

RAMP Outputs & Publications 2009

Peer Reviewed Journals & Proceedings:

Bealmear, S., **C. S. Bundy**, and D. VanLeeuwen. Injury Levels of *Lygus hesperus* (Heteroptera: Miridae) on Cotton in New Mexico. (In preparation).

Bealmear, S., **C. S. Bundy**, and D. VanLeeuwen. Impact of Fecal Deposition by *Lygus hesperus* (Heteroptera: Miridae) on Cotton Bolls. (In preparation).

Bealmear, S., **C. S. Bundy**, and D. VanLeeuwen. Injury Expression on Cotton Squares and Bolls by Feeding of *Lygus hesperus* (Heteroptera: Miridae). (In preparation).

Bundy, C. S., S. Lowry, and B. Lewis. Injury Symptoms to Chile Pepper by Feeding of *Lygus Hesperus* (Heteroptera: Miridae). (In preparation).

Chen, C., and **M. N. Parajulee**. 2009. Development and population growth of *Lygus hesperus* on selected weed hosts, artificial diet and cotton in the laboratory. *Journal of Economic Entomology* (in press).

Goodell, PB. 2009. Fifty years of the integrated control concept: the role of landscape ecology in IPM in San Joaquin Valley cotton. *Pest Management Science* (in press).

Hagler, J.R., C.G. Jackson & J.L. Blackmer. 2009. Diet selection exhibited by various lifestages of the omnivores western tarnished plant bug, *Lygus hesperus* and the tarnished plant bug, *Lygus lineolaris*. *Journal of Insect Science*. In Press.

Hagler, J.R. & V.P. Jones. 2009. Methods to mark a variety of arthropods for mark-capture type research. *Entomologia Experimentails et Applicata*. Submitted.

Law, Y.H., and **J.A. Rosenheim**. Intraguild predation with a self-limiting intermediate predator: implications for prey suppression and plant performance. *Ecology* (Submitted).

Naranjo, S.E. & P.C. Ellsworth. 2009. 50 years of the Integrated Control Concept: Moving the model and implementation forward in Arizona. *Pest Manage. Sci.* (in press, DOI 10.1002/ps.1861)

Naranjo, S.E. & P.C. Ellsworth. 2009. The contribution of conservation biological control to integrated control of *Bemisia tabaci* in cotton. *Biol. Control*. 51: 458-470.

Naranjo, S.E. 2009. Impacts of *Bt* crops on non-target organisms and insecticide use patterns. *CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources* 4, No. 011 DOI: 10.1079/PAVSNNR20094011

Palumbo J.C. and Castle S.J. 2009. IPM for fresh-market lettuce production in the desert southwest: the produce paradox. *Pest Manag Sci* 65: 1311-1320.

Parajulee, M. N., and A. K. Barman. 2008. Cotton compensation of *Lygus* induced square loss in a limited irrigation production regime. Proceedings, World Cotton Research Conference (CD).

Parajulee, M.N., R.B. Shrestha, A.K. Barman, and S.C. Carroll. 2008. Ecologically intensive pest management in cotton agroecosystems: *Lygus hesperus* as a model system. *Egyptian Journal of Agricultural Research* 86: 57-81.

Shrestha, R. B., **M.N. Parajulee**, and M.J. Grimson. 2008. SEM ultrastructure study of *Lygus hesperus* (Knight) (Hemiptera: Miridae). Proceedings, World Cotton Research Conference (CD).

Sivakoff, F.J., J.A. Rosenheim, and **J.R. Hagler**. The art of choosing a threshold: improving the interpretation of protein marking data to better study insect movement. *In Prep*.

Non-refereed proceeding articles:

Balachandran, A., D.L. Kerns, and **M.N. Parajulee**. 2008. Residual activity of selected insecticides on *Lygus hesperus* in cotton, pp. 1100-1105. Proceedings, Beltwide Cotton Conferences. National Cotton Council, Memphis, TN.

Balachandran, A., D.L. Kerns, **M.N. Parajulee**, and B. Baugh. 2009. Insecticidal management of *Lygus* and relative boll damage in Texas High Plains, pp. 758-762. Proceedings, Beltwide Cotton Conferences, National Cotton Council, Memphis, TN.

Balachandran, A., D.L. Kerns, and **M.N. Parajulee**. 2009. Evaluating effectiveness of flonicamid on *Lygus hesperus*, pp. 857-859. Proceedings, Beltwide Cotton Conferences, National Cotton Council, Memphis, TN.

Bastola, A., **M.N. Parajulee**, and R.B. Shrestha. 2009. Evaluation of different methods of nuclear DNA extraction for *Lygus hesperus* samples preserved in various storage conditions, 1159-1162. Proceedings, Beltwide Cotton Conferences, National Cotton Council, Memphis, TN.

Chen, C., **M.N. Parajulee**, S.C. Carroll, and M.D. Arnold. 2009. Climatic data-based analysis of *Lygus hesperus* preference on selected host plants, 844-845. Proceedings, Beltwide Cotton Conferences, National Cotton Council, Memphis, TN.

Parajulee, M.N., A.K. Barman, A. Balachandran, C. Chen, R.B. Shrestha, and S.C. Carroll. 2008. Compensation of *Lygus*-induced fruit loss in drip irrigated cotton, pp. 1251-1256. Proceedings, Beltwide Cotton Conferences. National Cotton Council, Memphis, TN.

Parajulee, M.N., A.K. Barman, and S.C. Carroll. 2009. COTMAN compensation capacity value for Lygus-induced pr-flower square loss in cotton, pp. 1127-1132. Proceedings, Beltwide Cotton Conferences, National Cotton Council, Memphis, TN.

Shrestha, R.B., **M.N. Parajulee**, M.B. Adhikari, and R.E. Strauss. 2008. Comparative ontogenic morphometry: *Lygus hesperus* vs. *Lygus lineolaris*, pp. 1138-1129. Proceedings, Beltwide Cotton Conferences. National Cotton Council, Memphis, TN.

Shrestha, R.B., **M.N. Parajulee**, S.C. Carroll, and A. Bastola. 2009. Evaluation of intercrop movement of *Lygus* between cotton and roadside alfalfa, pp. 873-881. Proceedings, Beltwide Cotton Conferences, National Cotton Council, Memphis, TN.

Books / Chapters:

Naranjo, S.E. & Luttrell, R.G., 2009. Cotton Arthropod IPM. P. 341-353. *In* Integrated Pest Management: Concepts, Tactics, Strategies & Case Studies, E. B. Radcliff & W. D. Hutchison (eds.). Cambridge University Press, Cambridge, UK.

Extension Publications:

Godfrey, L.D. 2009. Management and Damage Potential of *Lygus* Bugs to Blackeye Cowpeas. Project summary for Shafter REC field day booklet. 4 pp.

Godfrey, L.D. 2009. Management of Key Cotton Arthropod Pests with Insecticides and Acaricides. Project summary for Shafter REC field day booklet. 5 pp.

Godfrey, L.D., S. Temple and M. Canevari. 2009. *Lygus* Bug Management in Baby Lima Beans – Coupling Reduced Risk Insecticides and Host Plant Resistance. 3 pp.

Godfrey, L.D. 2009. Management of Key Cotton Arthropod Pests with Insecticides and Acaricides: Refinement of Use for Cotton IPM Systems. UC Cotton Workgroup Summary, 2 pp.

Godfrey, L.D., P.B. Goodell, E.T. Natwick, and D.R. Haviland. 2009. IPM Pest Management Guidelines: Cotton - Insects and Mites. Publication #3444, University of California Division of Agriculture and Natural Resources, 66 pages.

<http://www.ipm.ucdavis.edu/PMG/selectnewpest.cotton.html>

Godfrey, L.D. and R.F. Long. 2008. IPM Pest Management Guidelines: Dry Beans, Insects and Mites. University of California Division of Agriculture and Natural Resources Publication #3446, 24 pages. <http://www.ipm.ucdavis.edu/PMG/selectnewpest.beans.html>

Goodell, P.B. 2009. The importance of evaluating fruit retention. Cotton Field Check. July 4, 2009. http://cottoninfo.ucdavis.edu/IMAGES/field_check_0705_retention.pdf. Also distributed through MiteFax website.

Goodell, P.B. 2009. Lygus and other insects that appear similar. Photo gallery, one page fact sheet. Distributed with California Cotton Growers Workbook - A self-assessment guide to bio-intensive farming practices. Sustainable Cotton project, California Alliance for Family Farmers.

Goodell, P.B. 2009. Spring time hosts for Lygus. Photo gallery, one page fact sheet. Distributed with California Cotton Growers Workbook - A self-assessment guide to bio-intensive farming practices. Sustainable Cotton project, CA Alliance for Family Farmers.

Kerns, D.L. and P. Porter. 2009. FOCUS on South Plains Agriculture, Vol 48, no. 7 (newsletter). June 19, 2009. http://lubbock.tamu.edu/focus/focus2009/June_19/June_19.pdf.

Kerns, D.L. and P. Porter. 2009. FOCUS on South Plains Agriculture, Vol 48, no. 8 (newsletter). June 26, 2009. http://lubbock.tamu.edu/focus/focus2009/June_26/June_26.pdf

Kerns, D.L. and P. Porter. 2009. FOCUS on South Plains Agriculture, Vol 48, no. 9 (newsletter). July 10, 2009. http://lubbock.tamu.edu/focus/focus2009/July_10/July_10.pdf

Kerns, D.L. and P. Porter. 2009. FOCUS on South Plains Agriculture, Vol 48, no. 10 (newsletter). July 17, 2009. http://lubbock.tamu.edu/focus/focus2009/July_17/July_17.pdf

Kerns, D.L. and P. Porter. 2009. FOCUS on South Plains Agriculture, Vol 48, no. 11 (newsletter). July 31, 2009. http://lubbock.tamu.edu/focus/focus2009/July_31/July_31.pdf

Kerns, D.L. and P. Porter. 2009. FOCUS on South Plains Agriculture, Vol 48, no. 12 (newsletter). August 7, 2009. http://lubbock.tamu.edu/focus/focus2009/August_7/August_7.pdf

Kerns, D.L. and P. Porter. 2009. FOCUS on South Plains Agriculture, Vol 48, no. 13 (newsletter). August 21, 2009. http://lubbock.tamu.edu/focus/focus2009/August_21/August_21.pdf

Kerns, D.L. and P. Porter. 2009. FOCUS on South Plains Agriculture, Vol 48, no. 14 (newsletter). September 1, 2009. http://lubbock.tamu.edu/focus/focus2009/Sept_1/Sept_1.pdf

Kerns, D.L., J. Woodward, T. Wheeler and B. Kesey. 2009. Applied Cotton Insect and Disease management Evaluations in the Texas High Plains, 2008 Report. Texas AgriLife Extension Service, Lubbock, TX. http://lubbock.tamu.edu/ipm/AgWeb/2009Publications/Applied_CottonReport_2008.pdf.

Parajulee, M., S. Carroll, A. Balachandran, and K. Bronson. 2007. Effect of cover crop on arthropod population dynamics in subsurface drip irrigated cotton at AGCARES, Lamesa, TX, 2007. AGCARES Research Farm Annual Report, pp. 29-30.

Parajulee, M.N., S.C. Carroll, R.J. Kelsey, D.M. Nesmith, and J.P. Bordovsky. 2008. Influence of soil nitrogen level on seasonal activity of cotton arthropods and lint yield under drip irrigation. Helms Research Farm Annual Report.

Parajulee, M.N. and D.L. Kerns. 2008. Plains Cotton Growers Cotton Entomology Annual Research Report.

Parajulee, M., B. Kelsey, S. Carroll, and K. Bronson. 2008. Effect of cover crop on arthropod population dynamics in subsurface drip irrigated cotton at AGCARES, Lamesa, TX, 2008. AGCARES Research Farm Annual Report, pp. 45-46.

Popular Press:

Brown, M. 2009. New Tracking Method Helps Researchers Design Pest Control Strategies. *The Cultivar*, The Center for Agroecology & Sustainable Food Systems, University of California, Santa Cruz. 27 (1): 1-2, 22. <http://casfs.ucsc.edu/publications/cultivar/27.1.pdf>. [reported by **Hagler**]

Horton, T. Scouting is Critical in Insect Management. Cotton Farming, June 2008. URL: http://www.cottonfarming.com/home/2008_JuneCF-Lead.html

Presentations:

Adhikari, M.B. and **M.N. Parajulee**. 2008. Relationship between cotton boll age and *Lygus* injury. Entomological Society of America, Southwestern Branch Meeting, Fort Worth, TX, Feb. 23-26, 2009.

Adhikari, M.B., **M.N. Parajulee**, R.B. Shrestha, **D.L. Kerns**, and S.C. Carroll. 2008. Boll susceptibility threshold for *Lygus hesperus*: When is the boll safe? Entomology Science Conference, College Station, TX, Nov. 5-7, 2009

Balachandran, A., **D.L. Kerns** and **M.N. Parajulee**. 2009. Evaluating effectiveness of flonicamid on *Lygus hesperus*. Beltwide Cotton Conference, San Antonio, TX, Jan. 5-8, 2009.

Brent, C. 2009. Regulation of Development and Reproduction of *Lygus Hesperus*. RAMP Project Partners Meeting, Maricopa Agricultural Center, Maricopa, AZ. June 22-23, 2009.

Bundy, C. S. 2008. Plant Bug Injury to Chile. Invited speaker, NM Chile Field Day, Las Cruces, NM.

Bundy, C.S. 2009. Beet Leafhopper and Other Insect Pests of Chile. Invited speaker, New Mexico Chile Conference, Las Cruces, NM.

Carrière, Y. 2009. Regional Ecology, Movement and Modeling. RAMP Project Partners Meeting, Maricopa Agricultural Center, Maricopa, AZ. June 22-23, 2009.

Chen, C. and **M.N. Parajulee.** 2008. Laboratory life history study of *Lygus hesperus* on different hosts. Entomological Society of America, Southwestern Branch Meeting, Fort Worth, TX, February 23-26, 2009.

Ellsworth, P. 2009. The Lygus RAMP, Why are we doing this? RAMP Project Partners Meeting, Maricopa Agricultural Center, Maricopa, AZ. June 22-23, 2009.

Ellsworth, P. 2009. The Game Training Simulation Discussion. RAMP Project Partners Meeting, Maricopa Agricultural Center, Maricopa, AZ. June 22-23, 2009.

Fournier, A. 2009. RAMP Project Evaluation and Impact Assessment. RAMP Project Partners Meeting, Maricopa Agricultural Center, Maricopa, AZ. June 22-23, 2009.

Fournier, A. and P.C. Ellsworth. 2009. Crop Pest Losses Working Group and Lygus-RAMP Update. Presentation to Western IPM Center Advisory Committee. Portland, OR, March 11, 2009.

Godfrey, L.D. 2009. Management of Key Cotton Arthropod Pests with Insecticides and Acaricides: Refinement of Use for Cotton IPM Systems. Cotton Workgroup. Tulare, CA. May 5, 2009.

Godfrey, L.D. 2009. Advances in management of cotton arthropod pests: 2009 studies. Shafter Cotton Field Day, Shafter, CA. Sept. 15, 2009.

Godfrey, L.D. 2009. Lygus Bug Management in Baby Limas Bean: Coupling Reduced Risk Insecticides and Host Plant Resistance. Davis, CA. Aug. 20, 2009.

Goodell, P.B. 2009. Transcending spatial and temporal boundaries: What happens to IPM in cotton when landscapes radically change? Paper 35.3. 6th International IPM Symposium, Portland OR, March 25, 2009.

Goodell, P.B. 2009. Landscape, Lygus and Losses: How changes in cropping patterns created a perfect storm in 2008. Central Coast Cotton Conference, Shell Beach CA. Jan. 21, 2009.

Goodell, P.B. 2009. IPM in Shifting Landscapes - Lygus and Cotton as a case study. Tulare-Kings California Pest Control Advisor Chapter, Tulare, CA. Nov. 13, 2009.

Goodell, P.B. 2009. Influence of irrigation, variety and spacing on Lygus. University of California Bean Day, Shafter Research and Education Center, CA. Sept. 29, 2009.

Goodell, P.B. 2009. Influence of irrigation, variety and spacing on Lygus. University of California Bean Day, Kearney Research and Education Center, CA. Sept. 29, 2009.

Goodell, P.B. 2009. 50 Years of the Integrated Control Concept: The role of landscape in IPM. 93rd Annual Meeting of Pacific Branch of Entomological Society of America, San Diego, CA. March 29 – April 1, 2009.

Goodell, P.B. 2008. IPM in Shifting Crop Landscapes. Entomological Society of America Annual Meeting, Reno NV. Nov 18, 2008.

Hagler, J.R. 2009. Pinpointing predation events: A different molecular approach. Third International Symposium on Biological Control of Arthropods. Christchurch, New Zealand. Feb., 2009.

Hagler, J.R. 2009. Protein Marking for Dispersal and Biological Control Research. University of Arkansas. Department of Entomology Seminar Series.

Hagler J.R. 2009. The use of protein markers to pinpoint predation events on *Lygus hesperus*. 6th International IPM Symposium. Portland, OR. March 24-26, 2009.

Hagler, J.R. 2009. Individual Behavior and Local Movement. RAMP Project Partners Meeting, Maricopa Agricultural Center, Maricopa, AZ. June 22-23, 2009.

Kerns, D.L. 2009. Cotton Insect Pressure and Solutions, Rolling Plains Ag. Conference, Texas AgriLife Extension Service, Haskell, TX. Jan., 2009.

Kerns, D.L. 2009. Managing Insects using IPM in Cotton, Southern Mesa Agricultural Conference, Texas AgriLife Extension Service, Lamesa, TX. Jan., 2009.

Kerns, D.L. 2009. Cotton Insect Management, Llano Estacado Cotton Conference, Texas AgriLife Extension Service, Muleshoe, TX. Jan., 2009.

Kerns, D.L. 2009. Integrated Pest Management Strategies in Cotton, Sandyland Agricultural Conference, Texas AgriLife Extension Service, Seminole, TX. Jan., 2009.

Kerns, D.L. 2009. Cotton Insect Pest Management, Northern Panhandle Cotton Meeting, Texas AgriLife Extension Service, Dumas, TX. Feb., 2009.

Kerns, D.L. 2009. Cotton Insect Pest Management, Hale/Swisher Crop Conference, Texas AgriLife Extension Service, Plainview, TX. Feb., 2009.

Kerns, D.L. 2009. Managing Cotton Aphids and Lygus Bug Populations in Cotton, 2009 Cotton Warmup, Castro County, Texas AgriLife Extension Service, Dodd, TX. Feb., 2009.

- Kerns, D.L.** 2009. 2008 Product Evaluations of *Lygus* and Lepidopteran Control, High Plains Association of Crop Consultants Annual Meeting, Lubbock, TX. Mar., 2009.
- Kerns, D.L.** 2009. Gaines County Cotton Pest Management Update, Texas AgriLife Extension Service, Seminole, TX. Aug., 2009.
- Kerns, D.L.** 2009. Bailey County Cotton Pest Management Update, Texas AgriLife Extension Service, Muleshoe, TX. Aug., 2009.
- Kerns, D.L.** 2009. Cotton Pest Management, Districts 1, 2 and 3 Agent Training, Texas AgriLife Extension Service, Halfway & Lubbock, TX. Aug., 2009.
- Kerns, D.L.** 2009. Cotton IPM, West Texas Agricultural Chemical Institute Annual Meeting, Lubbock TX. Sept., 2009.
- Law, Y.H., and **J.A. Rosenheim**. 2009. Cannibalism and resource partitioning improve prey suppression despite intraguild predation. Entomophagous Insect Conference, Minneapolis, MN, July 27-29, 2009.
- Naranjo, S.E.** 2009. Plant/Pest/Pesticide Interactions. RAMP Project Partners Meeting, Maricopa Agricultural Center, Maricopa, AZ. June 22-23, 2009.
- Naranjo, S.E.** 2009. Transgenic maize and cotton within IPM programs – a U.S. and global perspective. 6th International IPM Symposium, Portland, OR. March 24-26, 2009.
- Parajulee, M.N.** 2009. Ecologically intensive pest management in cotton agroecosystems: *Lygus hesperus* as a model system. Indian Agricultural Research Institute, New Delhi, India, February 6, 2009.
- Parajulee, M.N.** 2009. Landscape level understanding of *Lygus hesperus* host preference and host utilization affecting *Lygus* management in cotton. 6th International IPM Symposium, Portland, OR, March 24-26, 2009.
- Parajulee, M.N.** 2009. *Lygus* bugs: Their alternate host plants and cotton boll susceptibility. High Plains Association of Crop Consultants Annual Meeting, Lubbock, TX, March 3-4, 2009.
- Parajulee, M.N.** 2009. Cotton cropping system research: Insect management component. Ag-Cares Field Day and Grower Appreciation Meeting, Lamesa, TX, August 12, 2009.
- Parajulee, M.N.**, A.K. Barman, R.B. Shrestha, C. Chen, A. Balachandran, and S.C. Carroll. 2008. Compensation of *Lygus*-induced fruit loss in cotton. Entomological Society of America, Southwestern Branch Meeting, Fort Worth, TX, February 23-26, 2009.

Parajulee, M.N. and D.L. Kerns. 2008. Evaluation of western tarnished plant bug as a late season pest. Cotton Incorporated Texas State Support Committee Annual Project Review, Lubbock, TX, December 16-17, 2008.

Parajulee, M.N. and R.B. Shrestha. 2008. Immunological assays in ecological studies: Movement behavior of *Lygus* bugs in cotton. Entomological Society of America, Southwestern Branch Annual Meeting, Ft. Worth, TX, Feb. 23-26, 2009.

Parajulee, M.N., R.B. Shrestha, A.K. Barman, and S.C. Carroll. 2008. Ecologically intensive pest management in cotton agroecosystems: *Lygus hesperus* as a model system. Fourth International Conference of Plant Protection Institute, Dokki-Giza, Egypt, Nov. 9-12, 2008.

Rosenheim, J.A. 2009. Response of cotton to *Lygus* herbivory. University of California Cotton Workgroup Meeting, Tulare, CA, May 5, 2009.

Sheller, F.J., J.A. Rosenheim, and J.R. Hagler. 2009. The problem of false positives in protein marking techniques. 6th International IPM Symposium. Portland OR. March 24-26, 2009.

Shrestha, R.B., **M.N. Parajulee,** and S.C. Carroll. 2008. Optimization of protein marking and detection system for the study of intercrop movement behavior of *Lygus hesperus* (Knight). Entomological Society of America Annual Meeting, Reno, NV, Nov. 16-19, 2008.

Shrestha, R.B., **M.N. Parajulee,** and S.C. Carroll. 2009. Challenges in tracking intercrop movement of *Lygus hesperus* between cotton and alfalfa. Entomological Society of America Southwestern Branch Meeting, Stillwater, OK, February 23-26, 2009.

Posters:

Balachandran, A., **D.L. Kerns, M.N. Parajulee** and B. A. Baugh. 2009. Insecticidal management of *Lygus* and relative boll damage in the Texas High Plains. Beltwide Cotton Conference, San Antonio, TX, Jan. 5-8, 2009.

Goodell, P.B. and D.A. Cary. 2009. Shifting cotton; shifting IPM. Pest Management Continuing Conference, University of California Agriculture and Natural Resources, Davis, CA. October 15-16, 2008.

Kerns, D.L., A. Balachandran, **M. Parajulee** and B. Baugh. 2009. Insecticidal Management of *Lygus* and Relative Boll Damage in the Texas High Plains. Southwest Branch Entomological Society of America, Stillwater, OK. Feb. 23-26, 2009.

Naranjo, S.E. & Ellsworth, P.C. 2008. Population dynamics and impact of potential pests and natural enemies in two new industrial crops in the western U.S. Poster presentation, Entomological Society of America, Reno, NV. Nov 16-18, 2008.

Parajulee, M.N. and C. Chen. 2008. *Lygus hesperus* host preference and suitability: Implications in landscape level pest management in Texas cotton. Poster presentation, Entomological Society of America, Reno, NV. Nov 16-18, 2008.

Abstracts:

Adhikari, M.B. and **M.N. Parajulee**. 2008. Relationship between cotton boll age and *Lygus* injury. Abstract. Entomological Society of America Southwestern Branch Meeting Abstract, Fort Worth, TX, Feb. 23-26, 2008.

Chen, C. and **M. N. Parajulee**. 2008. Laboratory life history study of *Lygus hesperus* on different hosts. Abstract. Entomological Society of America Southwestern Branch Meeting Abstract, Fort Worth, TX, Feb. 23-26, 2008.

Parajulee, M.N. 2008. Compensation of *Lygus*-induced fruit loss in cotton: Effect of plant phenological stage. Abstract. Entomological Society of America Pacific Branch Annual Meeting, Napa, CA, March 28 - April 2, 2008.

Reports:

Kerns, D.L. and A. Balachandran. 2009. Evaluation of Insecticides for Control of Western Tarnished Plant Bug in Cotton, 2008A. Arthropod Management Tests 34: F28.

Kerns, D.L., A. Balachandran, B.A. Baugh and **M.N. Parajulee**. 2009. Evaluation of Insecticides for Control of Western Tarnished Plant Bug in Cotton, 2008B. Arthropod Management Tests 34: F29.