

Curriculum Vitae --February 19, 2013

John C. Snyder

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Education

- Ph.D. University of Minnesota, 1978
Major, Horticulture; Minor, Genetics
Dissertation: Starch-Protein Relationships in High Protein Potatoes
- M.S. University of Minnesota, 1974
Major, Horticulture; Minor, Plant Physiology
Thesis: Differential Tolerance of Potato Cultivars to EPTC
- B.S. Baldwin-Wallace College, 1971
Major, Biology; Minor, Chemistry

Professional Experience

- 2010-2011 Visiting Professor, Institute of Vegetables and Flowers, Chinese Academy of Agriculture Science, Beijing.
- 1995-present Senior Technical Advisor - Research (STAR), Chinese Academy of Agriculture Science, People's Republic of China. Advice has been provided on aspects of vegetable breeding.
- 1985-present Associate Professor, Department of Horticulture and Landscape Architecture, University of Kentucky. Primary research interests have centered on plant-insect interactions and on delineation of issues constraining diversification of Kentucky agriculture as it relates to horticultural crops.
- 1978-1984 Assistant Professor, Department of Horticulture and Landscape Architecture, University of Kentucky. Primary research interest centered on plant-insect interactions.
- 1971-1978 Research Assistant, Department of Horticultural Science and Landscape Architecture, University of Minnesota.
- 1971 Lecturer, Lorrain Community College. Duties included teaching a four week course in Ecology.

Experience in Agricultural Development

More than 20 years ago I had the privilege of leading a research project aimed at understanding constraints to production and marketing of fruits and vegetables in Kentucky. The project involved agricultural economists, rural sociologists, and horticulturists. The primary approach used was a farming systems approach. The project was successful in defining constraints, and developing tactics for specifically alleviating these constraints. Deployment of these tactics resulted in fundamental changes in techniques used for horticultural production and marketing in Kentucky, and a considerable expansion of vegetable production and marketing in the state, involving many new successful producers. Tactics developed are still in use today, and form the basis for a very large extension project funded directly by the Commonwealth of Kentucky.

Invited International Activities

The table below provides a synopsis of relevant international activities related to my experience in horticulture. Nearly all activity has been in Asia, concentrated in the People's Republic of China. Over the years I have developed strong collaborations with Chinese Agricultural scientists. The main objective of my visits to China was centered on technology transfer aimed at improving vegetable breeding. Over the years impacts to Chinese agriculture can be traced, in part, to introduction of new germplasm and broadening of breeding objectives (new products) that resulted from my consultations with Chinese scientists.

Year	Country	Main Activities	Sponsor
2010-11	China	Visiting professor for one year. Conducted research on breeding for tomato host plant resistance to whitefly (<i>Bemisia</i> spp.), including development of bioassay methods, metabolomic analysis of trichome secretion composition, identification of markers for whitefly resistance, Consulted on aspects of breeding carrots, broccoli, cabbage, cucumber, peppers and squash. Delivered invited lectures at several provincial academies of agriculture.	Institute of Vegetables & Flowers, Chinese Academy of Agriculture Science, Beijing, China
2008	China	Attended and provided keynote lecture at Vege2008Beijing – Vegetable Production, Quality and Process Standardization in Chain: a Worldwide Perspective. Two additional lectures on breeding tomato for insect resistance given at the Institute for Vegetables and Flowers, Chinese Academy of Agriculture.	Ministry of Agriculture, China

2007	China	Reviewed aspects of breeding tomato for resistance to insects, extended research collaboration; six lectures	Beijing Academy of Agriculture and Forestry
2004	China	Reviewed aspects of breeding tomato for resistance to insects, establish research collaboration; six lectures	Beijing Academy of Agriculture and Forestry
2003	Thailand	Explored opportunities for collaboration	University of Kentucky
2001	China	Reviewed aspects of breeding tomato for resistance to insects, extended research collaboration; eight lectures	Beijing Academy of Agriculture and Forestry
1997	China	Reviewed aspects of breeding tomato for resistance to insects; seven lectures	Beijing Academy of Agriculture and Forestry
1995	Ecuador	Provided advice on aspects of developing a potato certified seed program	Partners of the Americas
1995	China	Review aspects of breeding tomato for resistance to insects, graduate student recruitment, eight lectures	Ministry of Agriculture, China
1989	Indonesia	Provided advice on aspects of vegetable research	US AID/University of Kentucky
1992	China	Reviewed aspects of breeding tomato for resistance to insects, 5 lectures	Ministry of Agriculture, China

RESEARCH INTERESTS

- 1) Host-plant resistance to insects, especially in wild relatives of tomato
- 2) Diversification of Kentucky agriculture, especially as it relates to vegetable production
- 3) Design of production/marketing system for a *Capsicum baccatum* specialty pepper
- 3) Fate of pesticides and heavy metals in the environment, including human safety

PUBLICATIONS

Recent refereed and peer reviewed articles (>75 total):

- Antonious, G.F., Silitonga, M.R., Tsegaye, T.D., Unrine, J.M., Coolong, T., Snyder, J.C., 2013. Elevated concentrations of trace elements in soil do not necessarily reflect metals available to plants. *Journal of Environmental Science and Health, Part B* 48, 219-225.
- Snyder, J., Min, C., 2012. Insect Resistance in *Lycopersicon hirsutum* LA2329 -- Current Status. *Acta Horticulturae. International Symposium on Vegetable Production, Quality, and Process Standardization in Chain: A Worldwide Perspective* 944, 15-21.
- Coolong, T., Snyder, J., Warner, R., Strang, J., Surendan, S., 2012. The relationship between soil water potential, environmental factors, and plant moisture status for poblano pepper grown using tensiometer-scheduled irrigation. *International Journal of Vegetable Science* 18, 137-152.
- Snyder J, Antonious G, Thacker R (2011) A sensitive bioassay for spider mite (*Tetranychus urticae*) repellency: a double bond makes a difference. *Experimental and Applied Acarology*:1-10. DOI:10.1007/s10493-011-9472-2
- Antonious G.F., Snyder J.C., Dennis S. (2010) Heavy metals in summer squash fruits grown in soil amended with municipal sewage sludge. *J Environ Sci Health, Part B* 45:167-173.
- Bradman A., Salvatore A.L., Boeniger M., Castorina R., Snyder J.C., Barr D.B., Jewell N.P., Kavanagh-Baird G., Striley C., Eskenazi B. (2009) Community-based intervention to reduce pesticide exposure to farmworkers and potential take-home exposure to their families. *J of Exposure Sci Environ Epidemiology* 19:79-89. DOI: <http://dx.doi.org/10.1038/jes.2008.18>.
- Snyder J., Antonious G.F. (2009) Trichomes – importance in plant defence and plant breeding. *CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources* 4:16. DOI: 10.1079/PAVSNNR20094076 (invited review).
- Antonious G.F., Turley E.T., Sikora F., Snyder J.C. (2008) Heavy metal mobility in runoff water and absorption by eggplant fruits from sludge treated soil. *J. Environ. Sci. Health B* 6:526-532.
- Law D.M., Bhavsar V., Snyder J.C., Mullen M.D., Williams M. (2008) Evaluating solarization and cultivated fallow for Johnsongrass (*Sorghum halepense*) control and nitrogen cycling on an organic farm. *Biological Agriculture & Horticulture* 26:175-191.
- Salvatore A., Bradman A., Castorina R., Camacho J., Lopez J., Barr D., Snyder J.C., Jewell N., Barr D., Eskenazi B. (2008) Occupational behaviors and farmworkers' pesticide exposure: Findings from a study in Monterey County, California. *American J of Industrial Medicine* 51:782-794.

- Snyder J.C., Chai M. (2008) Insect resistance in *Lycopersicon hirsutum* LA2329 - Current status. Acta Horticulturae, (Vegetable Production and Quality and Process Standardization in chain: a Worldwide Perspective (Vege2008Beijing))
- Zhang X., Snyder J.C. (2008) Occurrence of 2,3-dihydrofarnesoic acid, a spidermite repellent, in trichome secretions of *Lycopersicon esculentum* X *L. hirsutum* hybrids. Euphytica. 162 1-9.
- Antonious G.F., Snyder J.C. (2007) Accumulation of heavy metals in plants and potential phytoremediation of lead by potato, *Solanum tuberosum* L. J Environ Sci Health A 42:811-816.
- Antonious G.F., Kochar T.S., Jarret R.L., Snyder J.C. (2006) Antioxidants in hot pepper: Variation among accessions. J Environ Sci Health B 41:1237-1243.
- Antonious G.F., Meyer J.E., Snyder J.C. (2006) Toxicity and repellency of hot pepper extracts to spider mite, *Tetranychus urticae* Koch. J Environ Sci Health 41:1383-1391. DOI: <http://dx.doi.org/10.1080/0360123060096419>.
- Antonious G.F., Snyder J.C. (2006) Natural products: Repellency and toxicity of wild tomato leaf extracts to the two-spotted spider mite, *Tetranychus urticae* Koch. J Environ Sci Health B 41:43-55.
- Berberich S., Snyder J.C., Geneve R.R., Williams M.A. (2006) Growth and flowering response of container grown passion flower cultivars to fertilizer and paclobutrazol. J Environ Hort 24:109-114.
- Law D., Snyder J.C., Rowell B., Williams M.A. (2006) Weed control efficacy of organic mulches in two organically-managed bell pepper production systems. HortTechnology 16:225-232.
- Wang Z., Chai M., Jiang L., Snyder J.C. (2006) Preliminary Identification of a single dominant gene conferring resistance to leafminer (*Liriomyza sativae* Blanchard) in *Lycopersicon hirsutum* Dunal. Molecular Plant Breeding 4:399-403.

Books and peer-reviewed book chapters:

- Antonious G.F., Snyder J.C. (2008) Tomato leaf crude extracts for insect and spider mite control, in: V. R. Preedy and R. R. Watson (Eds.), Tomatoes and Tomato Products: Nutritional, Medicinal and Therapeutic Properties, Science Publishers, Enfield, NH. pp. 269-297.
- Antonious G.F., Snyder J.C. (2007) Impact of Soil Incorporated Sewage Sludge on Herbicide and Trace metal mobility on the environment, in: T. Theophanides (Ed.), Environ Engineering and Economics, Athens Institute for Education and Research, Athens, Greece. pp. 149-164.
- Barker K.R., Day E., Gibb T., J., Hinchee M., A., Hinkle N., C., Jacobsen B., J., Knight J., Langeland K., A., Nebeker E., Rosenberger D., A., Schmitt D., P., Snyder J.C., C., Sorensen A., Stevenson W., R., Stringham S., M., Swinton S., M., Watson D., W., Westra P., Whalon M., E., Whitson T. (2003) Integrated pest management: Current and future strategies Council for Agriculture Sci Technology, Ames.

Recent Applied Research Publications (more than 250):

- Strang, J., J. Snyder, et al. (2012). Bell Pepper Cultivar Screening Trial, Central Kentucky. 2012 Fruit and Vegetable Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, KY, Agricultural Experiment Station, University of Kentucky, College of Agriculture. Progress Report 656: 30-32.
- Strang, J., C. Smigell, et al. (2012). Spring Turnip Variety Evaluation. 2012 Fruit and Vegetable Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, KY, Agricultural Experiment Station, University of Kentucky, College of Agriculture. Progress Report 656: 26-27.
- Smigell, C., J. Strang, et al. (2012). Rabbiteye Blueberry Variety Evaluations. 2012 Fruit and Vegetable Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, KY, Agricultural Experiment Station, University of Kentucky, College of Agriculture. Progress Report 656: 19-20.
- Antonious, G., M. Silitonga, et al. (2012). Monitoring Trace-Elements Mobility from Soil into Bell Pepper and Melons Fruits. 2012 Fruit and Vegetable Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, KY, Agricultural Experiment Station, University of Kentucky, College of Agriculture. Progress Report 656: 40-43.
- Strang, J., C. Smigell, et al. (2010). Green Bean Variety Evaluation. 2010 Fruit and Vegetable Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, Agricultural Experiment Station, University of Kentucky. Progress Report 610: 38-40.
- Smigell, C., J. Strang, et al. (2010). Muskmelon and Specialty Melon Variety Evaluations. 2010 Fruit and Vegetable Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, Agricultural Experiment Station, University of Kentucky. Progress Report 610: 32-34.
- Smigell, C., J. Strang, et al. (2010). Blueberry Variety Evaluations. 2010 Fruit and Vegetable Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, Agricultural Experiment Station, University of Kentucky. Progress Report 610: 29-31.
- Antonious, G., J. Snyder, et al. (2009). Summer squash production in soil amended with sewage sludge. 2009 Fruit and Vegetable Crops Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, KY, University of Kentucky, College of Agriculture. Progress Report 603: 45-48.
- Smigell, C. and J. Snyder (2009). Preemergent herbicide weed control on Eden Shale soil. 2009 Fruit and Vegetable Crops Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, University of Kentucky, College of Agriculture. Progress Report 603: 18-19.
- Sparks, C., R. Hays, et al. (2009). Yield and income of fall staked tomato cultivars in Eastern Kentucky. 2009 Fruit and Vegetable Crops Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, KY, University of Kentucky, College of Agriculture. Progress Report 603: 35-36.
- Strang, J., A. P. Lentz, et al. (2009). Beet Variety Evaluation (Kentucky). Midwest Vegetable Trial Report for 2009. E. T. Maynard. West Lafayette, IN, Purdue University, Department of Horticulture and Landscape Architecture: 47-52.
- Strang, J., A. P. Lentz, et al. (2009). Beet Variety Evaluation. 2009 Fruit and Vegetable Crops Research Report. T. Coolong, J. Snyder and C. Smigell. Lexington, KY, University of Kentucky, College of Agriculture. Progress Report 603: 26-28.
- Strang, J., A. P. Lentz, et al. (2009). Blueberry Variety Evaluations. 2009 Fruit and Vegetable Crops Research Report. Lexington, KY, University of Kentucky, College of Agriculture. Progress Report 603: 23-25.