina. *Plant Disease* 95:1480-1481.

7. Louws, F.J., C.L. Rivard and C. Kubota. 2010. Grafting fruiting vegetables to manage soilborne pathogens, foliar pathogens, arthropods and weeds. *Scientia Horticulturae* 127:127–146
8. Rivard, C.L. O. Sydorovych, S. O’Connell, M.M. Peet and F.J. Louws. 2010. An economic analysis of two grafted tomato transplant production systems in the United States. *HortTechnology* 20:794-803.
9. Rivard, C.L., S. O’Connell, M.M. Peet and F.J. Louws. 2010. Grafting tomato with inter-specific rootstock provides effective management against diseases caused by *Sclerotium rolfsii* and southern rootknot nematodes. *Plant Disease* 94:1015-1021.
10. Louws, F.J. 2009. IPM for soilborne disease management for vegetable and strawberry crops in SE USA. *In*: U. Gisi, I. Chet, M.L. Gullino (eds.), *Recent Developments in Management of Plant Diseases, Plant Pathology in the 21st Century VI*, Springe-Verlage. Pg. 217-227.
11. Rivard, C.L. and F.J. Louws. 2008. Grafting to manage soilborne diseases in heirloom tomato production. *HortScience* 43: 2104-2111.
12. Sydorovych, O., C.D. Safley, R.M. Welker, L.M. Ferguson, D.M. Monks, K. Jennings, J. Driver and F.J. Louws. 2008. Economic Evaluation of Methyl Bromide Alternatives for the Production of Tomatoes in North Carolina. *HortTechnology* 18:705-713.
13. Abad, Z.G., Abad, J.A., Coffey, M.D., Oudemans, P.V., Man in 't Veld, W.A., de Gruyter, H., Cunnington, J. and Louws, F.J. 2008. *Phytophthora bisheria* sp. nov., a new species identified in isolates from the Rosaceae raspberry, rose and strawberry in three continents. *Mycologia* 100: 99–110.