

**Name** Narinderpal Singh

**Title** Ph.D Student

**Education** 2007 M.S Entomology,  
University of Arkansas

**Major Advisor** Dayton Steelman

**Anticipated Graduation Date** January 2011

**Thesis Title**

Chemical ecology, population dynamics and insecticide susceptibility of lesser meal worm (LMW) *Alphitobius diaperinus* (Panzer) (Coleoptera: Tenebrionidae).

**Awards and Honors**

University Merit Scholarship, B.S Agriculture (Hons.)

Travel grant, University of Arkansas, December 2005

Travel grant, University of Arkansas, March 2009

Travel grant, University of Arkansas, August 2009

**Area of Research Specialization**

My research focuses on isolation and identification of litter beetles released aggregation pheromones using GC/MS. Behavioral activity of the beetles to these identified compounds is determined by Electroantennogram and olfactometer bioassays. Successful candidates are tested in the field for monitoring and managing LMW populations. I am evaluating the susceptibility, resistance and the dosage-mortality values for these beetles to different groups of insecticides. Litter beetles population densities, distribution and movements over the time inside and outside the poultry houses are also being investigated

**Selected Presentations**

Bartelt, R. J., B. W Zilkowski, A. A. Cosse, C. D. Steelman, and **N. Singh**. 2008. Male-Produced aggregation pheromone of the lesser mealworm beetle *Alphitobius diaperinus* (Coleoptera: Tenebrionidae). Journal of Chemical Ecology. Accepted

**Singh, N.**, D.T. Johnson, R.J. Bryant and J.L. Bernhardt. 2007. Volatile Induction in Rice Stink Bug Host Grasses and Rice Plants. B.R. Wells Rice Research Studies 2006. p. 178-182.

**Singh, N.**, D.T. Johnson, R.J. Bryant and J.L. Bernhardt. 2006. Chemical ecology and population dynamics of rice stink bug *Oebalus pugnax* F., and natural enemies around rice plantings. B.R. Wells Rice Research Studies 2005. p. 173-180

**Singh, N.** and D.T. Johnson. 2004. Assessment of hand-applied dispensers releasing aggregation pheromone produced by Scarab beetles. Report to Trécé Inc. (Adair, OK).

**Singh, N.**, C. D. Steelman, and R.J. Bartelt 2009. Chemical ecology and population dynamics of lesser meal worm *Alphitobius diaperinus* (Panzer) (Coleoptera:

Tenebrionidae). Oral presentation at the Annual Livestock Insect Workers Conference, French Lick, IN.

**Singh, N.,** D.T. Johnson, R.J. Bryant and J.L. Bernhardt. 2005. Chemical ecology and population dynamics of rice stink bug, *Oebalus pugnax* F., and natural enemies around rice plantings. Poster presentation at 2005 Annual meeting of the Entomological Society of America in Ft. Lauderdale, FL.

**Singh, N.,** D.T. Johnson, R.J. Bryant and J.L. Bernhardt. 2005. Chemical ecology and population dynamics of rice stink bug, *Oebalus pugnax* F., and natural enemies around rice plantings. Poster at 2006 Rice Technical Work Group Meeting, Houston, TX.

***Professional Membership and Service***

Member Entomological society of America

Member Isley Baerg Entomology club, University of Arkansas

Member gamma sigma delta, University of Arkansas