

BRENT ROWELL

Department of Horticulture
N-318 Agric.Science Bldg. North,
University of Kentucky, Lexington, KY 40546
Tel. (859) 257 4721; email: browell@uky.edu

EDUCATION

Ph.D., 1984. Cornell University: Department of Vegetable Crops.
M.S., 1978. University of Tennessee: Department of Plant and Soil Science.
B.A., 1975. University of Tennessee: Botany.

PROFESSIONAL EXPERIENCE

Extension Professor, International & Sustainable Agriculture (2013-present). Department of Horticulture, University of Kentucky.

Agriculture Program Director (2006-2012). Proximity Designs (formerly IDE Myanmar), Rangoon, Myanmar (Burma). www.proximitydesigns.org

- Led countrywide program for design, development, introduction and promotion of drip irrigation systems for Burmese and minority small farmers. Led and advised drip technology introduction team; developed training programs for 130 national staff and private over 400 promotion agents for drip irrigation, sustainable crop production, water requirements, fruit and vegetable pest management.
- Supervised countrywide commercial-scale on-farm demonstration program for drip irrigation for horticultural crops with small farmers. Over 7000 locally manufactured systems have been installed on small farms from 2008 to 2012.
- Conducted on-going research and development program for drip, minisprinklers, and other microirrigation technologies appropriate for Myanmar horticultural crop producers.
- Provided daily on-the-job training and leadership development opportunities for team of senior local counterparts working with drip irrigation; advised senior counterpart in overall direction and development of a large rice pest management and extension program (Farm Advisory Services)
- Developed new designs for low cost gravity-fed drip system components and assisted manufacturing team with product specifications, quality testing, field performance testing, etc.
- Provided practical training to 3rd-4th year students and graduate students at

Burma's only agricultural university (Yezin Agricultural University).

Professor (2005-2006); Associate Professor (2000-2004), Assistant Professor (1994-1999). Vegetable Crops Extension Specialist, Department of Horticulture, University of Kentucky.

- Led statewide inter-departmental vegetable crops extension and research team; developed training programs, materials for agricultural extension agents in 120 counties; technical advisor to small farmers associated with 4 vegetable marketing cooperatives. Developed in-service training programs/materials for drip irrigation, sustainable vegetable production, marketing, and Integrated Pest Management (IPM).
- Supervised statewide commercial-scale on-farm demonstration program for good agricultural practices including drip irrigation in vegetable crops with small farmers.
- Developed liaisons with major farm organizations and Kentucky Dept. of Agriculture to plan marketing infrastructure investments in conjunction with crop diversification. Co-authored plan for a statewide farmer's market network and served on Kentucky Department of Agriculture's first Market Development Advisory Board.
- Conducted funded research and extension programs on sustainable vegetable production systems incorporating disease resistance, Integrated Pest Management, and biological control for organic vegetable production.
- Advised graduate students in research projects related to vegetable production and pest management.

Fulbright Scholar (2003), National Biological Control Research Center, Kasetsart University (Bangkok) and Maejo University, Chiang Mai, THAILAND.

- Worked with Thai colleagues, the Danish International Development Agency (DANIDA), and the United Nations Food and Agriculture Organization (FAO) to design and implement a national program for the biological control of Thailand's (and Asia's) most important vegetable pest.
- Helped establish formal MOU between the University of Kentucky and Maejo University. Hosted Fulbright scholar (later Director of International Programs) from Maejo University at UK.

Vegetable Crops Specialist, (1984-87; 1991). Ministry of Agriculture, Phnom Penh, Cambodia. Program of technical cooperation supported by Church World Service (U.S. National Council of Churches).

- Planned, implemented the creation of Cambodia's first national field station for

vegetable crops research, training, and seed multiplication (vegetables, food legumes, sweet potatoes, etc.). Supervised station development from site selection to completion and training of national staff. This station remains in operation today and is fully supported by the government of Cambodia.

- Trained national counterparts in vegetable production, small-scale seed production, IPM, agricultural research methodology.
- Planned, supervised provision of seeds and inputs for commercial vegetable crops project for 600-acre “green belt” surrounding Phnom Penh.
- Wrote and published vegetable crop production handbook and extension manuals, materials for the Ministry of Agriculture, UN agencies, and NGO’s working with vegetable crops.
- Established liaisons between Cambodian Ministry of Agriculture and international agric. research centers CIMMYT, AVRDC. Introduced/directed CIMMYT and AVRDC variety testing programs for maize, vegetables, mungbean.
- Developed project proposal for national program of vegetable seed production using contract farmers in a joint venture with the private sector.
- Advised international agencies (UNICEF, UNHCR) implementing agricultural projects.
- Developed vegetable seed kits for distribution through rural health clinics in Vietnam.

Visiting Scientist/Technical Advisor (1987-90). National Research Council of Thailand and Maejo University, Chiang Mai, THAILAND.. Project title: *Prospects and Problems of Expanded Vegetable Seed Production in Northern Thailand.*

- Directed research project with Thai counterpart professors, students, to develop an Integrated Pest Management plan for vegetable seed crops being produced in Northern and Northeastern Thailand.
- Taught and conducted field training for advanced undergraduates and extension workers in vegetable crops management, IPM, biological control, and research techniques.
- Conducted research and demonstrations on biological control agents of cabbage pests; identified two new beneficial natural enemies (parasitoids) that were previously unknown in Thailand.

Horticultural Consultant, Danish International Development Agency (DANIDA), Royal Danish Government, Copenhagen. Nov-Dec, 1980; July 1981.

- Designed training program in commercial vegetable production for Bangladesh government extension workers.
- Developed plan for training of women health/family planning field workers in horticulture and basic nutrition (Bangladesh).

Horticulturalist, Mennonite Central Committee, Noakhali, BANGLADESH. 1978-80.

- Planned, directed national program in vegetable crops extension and research. Advised, supervised extension workers in developing commercial vegetable crop demonstrations, field trials with contact farmers, schools, and womens' groups.
- Assessed vegetable varieties and breeding lines for disease resistance.
- Began a homestead gardening/nutrition program for village women with health and family planning staff.

Horticultural Consultant, World Relief, Inc., Bangkok, THAILAND. 1980.

- Designed plan for procurement, assembly and distribution of maize and vegetable seed kits for rainy and dry seasons; 50 tons of seeds were distributed through these kits to Khmer families across the Thai-Cambodian frontier during the Cambodian food crisis of 1980-81.

Graduate Research Assistant, Dept. of Vegetable Crops, Cornell Univ. (1981-84) and Dept. of Plant & Soil Science, Univ. of Tennessee (1976-78).

Research Associate, Castle Vegetable Seed Co., Homestead Research Station, Florida, USA. Mar-June, 1981.

LANGUAGES

Fluent in spoken Thai; basic speaking/reading proficiency in French; speaking proficiency, Bangla (Bengali).

HONORS AND AWARDS

- Fulbright Research Scholar, Thailand, 2003-04 (www.cies.org)

- Council for International Exchange of Scholars (CIES) 2004 Review Committee (reviewed all Fulbright scholar applications (75) for Southeast Asia.
- East-West Center Graduate Fellowship, University of Hawaii, 1981 (declined).
- University of Tennessee Fellowship for Graduate Study, 1975, 1976
- Gamma Sigma Delta; Phi Kappa Phi

PROFESSIONAL AFFILIATIONS

American Society for Horticultural Science (member since 1977)

International Working Group on Diamondback Moth (International Organization for Biological Control)

SELECTED PUBLICATIONS

National and international proceedings

Rowell, B., Soe, Mar Lar, Khine, Tun Tun. 2012. Low pressure drip irrigation for commercial vegetables in Myanmar pp. 1-14 **in** *Proceedings of High Value Vegetables in Southeast Asia: Production, Supply, and Demand*. AVRDC—World Vegetable Center, Regional Symposium. 24-26 January, 2012. Chiang Mai, THAILAND.

Friley, K., **B. Rowell**, and R. Bessin. 2004. Biological control of the European corn borer by inundative releases of *Trichogramma ostriniae* in bell peppers. *Proceedings of the National Pepper Conference, 14-16 November 2004*, Naples, FL (accepted for publication).

Rowell, B., N. Bunsong, K. Rattanayat, and C. Doungsa-ard. 2003. Indigenous parasitoids of the diamondback moth in Thailand. Sixth Annual Plant Protection Conference, 24-27 November, 2003, Khon Kaen, Thailand.

Rowell, B., R. Terry Jones, W. Nesmith, and J. C. Snyder. 2002. Bacterial spot resistance, yield, and quality of bell and specialty pepper cultivars. pp 22-23 in *Proceedings of the International Pepper Conference, 10-13 November, Tampico, Mexico*.

Rowell, B., A. Satanek, and R. Bessin. 2002. Biological control of European corn borer in peppers. pp 23 in *Proceedings of the International Pepper Conference, 10-13 November, Tampico, Mexico*.

Rowell, B., R. Terry Jones, W. Nesmith, and A. Satanek, and J. C. Snyder. 2000. Bacterial spot tolerance, yield, and quality of bell and specialty pepper cultivars. p 25 **in** *Proceedings of the National Pepper Conference, 1-3 October 2000*. Lafayette, LA.

Rowell, B. 1990. Crucifer seed crop pests, parasites and the potential for IPM in Northern Thailand. 1990. pp. 551-563 **in**: *Diamondback Moth and Other Crucifer Pests: Proceedings of the Second International Workshop*. Asian Vegetable Research

and Development Center (AVRDC), Shanhua, Taiwan. AVRDC Publ. No. 92-368, 603 p.

Rowell, B. and Tat Eng Lay. 1989. Tomato production in Cambodia and screening for tomato leaf curl disease tolerance. pp. 406-15 in *Tomato and Pepper Production in the Tropics. Proceedings of the International Symposium on Integrated Management Practices*. Asian Vegetable Research and Development Center (AVRDC), Shanhua, Taiwan. Publ. No.89-317, 619 p.

Invited presentations

Rowell, B. 2002. The role of non-governmental organizations in vegetable research, extension, training, and seed sector development. pp 113-125 in *Perspectives of ASEAN Cooperation in Vegetable Research and Development: Proceedings of the Forum on ASEAN-AVRDC Regional Network on Vegetable Research and Development (AARNET)*, Shanhua, Taiwan, 24-26 September 2001. Asian Vegetable Research and Development Center. AVRDC Publication No. 02-539, 151 p. Available in print and online at:
http://www.avrdc.org/aarnet_proceedings.html

Refereed journal articles

Rowell, B., N. Bunsong, K. Sathaporn, S. Phithamma, K. Rattanayat, and C. Doungsa-ard. 2005. Hymenopteran parasitoids of the diamondback moth (Lepidoptera: Ypeunomutidae) in northern Thailand. *J. Econ Ent* 98: 449-456.

Law, Derek, **B. Rowell**, J. Snyder, and M. Williams. 2006. Weed Control Efficacy of Organic Mulches in Two Organically Managed Bell Pepper Production Systems. *HortTechnology* 16:225-232

Rowell, B., R. T. Jones, W. Nesmith, A. Satanek, and J. C. Snyder. 2001. Bacterial spot tolerance, yield, and quality of bell and specialty peppers. *HortTechnology* 11:648-657.

Rowell, B., R. T. Jones, W. Nesmith, and J. C. Snyder. 1999. Comparison of resistant cultivars for management of bacterial spot in peppers. *HortTechnology* 9:641-650.

Rowell, B., W. Nesmith, and J. Snyder. 1999. Yields and disease resistance of fall-harvested transgenic and traditional summer squash in Kentucky. *HortTechnology* 9:282-288.

Peer reviewed research articles

Rowell, B., R. T. Jones and J. Snyder. 2003. Powdery mildew resistance of conventional and transgenic summer squash, 2002. Biological and Cultural Tests for

Control of Plant Diseases (online)18: V007. The American Phytopathological Society, St. Paul, MN

Rowell, B., R. T. Jones and J. Snyder. 2001. Bell pepper cultivar evaluations for bacterial spot resistance, 2000. *Biological and Cultural Tests for Control of Plant Diseases* (online)16:V101. The American Phytopathological Society, St. Paul, MN

Rowell, B., W. Nesmith, and J. Snyder. 1999. Tomato mosaic virus tolerance and yields of staked tomato cultivars, 1998. *Biological and Cultural Tests for Control of Plant Diseases*. 14:120.

Jones, T., **B. Rowell**, and J. Snyder. 1999. Early blight tolerance and yields of staked tomato cultivars, 1998. *Biological and Cultural Tests for Control of Plant Diseases*. 14:111.

Presentations at national meetings (abstracts)

Rowell, B. and Mar Lar Soe. 2012. Development and promotion of ultra-low pressure drip irrigation in Myanmar. International Horticulture & Issues workshop. Annual Meeting of the American Society for Horticultural Science. July 30-Aug 3, 2012. Miami, FL.

Rowell, B., N. Bunsong, K. Rattanayat, and C. Doungsa-ard. 2004. Indigenous parasitoids (Hymenoptera) of the diamondback moth, *Plutella xylostella* L. (Lepidoptera: Ypeunomutidae), in Thailand. Entomological Society of America Annual Meeting, November 14-17, Salt Lake City, UT.

Friley, K., **B. Rowell**, and R. Bessin. 2003. Biological control of European corn borer *Ostrinia nubilalis* by the parasitic wasp *Trichogramma ostrinae* in bell peppers in 2003. Entomological Society of America Annual Meeting, 29 October, 2003, Cincinnati, OH.

Friley, K., **B. Rowell**, and R. Bessin. 2002. Biological control of European corn borer *Ostrinia nubilalis* by the parasitic wasp *Trichogramma ostrinae* in bell peppers in 2002. Entomological Society of America Annual Meeting, 20 November, 2002, Fort Lauderdale, FL.

Rowell, B., R. T. Jones, W. Nesmith, A. Satanek, and J. C. Snyder. 2001. Bacterial spot resistance, yield, and quality of bell and specialty peppers. *Hortscience* 36:563.

Rowell, B., R. T. Jones, and J. C. Snyder. 2000. In search of the Kentucky tomato. *Hortscience* 34: 518.

Rowell, B., R. T. Jones, and J. C. Snyder. 2000. In search of the Kentucky tomato, part II. *Hortscience* 35: 559.

Rowell, B. 1996. Smoking Zucchini--introducing commercial vegetables in tobacco country. 1996. *Hortscience* 31:594.

Rowell, B. 1996. Up from the ashes: vegetable crop research capacity development

in Cambodia, 1984-1995. *Hortscience* 31:651.

Rowell, B. 1982. Vegetable crops extension approaches for improved nutrition in Bangladesh. *Hortscience* 17:535. Nutrition and vegetable programs--a second look. 1979. *ADAB News* (Agricultural Development Agencies in Bangladesh, Dhaka) 6, No. 11, pp. 17-20.

Extension publications

Rowell, B. and Mar Lar Soe. 2012. *Easy Watering in 6 Steps—Drip Irrigation Installation Guide*, Proximity Designs, Yangon, Myanmar. 33p.

Rowell, B. and Mar Lar Soe. 2013. *Guidelines for Gravity-fed Drip Irrigation on Slopes*, Proximity Designs, Yangon, Myanmar. 9p.

Rowell, B. and Mar Lar Soe. 2013. *Applying Fertilizer with Drip Irrigation*, Proximity Designs, Yangon, Myanmar. 8p.

Rowell, B., Soe, Mar Lar. 2012. Development of low cost drip irrigation in Myanmar. pp. 10-13 in *IRD Matters*, magazine published by the Royal Agriculture College at the University College at Cirencester, United Kingdom.

Rowell, B. (ed.) 1994-2007. *Vegetable Production Guide for Commercial Growers*. University of Kentucky Extension Publication ID-36, 140 p.

Rowell, B. and Ricardo Bessin. 2005. *Bt Basics for Vegetable Integrated Pest Management*. University of Kentucky Extension Publication ID-156. 8p.

Rowell, B. and Ricardo Bessin. 2005. *Growers' Guide to Bt*. University of Kentucky Extension Publication ID-156A. 4p.

Rowell, B. and Tat Eng Lay. 1991. *Vegetable Insects and Their Management in Cambodia*. Dept. of Agronomy, Ministry of Agriculture and Church World Service, Phnom Penh, State of Cambodia. 24 pp.

Rowell, B. and Tat Eng Lay. 1991. *Vegetable and Subsidiary Crops Trials, 1987-1990*. Dept. of Agronomy, Ministry of Agriculture and Church World Service, Phnom Penh, Cambodia. 79 p.

Book

Rowell, B. and Tat Eng Lay. *Vegetable Cultivation Handbook for Cambodia* (book) 1992. Dept. of Agronomy, Ministry of Agriculture and Church World Service, Phnom Penh, Cambodia. 170p.

DEPARTMENTAL AND UNIVERSITY SERVICE

- Promotion & Tenure committee, College of Agriculture, 2005-06.
- Chair, Horticulture Research Farm & Greenhouse Committee, 2000-2006.
- Horticulture Department seminar: *The Golden Paradox: Isolation and Agricultural Development in Myanmar* (Burma). 14 November 2001.
- Tobacco Communities Reinvestment Fund Board member (CGC), 1999-2001.
- Faculty appeals committee for promotion and tenure: 2001.
- Moderator, *Vegetable Crops Management* sessions. American Society for Horticultural Science Annual Meetings, 1996, 1999.
- Departmental Review Committee member, December 1998-May 1999.
- Agronomy/Horticulture Field Day Planning Committee member, 1999.
- Trade Show Coordinator, KVGA/KHS Annual Meetings, 1996-2006.
- Advisor, Board of Directors, Kentucky Vegetable Growers' Association (KVGA), 1994-2006.
- Horticulture Training Advisory Team member (review and design appropriate in-service training for county extension agents).
- Moderator, Marketing/Alternative Enterprises discussion group, Kentucky Ag. Advancement Council, 7/98.
- Moderator, *Fruit and Vegetable Marketing Open Forum*. Obtained nationally recognized keynote speaker and panelists for the KVGA/KHS annual meeting, 1996.
- Moderator, *Overcoming Institutional Barriers, What it Takes to Sell*. Rural Development Conference II, Georgetown College (sponsored by congressman Scotty Baesler, 1995).
- Facilitator, *Opening new doors: targeting agricultural marketing*, Kentucky Leadership for Agricultural and Environmental Sustainability (KLAES) project workshop, 10/95.
- Project review panel for KLAES project grant applications, 1995.
- Steering Committee member, Vegetable Crops Management Working Group, American Society for Horticultural Science, 1999.
- Reviewer and book reviewer, *HortTechnology*.

GRADUATE STUDENT ADVISING

- Co-chair: Karen Friley (Entomology and Horticulture) MS, 2002-ongoing
- Co-chair: Amanda Ferguson (Horticulture) MS, 2002-ongoing
- Co-chair, Tina Wilson, MS Horticulture, completed 11/2000.
- Committee member: Md. Sufian Yek (Entomology) MS, completed 5/03
- Committee member, Xu-Mei Zhang, Ph.D. Crop Science, completed 7/99.
- Committee member, Jane Patterson, MS Biosystems & Agric. Engineering, completed 7/99.
- Committee member, Tony Silvernail, MS Horticulture, completed 7/99.
- Committee member, Carl Harper, MS Horticulture, completed 1/99.

- Committee member, Robert Hadad, Ph.D. Crop Science, current.
- Major advisor, senior thesis, A. Jeerakan, BS Vegetable Crops Technology, Maejo Agricultural University, Chiang Mai, Thailand, completed 1990.