

## CURRICULUM VITAE: Bhadriraju Subramanyam

### **Bhadriraju Subramanyam, University Distinguished Professor**

Department of Grain Science and Industry  
Kansas State University, Manhattan, KS 66506

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#### **EDUCATION**

**Ph.D. in Entomology, 1988**, University of Minnesota, St. Paul, MN.

**M.S. in Entomology, 1984**, University of Minnesota, St. Paul, MN.

B.S. in Agriculture, 1981, Andhra Pradesh Agricultural University, India.

**High School Diploma, 1976**, Menlo-Atherton High School, Atherton, CA.

#### **EMPLOYMENT**

**Don Wilbur Sr. Endowed Professorship in Postharvest Protection**, 2012-2014, Department of Grain Science and Industry, Kansas State University, Manhattan, KS. This is an endowment that transfers every 3 years between the Departments of Grain Science and Entomology.

**University Distinguished Professor**, July 1, 2014 – present.

**Professor**, July 1, 2003 - present, Department of Grain Science and Industry, Kansas State University, Manhattan, KS.

**Associate Professor**, June 1, 1999 - 2003, Department of Grain Science and Industry, Kansas State University, Manhattan, KS.

**Associate Professor and Extension Educator**, July 1996 - May 1999, Department of Entomology, University of Minnesota, St. Paul, MN.

**Assistant Professor and Extension Educator**, August 1989 - June 1996, Department of Entomology, University of Minnesota, St. Paul, MN.

**Post-Doctoral Research Associate**, April 1988 - August 1989, Department of Entomology, Kansas State University, Manhattan, KS.

**Graduate Research Assistant**, January 1982 - April 1988, Department of Entomology, University of Minnesota, St. Paul, MN.

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### **RESEARCH EXPERIENCES AND INTERESTS**

- Management of stored-product insects in the grain supply chain
- Management of insects using elevated temperatures, pesticide, and alternatives
- Effects of ultrasound on reproduction of storage moths
- Developing integrated pest management programs for the grain, food, and retail industries
- Model environmental effects on insect development and survival
- Antibiotic resistant enterococci in stored products and stored-product insects
- Develop survey and sampling techniques
- Develop/evaluate trapping technologies

### **TEACHING EXPERIENCE**

*Associate Professor, 1999-2003; Professor, 2003 – present: Kansas State University*

- Taught GRSC 651 Food and Feed Product Protection (4 credits) every spring in the Department of Grain Science and Industry. Taught GRSC 710 Fundamentals of Grain Storage (2 credits) courses in the Department of Grain Science and Industry between 1999 and 2004. Guest lectured in ENTOM 805 Stored-Product Insects course in the Department of Entomology, GRSC 101 Introduction to Grain Science, GRSC 645 Pet Food Processing, GRSC 920 Professional Development Course, GRSC 900 Seminar, and GENAG 200 International Agriculture. Gave presentations in short courses organized by International Grains Program, Department of Grain Science and Industry, Kansas State University, and in workshops/courses organized by the International Association of Operative Millers, American Feed Industry Association, Kansas Pest Management Association, Nebraska Pest Management Association, Kansas Crop Improvement Association, Kansas Grain and Feed, ConAgra Foods, Nebraska; Temp-Air, Burnsville, Minnesota; US Soybean Export Council, St. Louis, Missouri; US Grains Council, Washington D.C.; American Institute of Baking International, Kansas; Food Inspection Safety Auditors, Kansas; Presto-X-Company, Omaha, Nebraska; and Industrial Fumigant Company, Kansas.

*Graduate Teaching Assistant, 1982 to 1985, 1987 and 1988: University of Minnesota*

- Economic Entomology Laboratory. Prepare and give frequent guest lectures in basic entomology, toxicology, agronomy, and pest management courses for undergraduates and graduates at the University of Minnesota (1986 to 1999).

### **EXTENSION/OUTREACH EXPERIENCE**

- Since 1999 I have been working with commodity organizations and stakeholders in Kansas and United States (America Feed Industry Association, US Grains Council, US Soybean Export Council, USAID), and grain, food, feed, and pest management industries worldwide on various aspects related to sanitation, pest management, and food safety in the postharvest system.
- I provide information via phone, websites, printed version, and in person, and

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- develop training programs for various end-users on issues related to pest management of insects in the cereal grain supply chain.
- Coordinated Pesticide Impact Assessment Program activities (1989-1999) within the state of Minnesota; provided information on pesticide safety and registration/reregistration status to public, county agents, extension agents, and industry representatives.
  - Evaluated impact of existing and new pesticide regulations in crop production.
  - Collected data on pesticides used on various crops to determine impact of loss of pesticides on producers.
  - Participated and presented talks at pest control operator, stored grain, and food processing pest management conferences at University of Minnesota.
  - Helped alleviate a stored product insect problem, coming from a nearby grain cleaning facility, in a Minneapolis, Minnesota, neighborhood by working with the Department of Agriculture, grain company executives, and the neighborhood residents.
  - Published various extension fact sheets, bulletins, and popular articles.

### **INDUSTRY/CONSULTING EXPERIENCE**

- Visit food-processing facilities within and outside US to survey premises and/or transportation vehicles for insect infestation and explore options for insect management; present talks on insect biology, ecology, and management.
- Assist pest management companies in identifying insect species; recommend management strategies.
- Conduct research on stored-food pests and pesticides or pesticide alternatives, upon request.
- Assist businesses involved in the food industry by investigating consumer complaints and offer remedial solutions.
- Serve as an “expert witness” in law suits, especially those pertaining to contamination of foodstuffs with insects or insecticides.
- Consulted with over 30 grain, food, and brewing industries on issues related to insect infestations, pesticide management, and food safety quality management systems.
- Developed and implemented programs for companies for selection and use of pesticides.
- Conducted research on methyl bromide alternatives for managing insects in commercial facilities to document benefits of newer technologies.
- Demonstrated benefits of flameless catalytic infrared technology in killing stored grain insects for a Kansas company.
- Helped food companies design better insect-resistant packaging material through testing of various packaging materials, use of odor barriers, and use of modified atmospheres.

### **MANAGEMENT AND SUPERVISORY SKILLS**

- Managed, supervised, and mentored visiting scientists (22), post-doctoral research associates (12), research assistants (3), graduate students (37), undergraduate students (37), and webmasters (10) from Department of Computer and

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Information Sciences in various laboratory and field activities at Kansas State University (1999-present).

- Advise undergraduate students (in the Department of Grain Science (7-8/year)
- Supervised 8 undergraduate students and 1 research assistant at University of Minnesota (1989-1999).

### **CONFERENCES/WORKSHOPS/SYMPOSIA ORGANIZED AND MODERATED**

*At Kansas State University (1999-present), Total 30*

- Co-moderated a session with Dr. Christos Athanassiou on “The Retrun of the Khapra Beetle”, at the 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand.
- Moderator for Cluster 5 session on “Corn Forum”, at the BIT’s 4<sup>th</sup> Annual World Congress of Agriculture, August 29-31, 2014, Changchun, China.
- Co-moderated a symposium with Dr. R. Balasubramaniam on, “Microbial Insecticides”. 4<sup>th</sup> Biopesticide International Conference (BIOCICON), November 28-30, 2013, St. Xavier’s College, Palayamkottai, Tirunelveli, Tamil Nadu, India.
- Co-moderated Session 6 with Dr. Fluorat-Lessard on “Integrated Protection of Stored Products Decision Support Tools and Integrated Approach”. 9<sup>th</sup> Conference of IOBC-WPRS (OILB-SROP) Working Group on Integrated Protection of Stored Products, July 1-4, 2013, Centre de Conference des Universites de Bordeaux, Talence, France.
- Co-moderator with Dr. C. G. Athanassiou, Session 9 on “Integrated Commodity Management”, at the 9<sup>th</sup> International Conference on Controlled Atmosphere and Fumigation in Stored Products, October 15-19, Antalya, Turkey.
- Co-moderator with Dr. Francis Fluorat-Lessard for a session on “Fumigation, Controlled Atmospheres, Modified Atmospheres, and Extreme Temperatures”, Conference of the Integrated Organisation for Biological and Integrated Control of Noxious Animals and Plants/West Plaeartic Regional Section Working Group on “Integrated Protection of Stored Products”, University of Thessaly, July 4-7, 2011, Volos, Greece.
- Coordinator and organizer of a workshop on “Methyl Bromide and Alternatives”, May 11-13, 2010, Kansas State University, Manhattan, KS.
- Moderator, Postharvest Session II: Submitted Papers, “Sulfuryl Fluoride Biological Studies”, 2009 Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions, November 10-13, 2009, San Diego, CA.
- Coordinator and organizer of a workshop on “Methyl Bromide Alternatives: Focus on ProFume<sup>TM</sup> and IPM tactics”, August 19-21, 2009, Kansas State University, Manhattan, KS.
- Coordinator and organizer of a workshop on “Sixth Heat treatment Workshop: A Practical Methyl Bromide Alternative for 2009 and Beyond”, May 13-15, 2009, Kansas State University, Manhattan, KS.
- Co-organizer and co-moderator with Dr. James Throne and Dr. Yongxue Deng for a session on “Achievements of Controlled Atmospheres and Fumigation, and

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- Development Trends”, 8<sup>th</sup> International Conference on Controlled Atmosphere and Fumigation in Stored Products, September 21-26, 2008, Chengdu, China.
- Planning Committee Member, 7<sup>th</sup> National Stored Product IPM Training Conference, April 18-20, 2007, Stillwater, OK.
  - Co-organizer and co-moderator with Dr. Raul Narcisco Guedes for a plenary session on “Biology, Behavior, and Pest Detection in Stored Grain”, 9<sup>th</sup> International Working Conference on Stored Product Protection, October 15-18, 2006, Campinas, Brazil.
  - Co-organizer and co-moderator with Dr. Lisa Neven of a symposium on, “Thermal Death Kinetics: Theory and Application.” The 53<sup>rd</sup> Annual Meeting of the Entomological Society of America, December 15-18, 2005, The Greater Fort Lauderdale/Broward County Convention Center, Ft. Lauderdale, FL.
  - Organizer and moderator of the fifth annual meeting of the “Consortium for Integrated Management of Stored Product Insect Pests (CIMSPIP)”, International Grains Program and Conference Center, October 20-21, 2005, Kansas State University, Manhattan, KS.
  - Co-organizer, “First National Workshop on Organic Stored-Product Protection”, August 24-25, 2005, Purdue University in West Lafayette, IN.
  - Co-moderator of a symposium with Mr. Wang Yuejin on “Advances in Application Methods and Techniques”, 7<sup>th</sup> International Conference on Controlled Atmosphere and Fumigation in Stored Products, August 8-13, 2004, Gold Coast, Australia.
  - Organizer and moderator, “Fourth Stored Product Pest Management and Heat Treatment Workshop”, August 5-7, 2004, Department of Grain Science and Industry, Kansas State University, Manhattan, KS.
  - Organizer and moderator of a "Pest Management and Heat Treatment Workshops" held three days before the International Association of Operative Millers Annual Technical and Trade Show, May 14-15, 2004, Wichita and Manhattan, KS.
  - Co-organizer and co-moderator with Dr. Nandi Nagaraj of a symposium on, "New products and Technologies for the Future" at the North Central Branch Entomological Society of America Annual Meeting, March 28-31, 2004, Kansas City, MO.
  - Co-organizer and co-moderator with Dr. Nandi Nagaraj of a symposium on, "Entomology and Food Safety" at the Annual Meeting of the Entomological Society of America, October 26-29, 2003, Cincinnati, OH.
  - Co-organizer and co-moderator with Dr. Nandi Nagaraj for a symposium on “New Products and Technologies for the Future”, North Central Branch Entomological Society of America Meeting, March 23-26, 2003, Madison, WI.
  - Coordinator, “Sixth National Stored Product IPM Training Conference”, August 19 –21, 2002, Kansas State University, Manhattan, KS.
  - Co-convener for the theme on "Biology, Detection, and Biological Control of Infesting Organisms", 8<sup>th</sup> International Working Conference on Stored Product Protection, July 22-26, 2002, York, U.K.
  - Organizer, “Third Stored Product Pest Management and Heat Treatment Workshop”, August 6-8, 2001, Department of Grain Science and Industry, Kansas State University, Manhattan, KS.

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- Organizer/Moderator for session on “Quality Preservation and Food Safety”, International Wheat Quality Conference II, May 20-24, 2001, Holiday Inn Holidome, Manhattan, KS.
- Organizer, “Second Heat Treatment Workshop”, August 14-16, 2000, Department of Grain Science and Industry, Kansas State University, Manhattan, KS.
- Co-chair, session on “Sampling and Trapping”, International Conference on Controlled Atmospheres and Fumigation, October 29-November 3, 2000, Fresno, CA.
- Organizer/Moderator of a symposium on, “Management of Stored-Product Insects in the 21<sup>st</sup> Century: Uncertainties and Challenges, Parts 1 and 2”, North Central Branch Entomological Society of America Meeting, 2000, Minneapolis, MN.
- Organizer, “First Heat Treatment Workshop”, August 4-6, 1999, Department of Grain Science and Industry, Kansas State University, Manhattan, KS.

*At University of Minnesota (1989-1999), Total 8.*

- Co-convenor, session on “Inert Dusts”, 7<sup>th</sup> International Working Conference on Stored-Product Protection, October 14-19, 1998, Beijing, China.
- Co-convenor/Moderator, session on “Trapping and Sampling”, 7<sup>th</sup> International Working Conference on Stored-Product Protection, October 14-19, 1998, Beijing, China.
- Organizer and moderator, “FAO Workshop on Pesticide Resistance in Stored-Product Insects”, November 26-28, 1996, Mexico City, Mexico.
- Steering Committee Member, “Regional Stored Grain Integrated Pest Management Workshop, 1994”, Fargo, North Dakota.
- Panel member, “Standardization of Trapping Techniques”, Third International Stored-Product Insect Trapping Workshop, April 17-21, 1994, Canberra, Australia.
- Co-organizer and co-moderator with Dr. John D. Sedlacek of a symposium on “Stored-Product Insects”, Annual Meeting of the Entomological Society of America, December 1989, San Antonio, TX.
- Coordinator/Planning Committee Member, “First International Stored-Product Insect Trapping Workshop”, December 1989, San Antonio, TX.
- Planning committee member for various extension/outreach conferences (Pesticide Applicator Training programs) for food processors, pest management professionals, and stored grain managers at University of Minnesota. There were three training programs each year between 1989 and 1995.

## **COMPUTER LITERACY**

- Proficient in using main frame and IBM/Macintosh computers for various applications including managing databases, word processing, bar coding, statistics, geostatistics, and model fitting.
- Well-versed with spreadsheets, color graphics and presentation applications.
- Program and conduct statistical analysis using the Statistical Analysis System (SAS).
- Well-versed with ArcView (GIS), Surfer, Geo-EAS, Variowin (Geostatistics), MS

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Access, and SigmaPlot programs.

### **AWARDS, HONORS, AND HONOR SOCIETIES**

- University Distinguished Professor, July 1, 2014 – present, Kansas State University, Manhattan, KS.
- 2013 Commerce Bank Distinguished Faculty Award.
- Editorial Board Member, ISRN Entomology, Hindawi Publishing Corporation.
- Adjunct Professor, Acharya N G. Ranga Agricultural University, Rajendranagar, Andhra Pradesh, India, 2012-2017.
- 2012 Outstanding faculty, College of Agriculture, recognized by Motorboard Senior Honor Society, Kansas State University, Manhattan, KS.
- 2012 Kansas State University-Grain Elevator and Processing Society (GEAPS) Distance Education Award (team award), Given at GEAPS Exchange, Minneapolis, MN.
- 2012 Entomological Foundation Award for Excellence in Integrated Pest Management, Entomological Society of America, Knoxville, TN. [National Award].
- 2012 Gamma Sigma Delta Distinguished Faculty Award, Kansas State University Chapter.
- 2012 Entomological Foundation Award for Excellence in Integrated Pest Management, North Central Branch Entomological Society of America, Lincoln, NE. [Regional Award].
- 2012 Andersons Cereals and Oilseeds Award of Excellence (in recognition of outstanding research accomplishments given at Multistate Project NC-213 “Marketing and Delivery of Quality Grains and Bioprocess Coproducts Annual Meeting).
- Don Wilbur Sr. Endowed Professorship in Postharvest Protection (2012-present), Kansas State University, Manhattan, KS.
- President, 2012-2013, Friends of International Programs at K-State, Manhattan, KS.
- Invited to serve as a Consulting Editor (Bhadriraju Subramanyam and D. W. Hagstrum) for a special December 2011 issue on stored-product protection for Stewart Postharvest Review journal, London, U.K.
- Adjunct Professor, Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan, India, 2011-2016.
- 2011 Professorial Performance Award, Kansas State University.
- Faculty advisor, Milling Science Club, Department of Grain Science and Industry, Kansas State University, Manhattan, KS, 2011-2013.
- 2010 Outstanding Hodson Alumnus Award, Department of Entomology, University of Minnesota, St. Paul, MN.
- Member, Friends of International Programs, Kansas State University, 2010-present.
- Member, Board of Directors, Prathista Industries India, Ltd., 2009-2011.
- Adjunct Professor, 2008-2013, Southwest University, Chongqing, Sichuan Province, China.

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- International Editorial Advisory Panel, International Journal of Pest Management, 2007-present
- Recipient Peer-Review Teaching Award at K-State, 2007, with Dr. Hulya Dogan.
- Recipient of the 2004 US-EPA's Stratospheric Ozone Protection Award
- Regular columnist, "Milling Journal" (2002 - present)
- College of Agriculture's 2002 Spring Semester Outstanding Faculty (Teaching) Award.
- Faculty Advisor, Indian Student Association, Kansas State University, 2001-2002.
- Active Member, Food Protection Committee of the International Association of Operative Millers (IAOM), 1999-present.
- Invited to participate in the USDA, Grain Marketing and Production Research Center Program Review Workshop, October 12-14, 1999, Ramada Inn, Manhattan, KS. I presented the final session report on Grain Processing Research Priorities.
- Member, Gamma Sigma Delta, Kansas State University Chapter, 1999-present.
- Recipient of the 1997 University of Minnesota Academic Staff Award.
- Recipient, Minnesota Gamma Sigma Delta Certificate for Academic Excellence in an agricultural field.
- Member, Epsilon Sigma Phi (National Honorary Extension Fraternity, 1990-2003).
- Coach, championship team, 1988 North Central Branch Entomological Society of America (NCB-ESA) Linnaean games.
- Member, championship team, 1986 NCB-ESA Linnaean Games.
- Vice-President, *Frenatae* (University of Minnesota Department of Entomology Graduate Student Association), 1985-1986.
- Department of Entomology Graduate Student Scholarship, December 1984.
- Recipient of numerous certificates of appreciation and letters of commendation from businesses, organizations, peers, U.S. and foreign government or scientific agencies/departments.

### **PEER REVIEWER, Total 40 journals and 4 government agencies.**

- African Journal of Biotechnology
- African Journal of Agricultural Research
- Applied Engineering in Agriculture
- ASABE Publications
- Biological Control
- Biopesticides International
- Canadian Entomologist
- Cereal Chemistry
- Cereal Foods World
- Crop Protection
- Environmental Entomology
- Entomologia Experimentalis et Applicata
- Insect Science
- Integrated Pest Management Reviews
- International Journal of Pest Management
- International Journal of Agricultural Research



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- ISRN Agronomy
- ISRN Entomology
- Journal of Agricultural and Urban Entomology
- Journal of Applied Entomology
- Journal of Economic Entomology
- Journal of Entomological Science
- Journal of Essential Oil Bearing Plants
- Journal of Food Protection
- Journal of Insect Science
- Journal of Kansas Entomological Society
- Journal of Pest Science
- Journal of Science of Food and Agriculture
- Journal of Stored Products Research
- Journal of Tropical Science (Insect Science and its Application)
- Naturwissenschaften
- Pest Management Science
- Revista Scientia Agricola
- The Environmentalist
- The United States-Israel Binational Agricultural Research and Development Fund (BARD) proposals
- Tropical Agriculture
- University of Rajshahi Journal of Zoology (Bangladesh)
- US Civilian Research and Development Foundation
- USDA's National Research Initiative Competitive Grants Program Grants
- USDA's Small Business Innovative Research Grants

### **SCIENTIFIC AND PROFESSIONAL AFFILIATIONS**

- International Association of Operative Millers (1999-present)
- Entomological Society of America (1982-present)
- Secretary, North Central Region Pesticide Impact Assessment Program (1995-1996)
- Member, City of Minneapolis Pesticide Task Force (1994-1995)
- Scientific Advisory Panel member, Institute of Agriculture and Trade Policy, Minneapolis, Minnesota (1993-1996)
- American Oat Association (1995)

### **COMMITTEES (At K-State) *Those marked with an asterisk (\*) are ad hoc committees***

- College of Agriculture Assessment Review Committee (2013-present)
- College of Agriculture Faculty & Staff Committee Member, K-State 2025 Vision for COA to become the top five public institutions in the nation (2013)\*
- Member, Distinguished Lecture Series, Department of Grain Science and Industry (2012-present)\*
- Member, Graduate faculty, Department of Grain Science and Industry (1999-present)
- Member, Awards and Professional Development Committee, Department of Grain Science and Industry (July 1, 2011-present)

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- Member, Buhler Instructor Committee (2012)\*
- Chair, Department of Grain Science and Industry, Assistant Professor, Milling/Grain Processing position (2010 & 2011)\*
- Member, Department of Grain Science and Industry, Research Program Committee (2008-present)
- Member, Department of Grain Science and Industry, Department Committee on Planning (2008-present)
- Member, Department of Grain Science and Industry, Buhler Search Committee (2008)\*
- Chair, Department of Grain Science and Industry CSREES Review Document Committee (2007-2009)\*
- Chair, Department of Grain Science and Industry Adjunct Faculty Review Committee (2006-present)
- Chair, Department of Grain Science and Industry Awards Committee (2006-2008)
- Chair, Department of Grain Science and Industry Graduate Admissions (Graduate Program) Committee (2005-2010)
- Member, Department of Grain Science and Industry Space Committee (2005-2008)
- Member, Faculty Senate (2004-2007)
- Member, College of Agriculture Safety Committee (2002-2006)
- Member, College of Agriculture Committee on Effective Instruction (2002-2008)
- Member, Department of Entomology's IPM and Pesticide Steering Committee (2001-2008)
- Chairman, Department of Grain Science and Industry Safety and Sanitation Committee (1999-2006)
- Member, Ancillary graduate faculty, Department of Entomology (1999-present)
- Member, Department of Grain Science and Industry Library Renovation Committee (2006)\*
- Member, Department of Grain Science and Industry International Grains Program (IGP) Economist Search Committee (2006)\*
- Acting Head, Department of Grain Science and Industry (Dr. Virgil Smail's absence-2006/2007)
- Member, Department of Grain Science and Industry Computer Committee (1999-2006)
- Member, Department of Grain Science and Industry Search Committee for the Extension State Leader (2005)\*
- Member, Department of Grain Science and Industry Search Committee for the Milling Instructor position. (2005)\*
- Chair, Department of Grain Science and Industry Seminar Committee (2005)\*
- Member, Department of Grain Science and Industry Graduate Admissions Committee (2005)
- Member, Kansas State University College of Agriculture Awards Committee (2005)\*
- Member, College of Agriculture Committee on SLO Assessments (2005)\*
- Member, Kansas State University Faculty Affairs Committee (2004-2005)\*
- Member, Wheat Research Summit, August 31, 2004\*
- Member, Committee to develop a course on Introduction to Grain Science GRSC 101 (2004)\*

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- Committee to review graduate student policies in the department (2004)\*
- Member, College of Agriculture Committee to review and streamline AES publication policies (2004)\*,
- Member, Undergraduate Curriculum Committee (2003)\*
- Member, Department of Grain Science and Industry Head Search Committee (2003)\*
- Member, Undergraduate Recruitment Task Force (2003)\*
- Member, College of Agriculture Dean/Director Search Committee (2003)\*

### **PUBLICATIONS SUMMARY**

- 2 edited books, and co-wrote 3 text books
- 17 book chapters
- 104 peer-review papers
- 32 papers in conference proceedings.
- 67 extension and popular publications

### **PRESENTATIONS SUMMARY**

- Delivered 207 invited oral presentations at international and national professional meetings and conferences.
- Delivered 164 other oral and poster presentations at international and national professional meetings and conferences.
- Delivered 60 short course presentations, excluding those given in India at workshops I organized, to domestic and international stakeholders at K-State Workshops/seminar presentations in India total ~60 (not included above).
- Presented invited talks and seminars on topics related to pesticides, pesticide alternatives, stored-product insects, and insect management at various organizations, conferences and meetings in Australia, Brazil, Canada, China, Cyprus, England, Ethiopia, India, Indonesia, Malaysia, Morocco, Portugal, Thailand, Turkey, United States, Greece, and Vietnam.

### **PERSONAL**

- Hobbies include reading, painting, photography, traveling, and playing basketball.

### **GRANTS RECEIVED**

*At Kansas State University (1999-present). Grants on which I was a Co-PI are indicated by an asterisk (\*). Total received, \$ 19,290,591.*

Subramanyam, Bh. 2014. Evaluating chlorine dioxide and ozone as alternatives for controlling phosphine-resistant insects in on-farm and commercial bulk storages, \$ 160,300. Funded by Cooperative Research Centre Plant Biosecurity, Australia, to support a PhD student (April 1, 2014-March 31, 2018).

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Subramanyam, Bh., and K. Ambrose. 2014. New non-chemical technologies to protect grain during storage and transport, \$ 206,331. Funded by Cooperative Research Centre Plant Biosecurity, Australia, to support a PhD student (September 1, 2014-June 30, 2018).

Subramanyam, Bh. 2014. Evaluation of a new fumigant against stored-product insects. in BASF Company, North Carolina, \$ 50,000.

Subramanyam, Bh. 2014. Evaluation of Celite and Diafil diatomaceous earth formulations against stored-product insects. Imerys Minerals, California, \$ 5,000.

Subramanyam, Bh. 2014. Evaluation of Dryacide against stored-product insects. Winfield Solutions, Minnesota, \$ 15,000.

Subramanyam, Bh. 2014. Evaluation of six new Exosect formulations against stored-product insects. Winfield Solutions, Minnesota, \$ 15,000. [Pending another \$15,000 after report is submitted].

Maier, D. E., S. T. Sonka, Bh. Subramanyam, M. M. Higgins, S. Washburn, N. Lilja, and G. Opit, Dr. R. M. Mahroof, A. B. Huebner, and F. Abay. 2013. Alliance for food security through reduction of postharvest loss and food waste. USAID Global Hunger and Food Security Research Strategy: Climate Resilience, Nutrition, and Policy, Program Area 5, Reduced Post-Harvest Losses and Food Waste. USAID, Washington, D. C., \$ 8,500,000.\*

Zhu, K. Y., Bh. Subramanyam, F. H. Arthur, J. F. Campbell, and B. D. Adam. 2013. Evaluation of new strategies and tactics to manage insect pests in mills. USDA Methyl Bromide Transitions Program, \$ 500,000.\*

Subramanyam, Bh. 2013. Evaluation of a new pirimiphos-methyl formulation against insects in stored corn. Winfield Solutions, Minneapolis, MN, \$ 40,000.

Subramanyam, Bh., and D. E. Frey. 2012. Training on Khapra beetle control. Visit by three Pakistani rice exporters as USDA Cochran Fellows. USDA-FAS, August 10-22, 2013, \$ 52,803.

Subramanyam, Bh., and K. Ambrose. 2012. New non-chemical technologies to protect grain during storage and transport. Cooperative Research Centre Plant Biosecurity, Australia, PhD Student, \$ 174,870.

Subramanyam, Bh., D. E. Maier, and L. H. Channaiah. 2012. Evaluating chlorine dioxide and ozone as alternative methods for controlling phosphine-resistant insects in on-farm and commercial bulk storages, Cooperative Research Centre Plant Biosecurity, Australia, \$ 349,757.

Subramanyam, Bh., D. E. Maier, and L. H. Channaiah. 2012. Evaluating chlorine dioxide and ozone as alternative methods for controlling phosphine-resistant insects in on-farm

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and commercial bulk storages, Cooperative Research Centre Plant Biosecurity, Australia, PhD Student, \$ 174,870.

Dogan, H., and Bh. Subramanyam. 2011. Graduate training to meet current and future challenges in post-harvest protection and biosecurity. USDA-NIFA National Needs Graduate and Postgraduate Fellowship Program (NNF), \$ 200,000\*.

Subramanyam, Bh. 2011. Management of insects in organic corn. Clarkson Grain Company, Cerro Gordo, IL, \$ 5,000.

Subramanyam, Bh. 2011. Heat treatment demonstration in commercial food-processing facilities using propane. Propane Education and Research Council, Washington, D.C., \$ 5,000.

Subramanyam, Bh. 2011. Disinfestation of sesame seeds with ozone and infrared radiation. Sesaco Corporation, Fallbrook, CA, \$ 5,000.

Zhu, K. Y., Bh. Subramanyam, F. H. Arthur, J. F. Campbell, P. W. Flinn, E. Jensen, and B. Adam. 2010. Evaluation, integration, and implementation of non-fumigation based pest management approaches for food-processing facilities. USDA-NIFA, Methyl Bromide Transitions Program, \$ 782,019.\*

Subramanyam, Bh., L. McKinney, D. E. Maier, and L. H. Channaiah. 2010. Demonstration trials to verify cost-effectiveness of newer insect pest management strategies in producer-managed bins. Kansas Wheat Commission, \$ 35,000.

Maier, D. E., L. H. Channaiah, L. McKinney, and Bh. Subramanyam. 2010. Use of carbon dioxide sensors for early detection of spoilage in stored corn. Kansas Corn Commission, \$ 28,242.\*

Subramanyam, Bh. 2010. Heat treatment demonstration in commercial food-processing facilities using propane. Propane Education and Research Council, Washington, D.C., \$ 31,000.

Subramanyam, Bh. 2010. Evaluation of spinosad against granary weevils on corn, wheat, and sorghum. BayerCropScience, Research Triangle Park, NC, \$ 19,000.

Subramanyam, Bh. 2010. Heat treatment demonstration in food-processing facilities using propane. Propane Education and Research Council, Washington, D.C., \$ 15,000.

Subramanyam, Bh. 2010. Methyl bromide and alternatives workshop. Chemtura, Middlebury, CT, \$ 5,000.

Subramanyam, Bh. 2010. Workshop on methyl bromide alternatives: ProFume. Dow AgroSciences, Indianapolis, IN, \$ 3,000.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2009. Demonstration of heat treatment as viable methyl bromide and pyrethroid alternative for disinfecting grain-processing facilities, \$ 48,900; Written by me and submitted it through Propane Education and Research Council (PERC), Washington, D.C., to US-EPA Region VII (funded). PERC matched EPA funding 1:1 and K-State received \$ 15,000 in 2010 as a donation after expenses.

Subramanyam, Bh. 2009. Heat treatment workshop, May 13-15, 2009. Propane Education and Research Council, Washington, D.C., \$ 30,000.

Subramanyam, Bh. 2009. Heat treatments of K-State pilot flour mill to manage life stages of the red flour beetle. Propane Education and Research Council, Washington, D.C., \$ 62,000.

Subramanyam, Bh. 2009. Evaluation of precommercial release formulation of spinosad against four stored product insects on four commodities. BayerCropScience, Research Triangle Park, NC, \$ 19,000.

Subramanyam, Bh. 2009. ProFume workshop 2009. Dow AgroSciences, Indianapolis, IN, \$ 4,000.

Subramanyam, Bh., D. E. Maier, M. Langemeier, J. F. Campbell, and P. W. Flinn, and W. Chayaprasert. 2008. Critical analysis of methyl bromide, sulfuryl fluoride, and heat treatment for disinfecting food-processing facilities. USDA/CSREES Methyl Bromide Transitions Program. \$ 784,805.

Arthur, F. H., M. E. Casada, D. Johnson, M. Langemeier, S. McNeill. M. Montross, and Bh. Subramanyam. 2008. Incidence and spread of insects from bucket elevator leg boots. NC-213, The Andersons Research Grant Program Team Competition. \$ 150,000\*.

Subramanyam, Bh., H. Dogan, and J. A. Gwirtz. 2007. Effects of flameless catalytic infrared heat on stored wheat insects and wheat quality. USDA/CSREES, Regional Integrated Pest Management Program-North Central Region, \$ 90,268.

Subramanyam, Bh. 2007. Gauging effectiveness of sulfuryl fluoride in commercial flour and rice mills. Dow AgroSciences, Indianapolis, IN, \$ 50,000.

Subramanyam, Bh. 2007. Evaluation of insecticide-laced elastomers on stored-product insects. Industrial Solutions USA, Sioux Falls, SD, \$ 3,000.

Subramanyam, Bh. 2006. Gauging effectiveness of sulfuryl fluoride in commercial flour and rice mills. Dow AgroSciences, Indianapolis, IN, \$ 30,000.

Ramaswamy, S., Bh. Subramanyam, F. H. Arthur, T. W. Phillips, and D. E. Maier. 2005. Consortium for integrated management of storage pests-2. USDA/CSREES Risk Assessment and Mitigation Program (RAMP), \$ 1,800,000.\*

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh., M. Langemeier, and R. M. Mahroof. 2005. Optimizing and gauging effectiveness of heat treatments for managing insects in food and feed processing facilities. USDA/CSREES, Methyl Bromide Transitions (MBT) Program, \$ 201,124.

Subramanyam, Bh. 2005 (Subcontractor). Demonstration trials of food grains ozonation-A new chemical-free stored product pest control technology. USDA/CSREES, Pest Management Alternatives Program (PMAP), Project originating from Purdue University, \$ 57,000.

Subramanyam, Bh. 2005 (Subcontractor). Ozonation of corn, wheat and barley stored in commercial grain storage structures for management of pest insects and molds and removal of off-odors. NC-213 Andersons Team Project, Project originating from Purdue University, \$ 50,000.

Subramanyam, Bh. 2005. Development of a spinosad video. Kansas Wheat Commission, \$ 15,000.

Subramanyam, Bh. 2005. Sulfuryl fluoride research. Dow AgroSciences, Indianapolis, IN, \$ 40,000

Subramanyam, Bh. 2005. Evaluation of spinosad on corn and sorghum to control insects. Agriliance, LLC, St. Paul, MN, \$ 15,000.

Subramanyam, Bh., and S. Alavi. 2004. Development and implementation of a thermal death kinetic model for management of Indianmeal moth and red flour beetle in food processing environments. Marketing and Delivery of Quality Grains and Bioprocess Coproducts (NC-213) The Ohio State University, \$ 20,000.

Subramanyam, Bh. 2004. Efficacy and adoption of new grain protectants by Kansas wheat producers. Kansas Wheat Commission, \$ 12,500.

Subramanyam, Bh. 2004 (Subcontractor). Improvement and field validation of an attract-and-kill bait station for the Indian meal moth. USDA/CSREES, Southern Regional IPM Grant, \$ 7,000. Originating from Oklahoma State University.

Grace, T., Bh. Subramanyam, and S. Kambhampati. 2004. Population dynamic studies using micro-satellite markers for better understanding of outdoor activity of Indian meal moth and to develop a DNA fingerprint to discriminate between populations from multiple areas. IPM Mini-Grant, Kansas State University, KS, \$ 6,360.

Subramanyam, Bh., L. Zurek, and A. Ahmad. 2003. Improved protocols for evaluating efficacy of ultrasound technology against economically-important urban pests. Applica Home Products, Miami, FL, \$ 180,000.

Subramanyam, Bh., and M. Toews. 2003. FQPA and management of insects in stored wheat: Perceptions and implementation of OP alternatives by Kansas farmers. Region VII EPA, Kansas City, KS, \$ 36,946.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2003. Evaluation of spinosad for protection of stored corn from insect attack and damage. Kansas Corn Commission, \$ 30,000.

Herrman, T., Bh. Subramanyam, M. R. Langemeier, and T. Harshavardhan. 2002. Development and implementation of a voluntary HACCP program for the commercial feed industry, USDA/CSREES, Food Safety Initiative Grant, \$ 534,153.\*

Subramanyam, Bh., and M. Toews. 2002. Fate and efficacy of spinosad applied to farm stored grains, USDA/CSREES-Pest Management Alternatives Program (PMAP), \$ 199,195.

Subramanyam, Bh. 2002. Characterization of spinosad as a stored grain and stored products protectant, Dow AgroSciences, Indianapolis, IN, \$ 127,500.

Subramanyam, Bh. 2002. Management of insects in stored grain with spinosad and aeration, Kansas Wheat Commission, \$ 61,811.

Subramanyam, Bh., and M. Toews. 2002. Sixth National Stored Product IPM Training Conference, USDA/ARS, IPM, \$ 20,000.

Subramanyam, Bh., and M. Toews. 2001. Pesticide alternatives and pollution prevention techniques in response to FQPA for post-harvest ecosystems. Region VII EPA, Kansas City, KS, \$ 69,956.

Subramanyam, Bh., and F. Huang. 2001. Effects of a novel ultrasonic emitter on the mating behavior and reproductive performance of the Indianmeal moth: a common pest associated with grains and processed food products. USDA Midwest Advanced Food Manufacturing Alliance (MAFMA), \$ 50,000.

Kadir, S., Bh. Subramanyam, and S. Ramaswamy. 2001. Kansas pesticide usage survey and crop profile development. USDA, \$ 35,257.\*

Subramanyam, Bh., and F. Huang. 2001. Assessment of Actellic on sunflower seeds, Agriliance, St. Paul, MN, \$ 20,000.

Subramanyam, Bh. 2001. Spinosad: A safe and effective alternative for managing stored-wheat insects. Kansas Wheat Commission, \$ 17,774.

Subramanyam, Bh. 2001. Management of stored-product insects with heat in food-processing facilities, Temp-Air, Rupp Industries, Burnsville, MN, \$ 15,000.

Subramanyam, Bh. 2001. Spinosad: A safe and effective alternative for managing stored-wheat insects. Kansas Wheat Commission, \$ 13,790.

Ramaswamy, S., Bh. Subramanyam, F. H. Arthur, T. W. Phillips, and D. E. Maier. 2000. Consortium for integrated management of stored-product insect pests-1, USDA-CSREES, Risk Assessment and Mitigation Program (RAMP), \$ 2,104,535.\*



## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2000. Quality of sulfuryl fluoride (ProFume) treated wheat, Dow AgroSciences, Indianapolis, IN, \$ 120,794.

Subramanyam, Bh. 2000. Heat sterilization for insect management in food-handling establishments. USDA Midwest Advanced Food Manufacturing Alliance (MAFMA), \$ 50,000.

Subramanyam, Bh. 2000. Spinosad: a safe and effective alternative for managing stored-wheat insects, Kansas Wheat Commission, \$ 17,274.

Subramanyam, Bh. 2000. Spinosad: A safe and effective alternative for managing stored-wheat insects, Kansas Wheat Commission, \$ 9,590.

Subramanyam, Bh. 2000. Fate and efficacy of spinosad in farm-stored wheat. Kansas Wheat Research Center, \$ 5,200.

Subramanyam, Bh. 1999. Development and evaluation of ultrasonic devices for management of stored-product moths and other arthropods. Weitech, Inc., \$ 150,000.

Subramanyam, Bh. 1999. Management of stored-product insects with heat in food-processing facilities. Rupp Industries, Inc., \$ 83,000.

Subramanyam, Bh. 1999. Development and evaluation of pest management programs at retail grocery stores, Ralston Purina Company, \$ 47,544.

Total received from AES-COA, Kansas State University, ~\$ 155,000.

*At University of Minnesota (1986-1999). I was the PI for all grants. Total received, \$ 665,854.*

Subramanyam, Bh. 1999. Pesticide Impact Assessment Program, Minnesota. USDA-CSREES, \$ 90,740.

Subramanyam, Bh. 1998. Determining the presence and distribution of the red flour beetle in a north Minneapolis neighborhood surrounding a grain cleaning facility. Minnesota Department of Agriculture, \$ 11,740.

Subramanyam, Bh. 1998. Alternatives to malathion for wild rice worm control. Cultivated Wild Rice Council, St. Paul, MN, \$ 6,000.

Subramanyam, Bh. 1998. Evaluation of spinosad on stored-product insects. Dow AgroSciences, Indianapolis, IN, \$ 5,500.

Subramanyam, Bh. 1998. Susceptibility of packaging materials to Indianmeal moth infestation. The Malt-O-Meal Company, Northfield, MN, \$ 16,500.

Subramanyam, Bh. 1996-98. Pesticide Impact Assessment Program-Minnesota, USDA-CSRS, \$ 181,481 (\$60,494/year).

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- Subramanyam, Bh. 1996. Management of insects in wild bird seed. D and D Commodities, Stephen, MN, \$ 2,500.
- Subramanyam, Bh. 1996. Survival and population growth of four stored-product insects on transgenic (*Bt*) and nontransgenic corn seeds. Northrup King (Novartis), MN, \$ 2,500.
- Subramanyam, Bh. 1995. Review of pesticide use data in Minnesota, 1985-1995. Minnesota Department of Agriculture, \$ 16,000.
- Subramanyam, Bh. 1995. Pest management practices of organic vegetable growers. USDA-ES Special Grant, \$ 20,000.
- Subramanyam, Bh. 1995. Degradation of chlorpyrifos-methyl residues on stored oats. National Fire Insurance Company, \$ 21,000.
- Subramanyam, Bh. 1995. Controlling stored-product beetles in wheat-based cat litter. Productive Alternatives, Detroit Lakes, MN, \$ 2,000.
- Subramanyam, Bh. 1995. Efficacy of Dryacide against stored-product insects. USDA-CSRS, \$ 15,140.
- Subramanyam, Bh. 1995. Services for testifying as an expert witness in a trial involving pesticide contamination of stored oats (deposited in a departmental account). US Attorney's Office, Minneapolis, MN, \$ 2,700.
- Subramanyam, Bh. 1994. Evaluation of Dryacide on stored-product insects. Dryacide Australia Pvt. Ltd., Melbourne, Australia, \$ 25,000.
- Subramanyam, Bh. 1994. Production and pest management practices of alfalfa growers. USDA-ES Special Grant, \$ 16,000.
- Subramanyam, Bh., and P. K. Harein. 1994. Efficacy of Insecto on stored-product insects, and ultrastructural changes in cuticle of some stored-product insects exposed to Insecto, North Central Region Pesticide Impact Assessment Program, USDA-CSRS, \$ 17,000.
- Subramanyam, Bh., and P. K. Harein. 1993. Production and pest management practices of fresh market vegetable growers, USDA-ES Special Grant, \$ 16,000.
- Subramanyam, Bh., and P. K. Harein. 1992. Decision-making processes in the selection and use of corn pesticides, USDA-ES Special Grant, \$ 16,000.
- Subramanyam, Bh., and P. K. Harein. 1991. Survey to determine pesticides used on corn, wheat, soybeans, and potatoes, USDA-ES Special Grant, \$ 16,000.
- Subramanyam, Bh., and P. K. Harein. 1990. Determining benefits and risks of pesticides used in Minnesota agriculture. USDA-CSRS, \$ 101,413.

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Subramanyam, Bh., and P. K. Harein. 1990. Phenology and economic importance of Indianmeal moth in Minnesota farm-stored grain. North Central Region Pesticide Impact Assessment Program, USDA-CSRS, \$ 17,000.

Subramanyam, Bh., and P. K. Harein. 1986. Insects and molds, and quality of farm-stored barley. American Malting Barley Association, \$ 11,000.

Subramanyam, Bh., and P. K. Harein. 1986. Organophosphate resistance and mechanisms conferring resistance in insects associated with corn, wheat, and barley in Minnesota. North Central Region Pesticide Impact Assessment Program, USDA-CSRS, \$ 37,000.

### **CASH AND IN-KIND DONATIONS**

*All donations were received only at Kansas State University (June 1999 - present). Total received, \$ 353,841*

- PureLine Systems, Chicago, Illinois. Donation of a trailer fitted with electronics, gauges, and devices to produce chlorine dioxide gas, \$ 90,000.
- 2014 Don Wilbur Sr. Endowed Professorship in Postharvest Protection, \$ 10,000.
- 2013 Don Wilbur Sr. Endowed Professorship in Postharvest Protection, \$ 10,000.
- 2012 Don Wilbur Sr. Endowed Professorship in Postharvest Protection, \$ 10,000.
- Armstrong Hunt, International, Miami, FL, \$ 25,000 (donation of 3 steam heaters for K-State's Hal Ross Flour Mill)
- IFC, Olathe, Kansas performed a methyl bromide fumigation and a sulfuryl fluoride fumigation of the Hal Ross flour mill in 2009 for free. Total value of service, \$ 30,000.
- Presto-X, Omaha, NE, performed a sulfuryl fluoride fumigation for free in May 2009. Total value of service, \$17,000.
- IFC, Olathe, KS, (in-kind fumigation of Hal Ross Mill with methyl bromide), \$ 12,000.
- D & D Commodities, Stephen, MN. \$ 5,000.
- Frontier Foods, Norway, IA. \$ 2,500.
- Whitmire-Microgen, IL, \$ 500.
- Aggreko, LA, \$ 3,500.
- Kraft Foods, IL, \$ 600.
- AIB, Manhattan, KS, \$ 350.
- IFC, Olathe, KS, \$ 5,500 (\$ 5,000 paid to Kluwer to underwrite production costs for my 2000 book).
- Copesan, WI, \$ 500.
- KSU Department of Entomology, \$ 300.
- Boyce Scientific, Nikon, SMZ 1000 microscope, \$ 2,472.
- Copesan, WI, \$ 855 worth of videotapes for GRSC 651 laboratory on IPM.
- Plunkett's Pest Control, Minnesota, \$ 1,200 worth of rodent pest management equipment, including sprayers, baits, traps, bait boxes, etc.

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- KSU Entomology Stored Product Insect Cultures, Priceless.
- Insect specimens for GRSC 651 laboratory from KSU Entomology Museum, Priceless.
- Dow AgroSciences, Indianapolis, IN, \$ 5,000.
- Dow AgroSciences, Indianapolis, IN, \$ 10,000
- Midwest Grain Products, Atchison, KS, \$ 9,000.
- Dow AgroSciences, Indianapolis, IN, \$ 11,000.
- American Pest Management, Manhattan, KS, \$ 100 worth of cockroach control tools.
- Agriliance, MN, \$ 2,000.
- Agriliance, MN, \$ 4,000.
- Gustafson, TX, \$ 6,000.
- Donation received for coordinating events at the North Central Branch Entomological Society of America Meeting, March 28-31, 2004, Kansas City, KS, \$ 13,000.
- Plunkett's Pest Control, \$ 200 worth of vertebrate pest management tools.
- Gustafson, TX, \$ 5000.
- Dow AgroSciences, Indianapolis, IN, \$ 10,000.
- Horizon Milling, Wichita, KS, \$ 1,000
- Midwest Grain Products, Atchison, KS, \$ 264.
- Catalytic Industrial Group, Independence, KS, Bench top infrared red heater (5 heaters each at \$ 5,000), \$ 25,000.
- Plunkett's Pest Control, MN, \$ 200 worth of vertebrate pest management tools.
- Temp-Air<sup>®</sup>, Minnesota, three heating/cooling incubators from Tritech Research, Los Angeles, CA., \$ 3,500.
- Dow AgroSciences, Indianapolis, IN, \$ 32,500.

### **INTERNATIONAL ACTIVITIES/PROGRAMS**

- I travelled to Beijing, China, between August 26 and September 2, 2014 at the request of the Academy of State Administration of Grain (ASAG), to give presentations to their scientists and students, and also discuss collaborations among Murdoch University, Australia, K-State, and ASAG.
- I visited Henan University of Technology, Zhengzhou, China, during August - September 2, 2014 visit to give guest lectures to students and had discussions on collaborative research. One of the entomologists from this university was a visiting scientist in my laboratory during 2013 calendar year.
- I visited a dry corn milling facility in India during December 18-21, 2014 to suggest way they can improve sanitation and pest management. They are following my recommendations.
- I visited Ethiopia on our \$ 8.5 million USAID project three times in 2014 to establish connections with government representatives in the Ministry of Agriculture, with university presidents and faculty, and with non-governmental

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organizations and small businesses regarding way to reduce postharvest losses. This is a 5-year project starting 2014. The visits were made during April 27-May 3, July 18-31, and October 14-23, 2014.

- I travelled to Beijing, China, during November 11-17, 2013 at the request of the Academy of State Administration of Grain (ASAG), to give presentations to their scientists and students, and also discuss collaboration among Murdoch University, K-State, and ASAG on the Cooperative Research Centre Plant Biosecurity, Australia, funded inert dust research.
- Hosted a delegation (3 individuals) from Acharya N. G. Agricultural University, Rajendranagar, Andhra Pradesh, India, visiting Kansas State University during September 26-28, 2013, to follow-up on possible collaborative linkages in the area of food safety, nano technology, and biotechnology.
- Visited National Institute of Plant Health Management, Rajendranagar, India June 17 and September 5, 2013. Gave two presentations during each visit to about 30 participants.
- Visited Greece during June 26-28, 2013, and gave three presentations at two locations and during October 22-November 2, 2013 to give presentation at the Panhellenic Entomological Congress and at the University of Thessaly.
- Gave presentations to technical training directors of Pest Control Walshe, India, on food-processing pest management on June 11, 2013 (Mumbai) and June 19 (Hyderabad).
- Visited PV Sons Corn Milling, Pune, India, June 7-10, 2013 to conduct mill inspection and observe a heat treatment.
- Met with an Ethiopian delegation (12 members) consisting of university presidents or vice presidents visiting Kansas State University, April 25-27, 2013. Gave a presentation on postharvest protection research at K-State.
- Travelled to Jakarta, Indonesia; Kuala Lumpur, Malaysia; and Saigon, Vietnam during November 29-December 12, 2012 on behalf of U.S. Grains Council to give three presentations to feed manufacturers at a Grain Inventory and Silo Management Short course. The short course was held over two days in each of the three locations. In Jakarta 60 feed manufacturers were in attendance and in Kuala Lumpur there were 40 and in Saigon about 70. The three presentations I gave were (1) Principles of grain condition and pests; (2) Sanitation in grain storage; and (3) Grain fumigation principles.
- Met with Chicago Thai General Consul and delegations' visit to Kansas State University, October 3, 2012. Discussed my visits to Thailand since 2009 for educational purposes. (Print agenda)

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- Conducted inspections of two flour mills in Athens Greece, October 23 & 24, 2012.
- Visited with and hosted Mr. V. Nagi Reddy, Interim Vice Chancellor and Dr. Aldas Jannaiah, Professor & Head, School of Agribusiness Management, Acharya N. G. Ranga Agricultural University, Rajendranagar, Andhra Pradesh, India, during their visit to Kansas State University, September 10-11, 2012.
- Traveled to Ethiopia and Djibouti as part of a USAID team to conduct a programmatic environmental assessment on phosphine fumigation of Title II (Food for Peace) USAID commodities by cooperating sponsors, April 11-26, 2012. Co-wrote a 189 page guide on issues observed and proper fumigation methods.
- Initiated a research project with PV Sons Corn Milling Company in Pune, India, to understand effectiveness of nonchemical technologies (heat) on insect numbers in the corn mill, January 2012-present.
- Attended the meeting to celebrate 50 years of Indo-US collaboration in agricultural research at Indian Agricultural Research Institute Campus, Pusa, New Delhi, December 20, 2011.
- Met Mr. Ajit Kumar, Joint Secretary, Indian Ministry of Food Processing Industries, New Delhi, and Dr. K. Alagasundaram, Director, Indian Institute of Crop Processing Technology, Thanjavur, and visiting K-State to discuss future collaborations on grain storage and food-processing programs with Indian universities and institutions, September 22, 2011.
- Met with Joint Secretary and Director General, Indian Council of Agricultural Research (ICAR), New Delhi, Deputy Director, Engineering, Director, National Dairy Research Institute (NDRI), Karnal, and Director, Indian Agricultural Research Institute, New Delhi, and visiting K-State to follow-up on MOU and identify areas for mutual collaboration, September 4-10, 2011.
- Met with the Vice Chancellor and Dean of Dairy and Food Science Technology, Maharana Pratap University of Agriculture and Technology (MPUAT), Udaipur, India, August 26-30, 2011.
- Traveled to Chinag Mai, Thailand, July 28-August 6, 2011 to interact with researchers at the Postharvest Technology Research Institute and Chiang Mai University, and to deliver presentations on soybean meal storage, pest management, and fumigation to 35 feed millers from Thailand, Vietnam, Indonesia, and Philippines. This program was sponsored by the American Soybean Association-International Marketing, Singapore, and Novus International, Thailand. I gave 5 presentations (see invited oral presentations).

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- I organized two one-day workshops on, “Management of Insects in Stored Grains and Foods in India”. The first one was held July 22, Hotel Avanti, New Delhi, and July 25, Taj Banjara, Hyderabad. There were 40 people in attendance at each venue. I gave the following presentations:
  - “*Overview of grain storage structures*”
  - “*Internal and external insects*”
  - “*Sampling devices and methods*”
  - “*IPM basics and concepts*”
  - “*Developing an IPM program*”
  - “*Phosphine basics and safety*”
- Coordinated the visit of K. V. S. S. Sai Ram (CEO, Prathista Industries, India) Dr. P. Raghuvardhan Reddy (Director, Prathista Industries) from India, November 23-25, 2010.
- Met with a Jordanian delegation visiting our department and gave them a brief presentation on food grains security and safety, September 30, 2010, Biological Industrial value Added Program (BIVAP), Manhattan, KS.
- Coordinated the visit of K. V. S. S. Sai Ram, Dr. Rajesh Sharma, and Dr. P. Raghuvardhan Reddy (Prathista Industries Ltd., Delegation) from India, September 27 – 30, 2010. I encouraged Prathists Industries to establish a sister company to make fermentation-based agricultural veterinary products in Manhattan, KS. A building was identified and funds by the City of Manhattan to the tune of \$ 500,000 have been approved for this venture.
- Panel discussion with four other K-State faculty members during a visit of International Officers from the US Army Command and General Staff College, International student Military Division at Fort Leavenworth, September 23, 2010, Alumni Center, Kansas State University, Manhattan, KS.
- Visited with fellows on the Nigerian Cochran Fellowship Program on Grain Standards and Grading, August 29-September 11, 2010, International Grains Program and Conference Center, Manhattan, KS.
- Visited with Cochran Fellows from Central Warehousing Corporation, India, August 14-25, 2010, International Grains Program and Conference Center, Manhattan, KS.
- Coordinated the fourth meeting to discuss progress on Kansas State University and Acharya N. G. Ranga Agricultural University joint postharvest research project initiated in 2007, on June 1, 2010, Acharya N. G. Ranga Agricultural University, Rajendranagar, Hyderabad, India.
- Organized and developed programs for two workshops in India. One on, “Ensuring food security of stored grains through novel storage practices”, May 27, 2010, in Punjab Agricultural University, Ludhiana, Punjab, India; and the

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- second was on, “Implementing food safety in India: Issues and challenges”, May 31, 2010, India International Centre, New Delhi, India. I gave a total of 5 presentations at both venues (see presentation given at professional meetings).
- Interacted with my Borlaug Fellow, Dr. Telavrolu Prasad, May 30, 2010, New Delhi, to follow-up on my mentee and submitted notes of that interaction with Borlaug Office in Washington, D.C.
  - Visited with Dr. Manjit S. Kang, Vice Chancellor, Punjab Agricultural University, during his trip to K-State during October 5-7, 2009. Discussed about our study abroad program in 2010 and initiatives in grain storage and handling, including a workshop on these topics during 2010 in India.
  - In 2008 at the request of US Soybean Export Council and US Grains Council, I participated in the 17th Annual American Soybean Association-International Marketing (ASA-IM) Southeast Asian Feed Technology and Nutrition Workshop, with focus on “Feed Safety and Hygiene”, June 16-19, 2009, Hue, Vietnam,. A total of 117 people were in attendance at the workshop, which included 78 participants from feed mills in SE Asia. I presented topics on:
    - *“Pest management in feed mills”*
    - *“Hands-on HACCP exercise”*
    - *“Pesticide management in the field and its relevance to residues in feed grains”*
  - At the request of ASA-IM, Singapore, I traveled to Bangkok, Thailand, to give two presentations followed by a question and answer session at Swissotel le Concorde, 3<sup>rd</sup> floor, Nilubon Room, June 19, 2009. A total of 74 people were in attendance at this 4-hour seminar. Topics presented were:
    - *“Ensuring feed safety through sanitation and pest management”*
    - *“Strategies for management of invertebrate and vertebrate pests”*
  - I did a feed mill audit at the Bangkok Food Products Company, an affiliate of Charoen Pokphand Group (the largest and number one feed mill company in the world), Samutprakaran, Bangkok, June 20, 2009, followed by talks in a conference room. There were a total 55 people in the conference room in Bangkok Foods, and 20 individuals from two other Charoen Pokphand Group of Companies were connected remotely by teleconferencing facilities. The company representatives took pictures and we discussed areas that need attention and issues related to sanitation and pest management.
  - I gave a seminar on “Pest Management” at the Menara Peninsula Hotel, June 23, 2009, Jakarta, Indonesia. There were 31 people, mostly upper management folks from Indonesian feed mills in attendance.
  - I visited Pt. Charoen Pokphand, Balaraja, Indonesia, June 23, 2009. There were 21 people in attendance. I gave talks on “Feed Mill Pest Management” and “Phosphine Fumigation”, followed by a feed mill audit.



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- I visited Pt. Japfa Comfeed, Jakarta, Indonesia. I did an audit of their feed mill and gave presentations on: grain storage, pest management, especially weevils in grain, and sampling grain for insects on June 22, 2009. There were 20 people in attendance.
- Organized and developed a “Food safety implementation program”, July 18, Taj Banjara, Hyderabad, India. A total of 18 people attended this workshop. At this one day meeting at two venues a total of six topics were presented. These topics included:
  - *“HACCP principles”*
  - *“GMP principles”*
  - *“Hands-on HACCP exercise”*
- Presentation to undergraduate students on “Food Safety and Pest Management” in the Department of Food Technology, Osmania University, July 14, 2009, Hyderabad, India. There were 35 students in the audience.
- Organized and developed a “Food safety Implementation Program”, July 13, 2009, Taj Lands End, Mumbai, India. A total of 21 people attended this workshop.
- On July 9, 2009, I was in India and set up a meeting with concerned scientists to review second year data on KSU-ANGRAU Postharvest Research Project. The outcomes are included in my file. Briefly, this project was funded by the ANGRAU administration to the tune of \$35,000 over a 2 year period. This project was initiated in 2006 and was funded in 2007 by ANGRAU and partially by K-State Grain science and COA-AES.
- Coordinated “Rapid Methods and Automation in Microbiology Symposium and Workshop”, Acharya N. G. Ranga Agricultural University, October 15-17, 2008, Rajendranagar, Andhra Pradesh. I took Dr. Beth-Ann Crozier Dodson, a colleague from Animal Sciences Department to India for this workshop. This workshop was held for the first time in India. A total of 28 people attended the workshop. The workshop had lectures and two days of laboratory session to use rapid methods for pathogen identification. Bh. Subramanyam presented two talks, in addition to assisting in the laboratory session, and they are:
  - *“How to comply with the 2006 National Food Safety and Standards Act”*
  - *“Proactive approaches for food safety”*
- I facilitated a KSU-ANGRAU Postharvest Research Workshop, Acharya N. G. Ranga Agricultural University, October 18, 2008, Rajendranagar, Andhra Pradesh. I have been working with ANGRAU on a postharvest research project that was supported by ANGRAU administration in 2007. The 2008 meeting was coordinated to get an update on research progress made by the Bapatla group, and to convince the ANGRAU Vice Chancellor, Dr. P. Raghava Reddy to support a similar project at the Hyderabad campus. I played an active part in an Indian company, United Phosphorus Limited, Vapi, India, donating two phosphine

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monitors (each worth \$2,500) to the researchers and also showed how they should be used during the October 18<sup>th</sup> meeting. In addition, Bh. Subramanyam with the help of KSU Associate Dean for Research, Dr. Ernie Minton, purchased two cocoons to be sent to ANGRAU for this research project.

- I gave a Millennium Guest Lecture on “Recent Advances in Stored-Product Protection” at Sri Venkateshwara Agricultural College, affiliated with Acharya N. G. Ranga Agricultural University, July 8, 2009, Tirupati, India. A total of 65 people were in attendance.
- Organized and developed content for two “Food Safety and Sanitation” Workshops. One was held June 21-22, 2008, Hotel Taj Deccan, Hyderabad. Number of participants, 20. The other workshop was held June 24-25, 2008. Hotel GRT Grand, Chennai. Number of participants, 24. These workshops were sponsored by the American Soybean Association-International Marketing (ASA-IM), New Delhi, India. There were 12 topics presented over a two day period and Bh. Subramanyam was responsible for 9 topics, and these included:
  - *“Complying with the National Food Safety and Standards Act”*
  - *“Hard and sharp objects in food”*
  - *“Understanding and implementing GMPs”*
  - *“Recall programs”*
  - *“Pest management and its importance in food safety programs”*
  - *“Hands-on exercises on: GMPs, HACCP, SSOPs, and Inspections”*
- Coordinated a Short Course on Feed Manufacturing Technology, June 23-27, 2008, Hotel GRT Grand, Chennai, India. This short course was primarily taught by Dr. Leland McKinney, colleague I took to India for this purpose, and other feed manufacturing folks from India. A total of 46 participants attended the short course from all over India. This is the first feed manufacturing short course conducted in India. I presented the following topics at this forum:
  - *“Ingredient storage and handling”*
  - *“Sanitation: hands-on exercise”*
  - *“Problem solving and panel discussion (a group of speakers)”*
  - *“Selling to a global market: HACCP in the feed industry”*
  - *“Warehouse management”*
- I coordinated and accompanied College of Agriculture Dean, Dr. Fred Cholick’s first visit to India January 1-15, 2008, along with four other faculty members. We visited various academic and government institutions to explore mutual areas of collaboration and to initiate MOUs.
- In 2007 Dr. Jeff Gwartz, our department’s milling professor, and I visited India to conduct seminars on flour milling and pest management. The list of seminars and my role in the seminars is given below. I developed and coordinated three short courses. The first course was titled, “International Short Course on Flour Milling”, May 28-30, 2007, GRT Grand Hotel, Chennai. A majority of the presentations were by Dr. Jeff Gwartz. About 40 people attended the course, and in I gave three presentations:

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- *“Storage of wheat and milled products”*
- *“International trends in food safety and pest management”*
- *“Rodent and bird control”*
- *“Sanitation issues in the mill”*

The second course was titled, “International Seminar on Latest Trends in Flour Milling”, May 31, 2007, Hotel Fortune Landmark, Ahmedabad. More than 40 people attended seminar. I gave one presentation in this seminar.

- *“Flour mill insects and their control”*

I also conducted three separate hands-on workshops on “Sanitation, Food Safety, and Pest Management” for the food industry, pest management professionals, industry quality assurance folks, and government regulators, to name a few. Over 60 people were trained at the three workshops held May 29-30, 2007, GRT Grand Hotel, Chennai; June 7-8, 2007, Hotel Sagar Plaza, Pune; and June 15-16, 2007, Hotel Green Park, Hyderabad. I was responsible for 11 out of the 13 presentations at each of the venues.

- *“The new Government of India food laws and their impacts on the food industries”*
  - *“A simple method to interpret and comply with language of federal regulations”*
  - *“Developing inbound and outbound inspections”*
  - *“Development of a sanitation program”*
  - *“Development of an inspection program”*
  - *“Developing standard operating procedures”*
  - *“Development of a HACCP Program”*
  - *“Developing training programs within a company”*
  - *“Developing scope of services for pest management: issues to consider”*
  - *“Packaging as a pest exclusion tool”*
  - *“Best management practices for retail industries”*
- Developed and coordinated a workshop on “Pest Management for the Grain, Food, and Feed Industry”, November 22, 2006. LeMeridien, New Delhi, India. Number of participants, 28. I gave 7 of 10 talks:
    - *“Insects associated with food/feed processing facilities”*
    - *“Methods for sampling insects”*
    - *“Ozonation of grain”*
    - *“Methods for management of insects in grain”*
    - *“Sanitation and sanitary design in a food/feed processing facility”*
    - *“Food safety and HACCP”*
    - *“Practical methyl bromide alternatives”*
  - Developed and coordinated a workshop on, “Train-the-Trainer Program for Pest Management Professionals”, November 18, 2006. Hotel LeMeridien, Mumbai, India. Number of participants, 30. I gave 5 of 8 presentations:
    - *“Developing scope of services for your clients”*
    - *“IPM inspections”*
    - *“Evaluating and documenting a pest management program”*
    - *“Methods for use in sensitive areas”*

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- *“Understanding GMPs and HACCP for the pest management professional”*

- Developed and coordinated a workshop on, “Pest Management in Sensitive Areas”, November 16, 2006. Taj Krishna, Hyderabad, India. Gave 4 of 6 presentations
  - *“Integrated pest management (IPM): Basics and concepts”*
  - *“Developing an IPM program for sensitive areas: issues to consider”*
  - *“Importance of sanitation and sanitary design in food plants”*
  - *“Methods for management of insects in food and feed industries”*
- I gave a presentation at the IAOM Eurasian District Meeting in Istanbul, Turkey, November 10-14, 2006 (see under invited oral presentations).
- Visited to Al Ghurair Foods, Dubai, to develop a program of study for my undergraduate intern, Mr. Eric Freund, June 6-8, 2006, Dubai, United Arab Emirates.
- I coordinated the visit on April 26, 2006 of a delegation of scientists and board members from Acharya N. G. Ranga Agricultural University, Rajendranagar, India, to sign a Memorandum of Agreement with Kansas State University.
- I held three one-day seminars on “Pest Management” seminars in three major Indian cities: Taj Banjara, Hyderabad, December 29, 2005; Taj Blue Diamond, Pune, January 4, 2006; Le Meridien, New Delhi, January 6, 2006. A total of 56 people attended these seminars. These seminars were co-sponsored by Pest Control of India and Walshe and Walshe Company—two major pest control industries in India. Gave 4 presentations at each venue on topics listed above.
- I coordinated the visit of Mr. Raj Kapoor of Assocom-India to our department so we could develop a MOU for Assocom to represent us in India and help us with student and faculty exchange programs. Mr. Kapoor visited K-State between February 8 and 12, 2005.
- During August 4-17, 2005, I visited several cities and universities in China with Dr. Susan Sun (Professor, Grain Science) and Mr. Vaughn Studer (K-State Foundation). This trip resulted in getting an agreement initiated for a 2 + 2 program with Henan University of Technology. Part of this visit included discussion with Buhler, China as well as Cargill, China to seek funding for supporting undergraduates from Henan to attend K-State. The MOU with Henan has been signed and is now in place. I also gave couple of presentations during this trip about my research.
- I attended and participated in the IAOM Middle East District Technical and Trade Show, September 25-29, 2005, Marrakech, Morocco, on behalf of Dr. Virgil Smail.
- During June 4-21, 2005, I traveled to India and visited various Indian institutions, US Embassy in New Delhi, met several key individuals to initiate MOUs for student and faculty exchange programs. In addition I presented two talks at a

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seminar organized by the Indian Pest Control Association on June 14, 2005. One of the presentations was on heat treatments and the other on pest management in retail establishments at the Alishan Banquet Complex, New Delhi. I also gave a presentation of my research at the Indian Institute of Agricultural Research, New Delhi, and also met with the Director-General of the Indian Council of Agricultural Research. Many of the MOUs I initiated during this trip have now been signed and a few others are currently being signed.

- I coordinated the visit of an 11-member Chinese delegation that visited US and K-State during November 26-December 10, 2005 to better understand methods for managing stored-product insects with the impending loss of the fumigant methyl bromide. The delegation included members from the Chinese pesticide and grain industry, and academia.
- During December 26, 2005-January 9, 2006 I was in India to conduct three, one day seminars in three different cities. The first one was on December 29, 2005 at Taj Banjara, Hyderabad; the second one was on June 4, 2006 at Taj Blue Diamond, Pune, and the third one was on June 6, 2006 at Le Meridein, New Delhi. In all, a total of 60 people attended the seminars.
- During November 22-December 6, 2004 visit to India I interacted with pest control operators and pesticide manufacturers in India. I also interacted with 25 feed manufacturers who attended my presentation on, "Feed mill IPM" in Guragon, New Delhi.
- I also visited with several international scientists that visited K-State since 1999.

### **INVITED ORAL PRESENTATIONS**

*At Kansas State University (1999-present), Total 159*

Subramanyam, Bh. 2014. Effectiveness of selected insecticides on concrete surfaces and grain against stored-product insects. 22<sup>nd</sup> Annual 2014 Nebraska Urban Pest Management Conference, February 18-19, 2014, Lincoln, Nebraska.

Subramanyam, Bh. 2014. Modified atmospheres for stored-product insect control. 22<sup>nd</sup> Annual 2014 Nebraska Urban Pest Management Conference, February 18-19, 2014, Lincoln, Nebraska.

Subramanyam, Bh. 2014. Comparison of heat and sulfur dioxide for the management of stored-product insects. Workshop on Integrated Pest Management in Stored Products and Innovations in Alternatives. United Nations Industrial Development Organization, Vienna, sponsored workshop, February 21-22, Monterrey, Mexico.

Subramanyam, Bh. 2014. Management of stored-product insects in grain and grain processing facilities with pesticide alternatives. Commerce Bank Distinguished Graduate Faculty Award Lecture, March 3, 2014, Big 12 Room, K-State University, Manhattan, Kansas.

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Subramanyam, Bh. 2014. Life cycle of stored-product insects and new information on chemical management. Central States Enterprises, 7B Certification Class, April 7, 2014, Salina, Kansas.

Subramanyam, Bh. 2014. Management of stored-product insects in grain and grain-processing facilities using pesticide alternatives. BIT's 3<sup>rd</sup> Annual World Congress of Agriculture, August 29-31, 2014, Changchun, China. [Keynote Address].

Subramanyam, Bh., and B. Sehgal. 2014. Efficacy of a new deltamethrin formulation on concrete and what against adults of laboratory and field strains of three stored grain insect species. BIT's 3<sup>rd</sup> Annual World Congress of Agriculture, August 29-31, 2014, Changchun, China.

Subramanyam, Bh., P. Vadlani, and G. Correa. 2014. Effects of maize weevil infestation on orn, and utilization of infested corn for ethanol production. BIT's 3<sup>rd</sup> Annual World Congress of Agriculture, August 29-31, 2014, Changchun, China.

Subramanyam, Bh. 2014. Effectiveness of select insecticides on concrete surfaces and grain against stored-grain insects. 7B Pesticide Recertification Training Program for Grain Elevator Managers, April 7, 2014, Central States Enterprises, Salina, KS.

Subramanyam, Bh. 2014. Comparison of heat treatment and Profume for management of stored product insect pests. Seminar-Workshop, Integrated Pest Management in Stored Products: Alternatives and Innovation, February 21-22, Nuevo León, Monterey, México.

Subramanyam, Bh. 2014. Effectiveness of selected insecticides on concrete surfaces and grain against stored product insects. 22<sup>nd</sup> Annual 2014 Nebraska Urban Pest Management Conference, February 18-19, 2014, Lincoln, NE.

Subramanyam, Bh. 2014. Modified atmospheres for stored-product insect control. 22<sup>nd</sup> Annual 2014 Nebraska Urban Pest Management Conference, February 18-19, 2014, Lincoln, NE.

Subramanyam, Bh. 2013. Spinosad: A novel biopesticide for stored grain protection. 4<sup>th</sup> Biopesticide International Conference (BIOCICON), November 28-30, 2013, St. Xavier's College, Palayankottai, Tirunelveli, Tamil Nadu, India. [Keynote address].

Subramanyam, Bh. 2013. Effectiveness of commercial heat treatments in food-processing facilities, November 12, 2013, University of Thessaly, Volos, Greece.

Subramanyam, Bh. 2013. Assessment of spinosad as a grain protectant: A long journey with a happy ending. 15<sup>th</sup> Panhellenic Entomological Congress, October 22-25, 2013, Kavala, Greece. [Plenary address].

Subramanyam, Bh. 2013. Heat treatment: Principles and experiences. Workshop on Stored-Product Pest Management. 15<sup>th</sup> Panhellenic Entomological Congress, October 22-25, 2013, Kavala, Greece.

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Subramanyam, Bh. 2013. Controlled and modified atmospheres for insect control. Workshop on Stored-Product Pest Management. 15<sup>th</sup> Panhellenic Entomological Congress, October 22-25, 2013, Kavala, Greece.

Subramanyam, Bh., and R. Hulasare. 2013. Heat treatment of mills and storage structures. 4<sup>th</sup> Annual International Association of Operative Millers (IAOM) Southeast Asia District Conference & Expo, October 8-10, 2013, Ho Chi Minh City, Vietnam.

Subramanyam, Bh. 2013. Principles of grain condition and insects. 4<sup>th</sup> Annual International Association of Operative Millers (IAOM) Southeast Asia District Conference & Expo, October 8-10, 2013, Ho Chi Minh City, Vietnam.

Subramanyam, Bh. 2013. Sanitation in grain storage. 4<sup>th</sup> Annual International Association of Operative Millers (IAOM) Southeast Asia District Conference & Expo, October 8-10, 2013, Ho Chi Minh City, Vietnam.

Subramanyam, Bh. 2013. Sanitation issues in flour mills. 4<sup>th</sup> Annual International Association of Operative Millers (IAOM) Southeast Asia District Conference & Expo, October 8-10, 2013, Ho Chi Minh City, Vietnam.

Subramanyam, Bh. 2013. Pest management concepts. 4<sup>th</sup> Annual International Association of Operative Millers (IAOM) Southeast Asia District Conference & Expo, October 8-10, 2013, Ho Chi Minh City, Vietnam.

Subramanyam, Bh. 2013. IPM mistakes and solutions. 4<sup>th</sup> Annual International Association of Operative Millers (IAOM) Southeast Asia District Conference & Expo, October 8-10, 2013, Ho Chi Minh City, Vietnam.

Subramanyam, Bh. 2013. Principles of phosphine fumigation. 4<sup>th</sup> Annual International Association of Operative Millers (IAOM) Southeast Asia District Conference & Expo, October 8-10, 2013, Ho Chi Minh City, Vietnam.

Subramanyam, Bh. 2013. Infrared radiation for disinfestation of stored wheat and effects on wheat quality, September 5, 2013, National Institute of Plant Health Management, Ministry of Agriculture, Rajendranagar, Andhra Pradesh, India.

Subramanyam, Bh. 2013. Delivery and storage of grains. One-day workshop on Stored Product Protection, June 26, 2013, Titania Hotel, Omonia, Athens, Greece; June 28, 2013, Mediterranean Hotel, Thessaloniki, Greece.

Subramanyam, Bh. 2013. Phosphine fumigation weak points. One-day workshop on Stored Product Protection, June 26, 2013, Titania Hotel, Omonia, Athens, Greece; June 28, 2013, Mediterranean Hotel, Thessaloniki, Greece.

Subramanyam, Bh. 2013. Heat treatment advices. One-day workshop on Stored Product Protection, June 26, 2013, Titania Hotel, Athens, Greece; June 28, 2013, Mediterranean Hotel, Thessaloniki, Greece.

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Subramanyam, Bh. 2013. Spinosad: A novel grain and seed protectant, June 17, 2013, National Institute of Plant Health Management, Ministry of Agriculture, Rajendranagar, Andhra Pradesh, India.

Heaps, J., and Bh. Subramanyam. 2013. Heat treatments: Some new information. 17<sup>th</sup> Annual International Association of Operative Millers (IAOM) Conference & Expo, April 29 - May 3, 2013, Niagara Fall, Canada.

Subramanyam, Bh. 2013. Management of insects in stored grain: Basics and concepts, 7B Pesticide Recertification Training Program for Grain Elevator Managers, April 16, 2013, Central States Enterprises, Salina, KS.

Subramanyam, Bh. 2013. Stored product pest management research at K-State, April 25-27, 2013, Ethiopian executives (university presidents) visit to Kansas State University, International Grain Program and Conference Center, Manhattan, KS

Subramanyam, Bh. 2012. Principles of grain condition and pests. U.S. Grain Council sponsored Grain Inventory and Silo Management Short Course, December 2 & 3, 2012 (Jakarta, Indonesia); December 6 & 7, 2012 (Kuala Lumpur, Malaysia); and December 10 & 11 (Saigon, Vietnam).

Subramanyam, Bh. 2012. Sanitation in grain storage. U.S. Grain Council sponsored Grain Inventory and Silo Management Short Course, December 2 & 3, 2012 (Jakarta, Indonesia); December 6 & 7, 2012 (Kuala Lumpur, Malaysia); and December 10 & 11 (Saigon, Vietnam).

Subramanyam, Bh. 2012. Grain fumigation principles. U.S. Grain Council sponsored Grain Inventory and Silo Management Short Course, December 2 & 3, 2012 (Jakarta, Indonesia); December 6 & 7, 2012 (Kuala Lumpur, Malaysia); and December 10 & 11 (Saigon, Vietnam).

Subramanyam, Bh. 2012. Weak points in food factories. Agro SpeCom Industry Day, October 26, 2012, Athens, Greece.

Subramanyam, Bh. 2012. IPM mistakes and solutions. Agro SpeCom Industry Day, October 26, 2012, Athens, Greece.

Subramanyam, Bh. 2012. Stored grain insect management basics and concepts. Recertification in Categories 7B/4-Fumigation & Seed Treatment, Kansas Agri Business Expo, November 14, 2012, Century II Convention Center, Wichita, KS.

Subramanyam, Bh. 2012. Stored grain insect species and their management with chemicals and alternatives. Central States Enterprises 7B Certification Class, April 17, 2012, Salina, KS (given by Dr. Mukti Ghimire).

Subramanyam, Bh. 2012. Heat treatment effectiveness in commercial facilities. 20<sup>th</sup> Annual 2012 Nebraska Urban Pest Management Conference, February 14-15, 2012, Lincoln, Nebraska.



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Subramanyam, Bh. 2012. Comparison of heat, methyl bromide, and sulfuryl fluoride in flour mills. 20<sup>th</sup> Annual 2012 Nebraska Urban Pest Management Conference, February 14-15, 2012, Lincoln, Nebraska.

Subramanyam, Bh. 2011. Stored-product insects: biology and ecology. American Soybean Association-International Marketing & Novus-International Workshop on Soybean meal and Grain Storage and Pest Management in Feed Mills, August 1-3, Chiang Mai, Thailand.

Subramanyam, Bh. 2011. Proper use of pesticides in grains and feed mills. American Soybean Association-International Marketing & Novus-International Workshop on Soybean meal and Grain Storage and Pest Management in Feed Mills, August 1-3, 2011, Chiang Mai, Thailand.

Subramanyam, Bh. 2011. Nonchemical management techniques for pests in grain and feed mills. American Soybean Association-International Marketing & Novus-International Workshop on Soybean meal and Grain Storage and Pest Management in Feed Mills, August 1-3, Chiang Mai, Thailand.

Subramanyam, Bh. 2011. Stored-product insects sampling methods and IPM programs. American Soybean Association-International Marketing & Novus-International Workshop on Soybean meal and Grain Storage and Pest Management in Feed Mills, August 1-3, Chiang Mai, Thailand.

Subramanyam, Bh. 2011. Practical training in grain bin facilities: Grain bin fumigation and other methods. American Soybean Association-International Marketing & Novus-International Workshop on Soybean meal and Grain Storage and Pest Management in Feed Mills, August 1-3, Chiang Mai, Thailand.

Subramanyam, Bh. 2011. Ensuring food safety through multifaceted programs. Industry Day: Safety in Flour and Cereals, Loulis Mill, Sourpi, July 8, 2011, Volos, Greece. Organized by AgroSpecom Company Limited.

Subramanyam, Bh. 2011. Practical IPM Systems. Industry Day: Safety in Flour and Cereals, Loulis Mill, Sourpi, July 8, 2011, Volos, Greece. Organized by AgroSpeCom Company Limited.

Subramanyam, Bh. 2011. Postharvest storage, handling, and product quality. Kansas National Guard Afghan 4/6 Agribusiness Development Team Training Program, June 26-July 1, 2011, Clarion Hotel, Manhattan, KS.

Subramanyam, Bh. 2011. Biology and management of stored-grain insects. GEAPS 7B Recertification Class, Central States Enterprises, April 12, 2011, Salina, KS.

Subramanyam, Bh. 2010. Postharvest storage, handling, and product quality. Kansas National Guard, Afghan Agriculture Development Team No. 3 Training Program, October 24-29, 2010, Clarion Hotel, Manhattan, KS.

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Subramanyam, Bh. 2010. Integrated pest management. Kansas Grain and Feed Association's Grain Handlers and Elevator Maintenance Workshop, August 31, 2010, Wichita, KS.

Subramanyam, Bh. 2010. Heat treatment for insect control. American Institute of Baking/Food Safety Inspection Auditors Recertification Seminar on Food Industry Pest Management, August 10-11, 2010, Kansas City Airport Marriott, Kansas City, MO.

Subramanyam, Bh. 2010. Insect identification and biology. American Institute of Baking/Food Safety Inspection Auditors Recertification Seminar on Food Industry Pest Management, Kansas City Airport Marriott, August 10-11, 2010.

Subramanyam, Bh. 2010. Monitoring for pest activity. American Institute of Baking/Food Safety Inspection Auditors Recertification Seminar on Food Industry Pest Management, August 10-11, 2010, Kansas City Airport Marriott, Kansas City, MO.

Subramanyam, Bh. 2010. Heat treatments: theory and practice. Training session for 6 people from P & H Milling, Canada, July 19-20, 2010, Temp-Air, Burnsville, MN.

Subramanyam, Bh. 2010. Optimizing heat treatments for management of stored-product insects in food-processing facilities. Keynote Presentation in Session on Integrated Pest Management, Thursday July 1, 2010. 10th International Working Conference on Stored Product Protection, June 27-July 2, 2010, Estoril Conference Centre, Estoril, Portugal.

Subramanyam, Bh. 2010. Stored-grain insects and their management. June 4, 2010, Federal of Indian Chambers of Commerce and Industry's Conference on Food Security, Safety, and Processed Food during Disaster Situations, June 4, 2010, Grand Kakatiya Hotel, Hyderabad, Andhra Pradesh, India.

Subramanyam, Bh. 2010. Optimizing heat treatments for management food stored-product insects in food-processing facilities, Hodson Graduate Alumni Award Lecture, May 14, 2010, Department of Entomology, University of Minnesota, St. Paul, MN.

Subramanyam, Bh. 2010. Heat treatment versus fumigation to control insects in a grain handling/processing facility. International Association of Operative Millers 114<sup>th</sup> Annual Conference & Expo, April 21, 2010, Las Vegas, NV.

Subramanyam, Bh. 2010. Fumigation, fumigants, and stewardship. IFC Technical Training Conference, February 9, 2010, Double Tree Hotel, Overland Park, KS.

Subramanyam, Bh. 2010. Integrated pest management. IFC Technical Training Conference, February 9, 2010, Double Tree Hotel, Overland Park, KS.

Subramanyam, Bh. 2010. The prerequisites for effective pest control. IFC Technical Training Conference, February 9, 2010, Double Tree Hotel, Overland Park, KS.

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Subramanyam, Bh. 2009. Collaborative efforts in evaluating spinosad as a grain protectant: an example of a success story. Symposium on Entomological Disasters, Problems, and Success Stories: Thanks to Scientific Collaboration. Annual Meeting of the Entomological Society of America, December 13-16, 2009, Indianapolis, IN.

Subramanyam, Bh. 2009. Stored-grain IPM. Kansas National Guard, Afghan Agriculture Development Team Training Program, November 16-20, 2009, Manhattan, KS.

Subramanyam, Bh. 2009. Food safety in the snack food industry. ConAgra Sanitation Training Seminar, November 2-5, 2009, Omaha, NE.

Subramanyam, Bh. 2009. Pesticide management in the field and its relevance to residues in feed grains. 17th Annual American Soybean Association-International Marketing Southeast Asian Feed Technology and Nutrition Workshop. Focus on “Feed safety and hygiene”, June 16-19, 2009, Hue, Vietnam.

Subramanyam, Bh. 2009. Pest management in feed mills. 17th Annual American Soybean Association-International Marketing Southeast Asian Feed Technology and Nutrition Workshop. Focus on “Feed safety and hygiene”, June 16-19, Hue, Vietnam.

Subramanyam, Bh. 2009. Recent Advances in Stored-Product Protection, Millennium Lecture, July 8, 2009, at Sri Venkateshwara Agricultural College, Tirupati, Andhra Pradesh, India.

Subramanyam, Bh. 2009. Postharvest storage, handling, and product quality. Kansas National Guard, Afghan Agriculture Development Team Training Program, March 2-6, 2009, Manhattan, KS.

Subramanyam, Bh. 2009. Pesticides-their use and chemical families. 2009. Industrial Fumigant Company Technical Training Conference, February 17, 2009, Overland Park, KS.

Subramanyam, Bh. 2008. Insect management in stored grain. Oral presentation. Crop Management Conference, December 3-4, 2008, Holiday Inn Select Executive Center, Columbia, MO.

Subramanyam, Bh. 2008. Stored grain insects. [Hands-on insect identification session]. Crop Management Conference, December 3-4, 2008, Holiday Inn Select Executive Center, Columbia, MO.

Subramanyam, Bh., and R. M. Mahroof. 2008. Stored-product extension entomology: is it extinct? Symposium on Overlooked areas of concern for pest solutions. Annual Meeting of the Entomological Society of America, November 16-19, 2008, Reno, NV.

Subramanyam, Bh. 2008. Food and feed product protection, August 29, 2008, K-State Alumni Center, Manhattan, KS. [Invited Oral presentation to three high level Thailand delegates—one from the Ministry of agriculture, one from the food industry, and one from the grain industry—as part of Dr. Justin Kastner’s Frontier Program]

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Subramanyam, Bh. 2008. New technologies for management of stored-product insect pests. The Second Forum of Grain Storage Technology & Management, May 20-22, 2008, Nanjing, China.

Subramanyam, Bh. 2008. Stored-product insect management research at K-State. Academy of State Administration of Grain, May 19, 2008, Beijing, China.

Subramanyam, Bh. 2008. Recent advances in using heat for insect management in food-processing facilities. International Association of Operative Millers Conference & Expo, Rosen Plaza Hotel and Orange County Convention Center, May 13-16, 2008. Orlando, FL.

Subramanyam, Bh. 2008. Issues in insect management in food-processing facilities. Latin American District Program, International Association of Operative Millers Conference & Expo, Rosen Plaza Hotel and Orange County Convention Center, May 13-16, 2008. Orlando, FL.

Subramanyam, Bh. 2007. Heat treatments and alternative pest management strategies in stored products. Stored Product Pest Control 7B, Commercial Applicator Recertification Program, December 17, 2007, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2007. Trap captures of *Tribolium castaneum* adults after fumigation in food-processing facilities (with X. Hou and J. F. Campbell). Symposium on, "Global Concerns and Impacts of Stored Product Insects", Annual Meeting of the Entomological Society of America, December 9-12, 2007, San Diego, CA.

Subramanyam, Bh. 2007. Information resources on stored-product entomology. Symposium on, "Global Concerns and Impacts of Stored Product Insects", Annual Meeting of the Entomological Society of America, December 9-12, 2007, San Diego, CA.

Subramanyam, Bh. 2007. Producer perceptions about postharvest pest management. Department of Entomology Research and Extension Annual Conference, November 7-8, 2007, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2007. Advantages of using phosphine for stored-grain insect management. Bequisa Technical Convention, October 26-27, 2007, Foz do Iguacu, Brazil.

Subramanyam, Bh. 2007. Novel methods for management of stored grain insects. International Workshop on Management of Stored Rice Pests, September 17-19, 2007, Alcácer do Sal, Portugal.

Subramanyam, Bh. 2007. Timing is everything for managing pest insects in mills. International Association of Operative Millers Latin American District Meeting, May 5, 2007, Kansas City, KS.

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Subramanyam, Bh. 2007. Anatomy of a heat treatment. AIB Seminar on Pest Management for Food Plants, April 16-18, 2007, Manhattan, KS.

Subramanyam, Bh. 2007. Feed plant sanitation. Advanced Feed Mill Management (sponsored by KSU, AFIA, and NGFA), April 3-6, 2007, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2007. Practical applications of a novel thermal death kinetic model during structural heat treatments (with X. Hou, R. Mahroof, D. Boina, and S. Alavi as coauthors). North Central Branch Entomological Society of America Annual Meeting, March 24-27, 2007, Winnipeg, Canada.

Subramanyam, Bh. 2007. Management tactics for stored product insects in grain and food-processing facilities. Kansas Pest Control Association Annual Meeting, March 8, 2007, Salina, KS.

Subramanyam, Bh. 2007. Innovations and IPM options or why we will never be able to manage stored-product insects. Kansas Pest Control Association Annual Meeting, March 8, 2007, Salina, KS.

Subramanyam, Bh. 2007. Stored seed protectants. Kansas Crop Improvement Association Annual Conference, February 7, 2007, Salina, KS.

Subramanyam, Bh. 2006. Stored grain management. 2006 Kansas regional conference, December 5-6, 2006. sponsored by Agriliance and croplan, Salina, KS.

Subramanyam, Bh. 2006. Pest management. International Association of Operative Millers Eurasian Conference and Expo, November 10-14, 2006. Istanbul, Turkey.

Subramanyam, Bh. 2006. Issues and challenges in implementing stored grain integrated (insect) pest management programs in US. Workshop on Practical Experiences on Integrated Pest Management of Stored Grains. 9th International Working Conference on Stored Product Protection. October 15-18, 2006, Campinas, Brazil.

Subramanyam, Bh. 2006. Insect identification. ConAgra Environmental Quality, Food Safety and Sanitation Conference, October 9, 2006, Omaha, NE.

Subramanyam, Bh. 2006. Flour handling and storage. ConAgra Environmental Quality, Food Safety and Sanitation Conference, October 9, 2006, Omaha, NE.

Subramanyam, Bh. 2006. Pest management measures. ConAgra Environmental Quality, Food Safety and Sanitation Conference, October 9, 2006, Omaha, NE.

Subramanyam, Bh. 2006. Methyl bromide alternatives. ConAgra Environmental Quality, Food Safety and Sanitation Conference, October 9, 2006, Omaha, NE.

Subramanyam, Bh. 2006. Radio interview about spinosad. Eric Atkinson, KSRE Radio, August 11, 2006, McCain Auditorium, Kansas State University, Manhattan, KS.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2006. Seed protectants. American Seed Trade Association Annual Meeting, July 10-12, 2006, Chicago, IL.

Subramanyam, Bh. 2006. Management of insects in organic grains. Farmer Direct Foods Conference, June 27, 2006, IGP Conference Center, Manhattan, KS.

Subramanyam, Bh. 2006. Food plant heat treatment. Pest Management for Food Plants, AIB International Short Course, April 3-5, 2006, Manhattan, KS.

Subramanyam, Bh. 2006. Insect management in flour mills. IAOM Wheat State and Central District Meeting, April 1, 2006, IGP Conference Center, Manhattan, KS.

Subramanyam, Bh. 2006. A dynamic model for predicting survival of heat tolerant stages of confused flour beetle during facility heat treatments. Symposium on Thermal Death Kinetic Models: Theory and Application. Annual Meeting of the Entomological Society of America, December 15-18, 2005, The Greater Fort Lauderdale/Broward County Convention Center, Ft. Lauderdale, FL.

Subramanyam, Bh. 2005. Stored product pest research update. Pest Control Technology sponsored Stored Product Pest Seminar, November 16-18, 2005, Hilton, Minneapolis, MN.

Subramanyam, Bh. 2005. Spinosad: an organic grain protectant. First National Workshop on Organic Stored-Product Protection, Aug 24-25, 2005, Purdue University in West Lafayette, IN.

Subramanyam, Bh. 2005. Pest management basics and concepts. 6<sup>th</sup> National Seminar for Popularisation of Oilmeal Useage in Compound Cattle, Poultry and Aqua Feeds. Organized by The Solvent Extractors' Association of India, June 19, 2005, Cochin, Kerala, India.

Subramanyam, Bh. 2005. Management of insects and vertebrate pests in feed mills. 13<sup>th</sup> Annual America Soybean Association Southeast Asia Feed Technology and Nutrition Workshop, May 30-June 3, 2005, Kota Kinabalu, Sabah, Malaysia.

Subramanyam, Bh. 2005. Heat applications in food plants. A Systematic Approach to Pest Management in Food Plants, American Institute of Baking International, April 11-13, 2005, Manhattan, KS.

Subramanyam, Bh. 2005. Stored-product IPM: Understanding issues affecting end users through surveys and focus group meetings. Symposium on Urban Entomology Research and Extension Technology in the North Central Region. North Central Branch of the Entomological Society of America Annual Meeting, March 20-23, 2005, West Lafayette, IN.

Subramanyam, Bh. 2005. Methyl bromide fumigation: Heat treatment as an alternative strategy for pest management in food-processing facilities (coauthor; presented by R.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Mahroof). Symposium on Urban Entomology Research and Extension Technology in the North Central Region. North Central Branch of the Entomological Society of America Annual Meeting, March 20-23, 2005, West Lafayette, IN.

Subramanyam, Bh. 2005. Performance of spinosad as a grain protectant. Symposium on Managing Stored-Product Insects Using Organic Methods: Tools, Techniques, Issues, and Challenges. North Central Branch of the Entomological Society of America Annual Meeting, March 20-23, 2005, West Lafayette, Indiana.

Subramanyam, Bh. 2005. Management of stored-product insects in food-processing plants using elevated temperatures: Recent advances and challenges. Pacific Branch Meeting of the Entomological Society of America. February 27-March 2, 2005, Pacific Grove, CA.

Subramanyam, Bh. 2004. Management of pests in the feed mill: IPM concepts. Seminar organized by the American Soybean Association in New Delhi, India. December 1, 2004. Bristol Hotel, Guragon, New Delhi, India.

Subramanyam, Bh. 2004. Impact of selected IPM practices on stored-product insect populations in retail environments. Federation of Asian & Oceania Pest Managers Associations and Indian Pest Control Association Convention and International Exhibition. Integrated Pest Management in Urban Areas. November 25-26, 2004, J. W. Marriott Hotel, Mumbai, India.

Subramanyam, Bh. 2004. Heat treatments for managing insect populations in food-processing facilities. Federation of Asian & Oceania Pest Managers Associations and Indian Pest Control Association Convention and International Exhibition. Integrated Pest Management in Urban Areas, November 25-26, 2004, J. W. Marriott Hotel, Mumbai, India.

Subramanyam, Bh. 2004. Weevils: biology and management. Minnesota Stored Grain Pest Management Conference, November 18, 2004. St. Cloud Civic Center, St. Cloud, MN.

Subramanyam, Bh. 2004. Grain protectants: old and new. Minnesota Stored Grain Pest Management Conference, November 18, 2004. St. Cloud Civic Center, St. Cloud, MN.

Subramanyam, Bh. 2004. Heat treatment effectiveness. The North American Millers Association Pest Management Alternatives Workshop. September 29, 2004, DoubleTree Hotel, O'Hare Rosemont, Chicago, IL.

Subramanyam, Bh. 2004. Stored product pest management research at K-State. Presto-X-Company Annual Technical Conference, March 12, 2004, Omaha, NE.

Subramanyam, Bh. 2004. Stored product protection in the 21st century. March 12, 2004. Presto-X-Company Annual Technical Conference, Omaha, NE.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2004. Stored grain insect control with and without pesticide use. Kansas Crop Improvement Association Certification Seed Grower's Annual Meeting, February 10, 2004, Colby, KS.

Subramanyam, Bh. 2004. Spinosad: a novel stored grain protectant. Farmer Direct Foods Annual Meeting, January 20, 2004, Hays, KS.

Subramanyam, Bh. 2003. Prerequisite programs for feed mills. AFIA HACCP Workshop, December 15, 2003, Kansas City, MO.

Subramanyam, Bh. 2003. Physical and chemical hazards in feed mills. AFIA HACCP Workshop, December 15, 2003, Kansas City, MO.

Subramanyam, Bh. 2003. New technologies for stored product (insect) pest management. Nebraska Pest Control Association Annual Conference, December 10, 2003, Lincoln, NE.

Subramanyam, Bh. 2003. Hazard Analysis and Critical Control Point. To students in Shri Shakti School of Hotel Management, July 28, 2003, Hyderabad, India.

Subramanyam, Bh. 2003. Management of insects and rodents in feed mills. One day workshop organized by the American Soybean Association, New Delhi, for poultry feed manufacturers and nutritionists, June 4, 2003, Le meridian Hotel, Bangalore, India.

Subramanyam, Bh. 2003. Management of insects and rodents in feed mills. One day workshop organized by the American Soybean Association, New Delhi office for poultry feed manufacturers and nutritionists, June 5, 2003, Le meridian Hotel, Pune, India.

Subramanyam, Bh. 2003. Stored product insects in the urban environments: Observations from sampling and trapping. Symposium on Urban Entomology at the North Central Branch entomological Society of America Meeting, March 24-27, 2003, Marriott Hotel, Madison, WI.

Subramanyam, Bh. 2003. Ultrasound and arthropod pest control: Hearing is believing. S. C. Johnson & Wax, March 11, 2003, Racine, WI.

Subramanyam, Bh. 2003. Stored product insect control now and in the future. Presto-X-Company 28<sup>th</sup> Annual Technical Conference, February 27-28, 2003, Holiday Inn Central, Omaha, NE.

Subramanyam, Bh. 2003. Stored product pests. Presto-X-Company 28<sup>th</sup> Annual Technical Conference, February 27-28, 2003, Holiday Inn Central, Omaha, NE.

Subramanyam, Bh. 2003. Challenges and prospects for IPM in food processing and value-added food outlets. Southwestern Branch Entomological Society of America, 51<sup>st</sup> Annual Meeting, February 22-27, 2003, Renaissance Hotel & Cox Convention Center, Oklahoma City, OK.



## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2002. Bugs, bugs everywhere: Understanding the dynamics and populations of flour mill insects. Association of Operative Millers Wheat State District Annual Meeting. Marriott Hotel, December 6, 2002, Wichita, KS.

Subramanyam, Bh. 2002. Pest management in feed mills. Sponsored by American Soybean Association, New Delhi office, October 10, 2002, Hyderabad, Andhra Pradesh, India.

Subramanyam, Bh. 2002. Pantry pest identification and control. Commercial Pesticide Training Certification meeting, November 7, 2002, Holiday Inn, Great Bend, KS.

Subramanyam, Bh. 2002. Alternative techniques for management of insects in grain and food-processing facilities. Wheat State District, Central State District, and Texoma District Technical Committee Meeting, August 1, 2002, Lake of the Ozarks, MO.

Subramanyam, Bh. 2002. Some considerations for effective use of heat treatments in food-processing facilities. Keynote Address (July 25) – Theme II. 8<sup>th</sup> International Working Conference on Stored Product Protection, July 22- 26, 2002, York, U.K.

Subramanyam, Bh. 2002. Stored product insects: biology. Workshop organized for Agriliance Company's agronomy field scouts, May 15-16, 2002, Holiday Inn Holidome and Holiday Inn Express, Garden City, KS.

Subramanyam, Bh. 2002. Heat treatments-plant. Association of Operative Millers Annual Technical Conference and Trade Show, May 7, 2002, Minneapolis, MN.

Subramanyam, Bh. 2002. Stored product insects in flour mills: biology, detection, and management. Dow AgroSciences, Indianapolis, Indiana. Training for their in-house and field scientists, April 16, 2002, Dow AgroSciences, Zionsville, IN.

Subramanyam, Bh. 2002. Impact of selected IPM practices on insect populations in retail environments. Nestle Purina PetCare Company Food Safety Symposium, March 25, 2002, Oklahoma City, OK.

Subramanyam, Bh. 2002. Research programs that benefit the pest control industry. Kansas Pest Control Association Winter Workshop, February 7, 2002, McPherson, KS.

Subramanyam, Bh. 2002. Research update: stored grain pests. Nebraska 2002 Urban Pest Management Conference, January 18, 2002, Lincoln, NE.

Subramanyam, Bh. 2002. Pests requiring immediate attention in grain and food storage areas. Nebraska 2002 Urban Pest Management Conference, January 17, 2002, Lincoln, NE.

Subramanyam, Bh. 2001. The role of sanitation in food processing pest management. Nebraska 2001 Urban Pest Management Conference, January 12, 2001, Lincoln, NE.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2001. Update on status of fumigants and fumigation as tools for grain and food processing pest managers. Nebraska 2001 Urban Pest Management Conference, January 12, 2001, Lincoln, NE.

Subramanyam, Bh. 2000. Toward a better understanding of effects of high temperatures on stored-product insects. Annual Meeting of the Entomological Society of America, Montreal, December 3-6, 2000, Montreal, Canada.

Subramanyam, Bh. 2000. Some issues to consider when judging effectiveness of stored-product insect control measures in mills. International Conference on Controlled Atmospheres and Fumigation, November 3, 2000, Fresno, California.

Subramanyam, Bh. 2000. Modeling temperature changes during heat treatment of flour mills for insect control. International Congress of Entomology, August 20-26, 2000, Foz do Iguacu, Brazil.

Subramanyam, Bh. 2000. Improving heat treatment effectiveness on insects. Copesan Heat Treatment Training Workshop, June 22, 2000, Burnsville, MN.

Subramanyam, Bh. 2000. Results of the heat treatment workshop: Department of Grain Science and Industry pilot flour mill, Kansas State University. Association of Operative Millers Annual Technical Conference and Trade Show, May 9, 2000, Kansas City, KS.

Subramanyam, Bh. 2000. Quality ingredient storage. American Feed Industry Association (AFIA) Regional Production Schools, April 6, 2000, Atlanta, GA.

Subramanyam, Bh. 2000. Quality ingredient storage. American Feed Industry Association (AFIA) Regional Production Schools, April 13, 2000, Pittsburgh, PA.

Subramanyam, Bh. 2000. Insect populations before and after heat treatment of mills. Symposium on "Management of Stored-Product Insects in the 21<sup>st</sup> Century: Uncertainties and Challenges", North Central Branch, Entomological Society of America Meeting, March 26-29, 2000, Minneapolis, MN.

Subramanyam, Bh. 2000. Battling a beetle nuisance: a classic example of university helping the community. USDA-GMPRC, February 11, 2000, Manhattan, KS.

Subramanyam, Bh. 2000. Stored-product pest management in the 21<sup>st</sup> century. Manhattan AACC Chapter Meeting, September 15, 1999. Department of Grain Science and Industry, Kansas State University, Manhattan, KS.

*At University of Minnesota (1989-1999), Total 48*

Subramanyam, Bh. 1998. Stored-product protection in the 21<sup>st</sup> century. Department of Grain Science and Industry, December 9, 1998, Kansas State University, Manhattan, KS.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 1998. FQPA: will the path to food quality mean fewer management options? 18th Annual Crop Pest Management Short Course, Earle Brown Center, November 23, 1998, St. Paul Campus, MN.

Subramanyam, Bh. 1998. What went wrong? Common errors in stored product research. 7th International Working Conference on Stored-Product Protection, October 14-19, 1998, Beijing, China.

Subramanyam, Bh. 1998. Pesticide use surveys: relevance to FQPA. NASS Enumerator Conference, October 7, 1998, Willmar, MN.

Subramanyam, Bh. 1998. Role of diatomaceous earth dust in stored product insect management. USDA, ARS, Center for Medical, Agricultural, and Veterinary Entomology, May 8, 1998, Gainesville, FL.

Subramanyam, Bh. 1998. Best management practices of stored grain for insect control. Managing corn, soybeans, and stored grain for profit in 1998, February 6, 1998, Fergus Falls, MN.

Subramanyam, Bh. 1998. Wild rice insect management: past, present, and future. Cultivated Wild Rice Council Annual Conference, January 14, 1998, Grand Rapids, MN.

Subramanyam, Bh. 1997. Stored-product insect control with diatomaceous earth formulations. Department of Entomology, Andhra Pradesh Agricultural University, December 18, 1997, Rajendranagar, Andhra Pradesh, India.

Subramanyam, Bh. 1996. Pesticide resistance in stored-product insects: an overview. Food and Agriculture Organization Workshop on Pesticide Resistance in Stored Product Insects, November 26-28, 1996, Mexico City, Mexico.

Subramanyam, Bh. 1996. Resistance detection and estimation techniques based on insect response to grain protectants. Food and Agriculture Organization Workshop on Pesticide Resistance in Stored Product Insects, November 26-28, 1996, Mexico City, Mexico.

Subramanyam, Bh. 1996. Sampling to determine treatment efficacy. International Conference on Controlled Atmosphere and Fumigation in Stored Products, April 21-26, 1996, Nicosia, Cyprus.

Subramanyam, Bh. 1996. Pesticide use surveys in Minnesota. Midwest Environmental Laboratory Technology Conference, January 31- February 1, 1996, Earle Brown Center, University of Minnesota, St. Paul, MN.

Subramanyam, Bh. 1995. Within bin distribution and effectiveness of Insecto applied through aeration fans. Department of Entomology, Kansas State University, September 8, 1995, Manhattan, KS.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 1995. Factors influencing the insecticidal activity of Insecto against stored-product insects. USDA, U. S. Grain Marketing Research Laboratory, September 6, 1995, Manhattan, KS.

Subramanyam, Bh. 1994. Interactions between storage molds and stored-grain insects. Plant Pathology Course 3001, University of Minnesota, May 20, 1994, St. Paul, MN.

Subramanyam, Bh. 1994. Standardization of trapping techniques (panel discussion). Third International Stored-Product Insect Trapping Workshop, held during the 6th International Working Conference on Stored-product Protection, April 17-21, 1994, Canberra, Australia.

Subramanyam, Bh. 1994. Distribution statistics for insects in stored corn sampled with perforated probe traps. 6th International Working Conference on Stored-Product Protection, April 17-21, 1994, Canberra, Australia.

Subramanyam, Bh. 1993. Integrated management of stored-product insects. Minnesota Department of Agriculture Grain Auditing and Licensing Division Examiners Annual Conference, Grain Exchange Building, September 27-28, 1993, Minneapolis, MN.

Subramanyam, Bh. 1993. INSECTO: a new diatomaceous earth formulation for stored-product insect suppression. 9th International Symposium on Biodeterioration and Biodegradation, University of Leeds, September 5-10, 1993, Leeds, U.K.

Subramanyam, Bh. 1993. Stored-product insect control with Insecto. Report to the Food Protection Committee, Association of Operative Millers' Annual Technical Conference and Trade Show, April 24-28, 1993, Indianapolis, IN.

Subramanyam, Bh. 1993. Pesticide laws and regulations. Pesticide Toxicology course, Department of Medicinal Chemistry, University of Minnesota, January 15, 1993, Minneapolis, MN .

Subramanyam, Bh. 1992. Nonchemical methods of pest control in and around homes. EPA Household Hazardous Waste Management Conference, Marriott City Center, December 8-12, 1992, Minneapolis, MN.

Subramanyam, Bh. 1992. The National Pesticide Impact Assessment Program. State County Agent Training, Earle Brown Center, University of Minnesota, October 29, 1992, St. Paul, MN.

Subramanyam, Bh. 1992. Pesticide Impact Assessment Program. State Agricultural Agent Training, Minnesota Pollution Control Agency, September 29, 1992, MN,

Subramanyam, Bh. 1991. The role of trapping for detection and management of stored-product insects. Department of Entomology, Purdue University, June 18, 1991, West Lafayette, IN.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 1990. Degradation of pirimiphos-methyl and chlorpyrifos-methyl residues on stored grains. 8th International Symposium on Biodeterioration and Biodegradation, University of Windsor, August 26-31, 1990, Windsor, Ontario, Canada.

Subramanyam, Bh. 1990. Quantitative analysis of temperature, relative humidity, and diet influencing development of the larger grain borer, *Prostephanus truncatus* (Horn) (Coleoptera: Bostrichidae). Department of Entomology, Kansas State University, February 13, 1990, Manhattan, KS.

Subramanyam, Bh. 1998. Purdue Post-harvest IPM Educator. Stored-Grain Pest Management Training Conference, November 17 and 19, 1998, Detroit Lakes and New Ulm, MN.

Subramanyam, Bh. 1998. Area-wide management of stored grain insects. Stored-Grain Pest Management Training Conference, November 17 and 19, 1998, Detroit Lakes and New Ulm, MN.

Subramanyam, Bh. 1998. Stored grain insect identification workshop. Stored-Grain Pest Management Training Conference, November 17 and 19, 1998, Detroit Lakes and New Ulm, MN.

Subramanyam, Bh. 1997. Diatomaceous earth: myth vs. reality. Stored-Grain Pest Management Training Conference, November 18 and 20, 1997, Detroit Lakes and New Ulm, MN.

Subramanyam, Bh. 1997. Sampling, hands-on session. V National Stored-Grain Pest Management Training Conference, August, 18-21, 1997, West Lafayette, IN.

Subramanyam, Bh. 1995. Stored grain insect identification. Stored-Grain Pest Management Training Conference, November 28, 1995, Alexandria, MN.

Subramanyam, Bh. 1995. Devices for detecting and monitoring stored-product insects. Workshop Session. Stored-Grain Pest Management Training Conference, November 28, 1995, Alexandria, MN.

Subramanyam, Bh. 1994. The current status of residual protectants for stored grain. Stored-Grain Pest Management Training Conference, November 29 and 30, 1994, Alexandria and St. Paul, MN.

Subramanyam, Bh. 1994. The major components of a successful integrated pest management program in country elevators. Stored-Grain Pest Management Training Conference, November 29 and 30, 1994, Alexandria and St. Paul, MN.

Subramanyam, Bh. 1994. Residual products/alternatives. Hands-on session. IV National Stored-Grain Pest Management Training Conference, September 18-21, 1994, Manhattan, KS.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

- Subramanyam, Bh. 1994. Review of grain storage practices. Regional stored grain integrated pest management workshop, March 30, 1994, Fargo, ND.
- Subramanyam, Bh. 1993. Insect identification and management (includes five different topics). Grain Storage Management Short Course, North Branch Trinity Lutheran Church, February 23, 1993, North Branch, MN.
- Subramanyam, Bh. 1992. The role of stored-grain sampling for making IPM decisions. Stored Grain Pest Management Training Conference, November 17-20, 1992, New Ulm, St. Paul, and Detroit Lakes, MN.
- Subramanyam, Bh. 1992. Management of stored-grain insects. Fifth Annual Crops and Soils Seminar, February 6, 1992, Waconia, MN.
- Subramanyam, Bh. 1990. The 1990 Minnesota stored-grain insect survey. Stored Grain Pest Management Training Conference, December 3-7, 1990, New Ulm, St. Paul, and Detroit Lakes, MN.
- Subramanyam, Bh. 1990. Phosphine-tolerant insect control possibilities. Stored Grain Pest Management Training Conference, December 3-7, 1990, New Ulm, St. Paul, and Detroit Lakes, MN.
- Subramanyam, Bh. 1990. Pesticide resistance. III National Stored Grain Pest Management Conference, Embassy Suites Hotel, October 20-25, 1990, Kansas City, MO.
- Subramanyam, Bh. 1990. Insects and related Arthropods - identification, biology, damage, and control. Food Processing Pest Management Training Conference, Earle Brown Center, October 10-11, 1990, St. Paul, MN.
- Subramanyam, Bh. 1989. Correct identification of your pest is a basic necessity - insects and relatives. Food Processing Pest Management Training Conference, Earle Brown Center, October 11-12, 1989, St. Paul, MN.
- Subramanyam, Bh. 1986. 1986 insect infestation in Minnesota farm-stored corn, wheat, and barley. Stored Grain Pest Management Training Conference, Earle Brown Center, December 3-4, 1986, St. Paul, MN.
- Subramanyam, Bh. 1985. Detection and identification of stored-grain insects. Stored Grain Pest Management Training Conference, Earle Brown Center, December 11-12, 1985, St. Paul, MN.
- SHORT COURSE PREENTATIONS AT K-STATE, Total, 60**
- Subramanyam, Bh. 2014. Biological hazards. Establishing a HACCP for the Feed Industry, April 14 - 17, 2014. , International Grain Program and Conference Center, Manhattan, Kansas.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2014. Sanitation, food safety, and pest management in the feed industry. Establishing a HACCP for the Feed Industry, October 4-8, 2014. International Grains Program and Conference Center, Manhattan, Kansas.

Subramanyam, Bh. 2014. Sanitation, HACCP, and Pest Management. Extrusion Processing: Technology and Commercialization, August 11-14, 2014, International Grain Program and Conference Center, Manhattan, Kansas.

Subramanyam, Bh. 2013. Plant sanitation and pest management. Extrusion Processing: Technology and Commercialization. Short course, August 13-16, 2013, International Grains Program Conference Center, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2013. Developing a HACCP plan: issues to consider. Establishing a HACCP Program for the Feed Industry, April 1-4, 2013, International Grains Program Conference Center, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2013. HACCP for the feed manufacturing industry. Safe feed, safe food: Advanced feed manufacturing practices. Safe Feed, Safe Food: Advanced Feed Manufacturing Practices. AFIA-KSU Advanced Feed Manufacturing Short Course, February 18-21, 2013, International Grain Program and Conference Center, Manhattan, KS.

Subramanyam, Bh. 2013. Ensuring feed safety through a sanitation program and control. Safe Feed, Safe Food: Advanced Feed Manufacturing Practices. AFIA-KSU Advanced Feed Manufacturing Short Course, February 18-21, 2013, International Grain Program and Conference Center, Manhattan, KS.

Subramanyam, Bh. 2012. HACCP principles. Establishing a HACCP Program for the Feed Industry, April 9-12, 2012, IGP Conference Center, Manhattan, KS.

Subramanyam, Bh. 2012. Pest management and feed mill sanitation. South African Feed Manufacturing Training Activity, March 5-9, 2012, IGP Conference Center, Manhattan, KS.

Subramanyam, Bh. 2011. Integrated pest management. IAOM-KSU Resident Training Short Course on Managing Mill Performance, January 31-February 4, 2011, IGP Conference Center, Manhattan, KS.

Subramanyam, Bh. 2011. Biological, physical, and chemical hazards. Establishing HACCP for the Feed Industry, April 11-14, Clarion Hotel, Manhattan, KS.

Subramanyam, Bh. 2011. Sanitation and pest management. French Feed Safety Seminar, October 3-7, 2011, International Grain Program, and Conference Center, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2011. Postharvest protection at K-State. Foreign Agriculture Service Training Overview, June 30, 2011, International Grain Program and Conference Center, Kansas State University, Manhattan, KS.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2011. Sanitation issues and pest management in feed mill environments. Presentation to 5 USDA-Cochran Fellows from Ecuador and Venezuela, August 19, 2011, International Grain Program and Conference Center, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2011. Pest management and feed mill sanitation. Basic Feed Manufacturing Short Course, September 26-October 6, 2011, International Grain Program and Conference Center, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2010. Proactive approaches to food safety. Establishing a HACCP Program for the Feed Industry, October 18-21, 2010, International Grains Program and Conference Center, Manhattan, KS.

Subramanyam, Bh. 2010. Food grains security and safety. Jordanian delegates visiting K-State, September 30, 2010, Biological Industrial Value Added Program, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2010. Ensuring food safety and quality through sanitation and pest management. August 30, 2010. Nigerian Cochran Fellowship Program on Grain Standards and Grading, August 29 - September 11, 2010, International Grains Program and Conference Center, Manhattan, KS.

Subramanyam, Bh. 2010. Assuring grain security through proper storage management. Cochran Fellowship Program for Central Warehousing Corporation representatives from India, International Grains Program, August 14-25, 23, 2010, Manhattan, KS.

Subramanyam, Bh. 2010. Plant sanitation and pest management. Extrusion Processing: Technology and Commercialization Short Course, August 3-6, 2010, International Grain Program Conference Center, Manhattan, KS.

Subramanyam, Bh. 2010. Biological, physical, and chemical hazards. Establishing a HACCP Program for the Feed Industry, April 5-8, 2010, International Grains Program Conference Center, Manhattan, KS.

Subramanyam, Bh. 2010. Integrated pest management. International Association of Operative Millers-Kansas State University Resident Training Mill Performance Short Course, International Grain Program Conference Center, February, 1-5, 2010, Manhattan, KS.

Subramanyam, Bh. 2010. Maintenance of quality of sorghum in storage. United States Grains Council-United Sorghum Checkoff Program Usage Workshop, , International Grains Program Conference Center, January 25-26, 2010, Manhattan, KS.

Subramanyam, Bh. Feed pest management. US Grains Council Mediterranean DDGS and Sorghum Feed Workshop, International Grains Program Conference Center, October 26-30, 2009, Manhattan, KS.



## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2009. Biological, physical, and chemical hazards. American Feed Industry Association-Kansas State University Feed Manufacturing Short Course on Establishing a HACCP program for the Feed Industry, October 5-8, 2009, Manhattan, KS.

Subramanyam, Bh. 2009. Proactive approaches for food safety. American Feed Industry Association-Kansas State University Feed Manufacturing Short Course on Establishing a HACCP program for the Feed Industry, October 5-8, 2009, Clarion Hotel, Manhattan, KS.

Subramanyam, Bh. 2009. Ensuring feed safety and quality through sanitation and pest management. International Grains Program Feed Manufacturing Short Course, International Grains Program and Conference Center, September 28-October 8, 2009, Manhattan, KS.

Subramanyam, Bh. 2009. Sanitation and pest management. Extrusion Processing: Technology and Commercialization, International Grains Program Conference Center, August 11-14, 2009, Manhattan, KS.

Subramanyam, Bh. 2009. Integrated pest management. International Association of Operative Millers Kansas State University Resident Training Module Two: Managing Mill Performance, International Grains Program Conference Center, February 2-6, 2009, Manhattan, KS.

Subramanyam, Bh. 2008. Ensuring food safety and quality through sanitation and pest management (October 1, 2008). International Grains Program (IGP) Feed Manufacturing Short Course, International Grains Program Conference Center, Kansas State University, September 22-October 3, 2008, Manhattan, KS.

Subramanyam, Bh. 2008. Plant sanitation and pest management. Extrusion Processing: Technology and Commercialization, International Grains Program Conference Center, Kansas State University, August 12-15, 2008, Manhattan, KS.

Subramanyam, Bh. 2007. Producer perceptions about postharvest pest management. Department of Entomology Research and Extension Annual Conference, 137 Waters Hall, Kansas State University, November 7-8, 2007, Manhattan, KS.

Subramanyam, Bh. 2007. Pesticide laws, use, and residues. USDA/Cochran (North African) Grain Storage Short Course, International Grains Program and Conference Center, October 22-31, 2007, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2007. Ensuring feed quality through sanitation, inspections, and pest management. Feed Manufacturing Short Course, International Grains Program and Conference Center, Kansas State University, September 24-October 5, 2007, Manhattan, KS.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2007. Pest management in the feed mill. American Soybean Association China Feed Manufacturing Short Course, International Grains Program and Conference Center, Kansas State University, August 20-24, 2007, Manhattan, KS.

Subramanyam, Bh. 2007. Ensuring food quality and safety. Extrusion Processing: technology and Commercialization, International Grains Program and Conference Center Kansas State University, August 7-10, 2007, Manhattan, KS.

Subramanyam, Bh. 2007. Feed plant sanitation. Advanced Feed Mill Management (sponsored by KSU, AFIA, and NGFA), International Grains Program Conference Center, Kansas State University, April 3-6, 2007, Manhattan, KS.

Subramanyam, Bh. 2006. Sanitation and pest management. KSU-AFIA Feed Manufacturing Short Course Module One: Principles of Feed Manufacturing, Department of Grain Science and Industry, Kansas State University, June 6-9, 2006, Manhattan, KS.

Subramanyam, Bh. 2006. Integrated pest management. IGP Flour Milling Short Course, International Grains Program Conference Center, June 5-14, 2006, Manhattan, KS.

Subramanyam, Bh. 2005. Pest management in the feed mill. American Soybean Association Feed Manufacturing Short Course, International Grains Program Conference Center, September 6-9, 2005, Manhattan, KS.

Subramanyam, Bh. 2005. Pest management in the feed mill. Feed Manufacturing Short Course, International Grains Program Conference Center, September 27-October 7, 2005, Manhattan, KS.

Subramanyam, Bh. 2004. Integrated pest management. Flour Milling Short Course, International Grains Program, June 14-25, 2004, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2004. IPM in feed mills: new products and technologies. AFIA Feed Manufacturing Short Course, International Grains Program Conference Center, June 7-17, 2004, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2004. Pest management in the feed mill. US Grains Council (USGC) Feed Manufacturing Short Course, International Grains Program Conference Center, Kansas State University, May 10-21, 2004, Manhattan, KS.

Subramanyam, Bh. 2003. Pest management in the feed mill. Feed Manufacturing short course, International Grains Program, Kansas State University, September 22 - October 3, 2003, Manhattan, KS.

Subramanyam, Bh. 2003. Feed mill pest management. West African Feed Manufacturing Short Course, International Grains Program, Kansas State University, January 13 - 21, 2003, Manhattan, KS.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 2002. Pest management in the feed mill. Feed Manufacturing Short Course, International Grains Program, Kansas State University, September 23 - October 4, 2002, Manhattan, Kansas.

Subramanyam, Bh. 2002. Integrated pest management from the wheat to the flour mill. Price analysis and risk management short course, International Grains Program, Kansas State University, August 15, 2002, Manhattan, Kansas.

Subramanyam, Bh. 2002. Principles of flour mill sanitation. Flour Milling Short Course, International Grains Program, Kansas State University, June 3 - 14, 2002, Manhattan, Kansas.

Heat treatment to control flour mill insects. Flour Milling Short Course, June 3 - 14, 2002. International Grains Program, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2002. Integrated pest management. Flour Milling Short Course, June 3 - 14, 2002. International Grains Program, Kansas State University, Manhattan, KS.

Subramanyam, Bh. 2002. Integrated pest management. AFIA Feed manufacturing short course, International Grains Program, Kansas State University, June 3 - 13, 2002, Manhattan, KS.

Subramanyam, Bh. 2002. Feed mill pest management. West African Feed Manufacturing Short Course, International Grains Program, Kansas State University, January 13 - 21, 2002, Manhattan, KS.

Flour mill insects and their management. Flour Milling Short Course, International Grains Program, Kansas State University, June 4 - 15, 2001, Manhattan, KS.

Nutritional ecology of stored-product insects and mites. Feed Manufacturing Short Course, September 25 - October 6, 2000, International Grains Program, Kansas State University, Manhattan, KS.

Temperature profiles. Second Heat Treatment Workshop, Kansas State University, August 14 -16, 2000, Manhattan, KS.

Integrated pest management. AFIA Feed Manufacturing Short Course, International Grains Program, Kansas State University, June 5 - 15, 2000, Manhattan, KS.

Subramanyam, Bh. 2000. Use of pesticides and pest management practices in the US Wheat Marketing System. South Korean Grain Group, Kansas State University, May 1, 2000, Manhattan, KS.

Subramanyam, Bh. 1999. Insect bioassays and insect numbers before and after heat treatment. First Heat Treatment Workshop, Kansas State University, August 4 - 6, 1999, Manhattan, KS.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Subramanyam, Bh. 1999. Nutritional ecology of stored-product insects and mites. Feed Manufacturing Short Course, International Grains Program, 1999, Kansas State University, September 27 - October 8, Manhattan, KS.

### **MISCELLANEOUS ACTIVITIES/GUEST LECTURES GIVEN, Total 37.**

- Guest lecture on Food Safety, sanitation, and pest management in GRSC 101 Introduction to Grain Science, November 10, 2014.
- Two lectures, one in GRSC 900 Seminar course on Experimental design and data analyses, and two in GRSC 905 Professional Development course on Writing a scientific article and on Grant proposal preparation.
- Guest lecture on Control of mites and insects in pet food packages using modified atmospheres, GRSC 645 Pet Food Processing, December 12, 2013.
- Guest lecture on Food safety, sanitation, and pest management, GRSC 101 Introduction to Grain Science, November 22, 2013.
- Guest lecture on Experimental design, data analysis, and data management, GRSC 900 Seminar in Grain Science, November 7, 2013.
- Guest lecture on Process of writing a scientific paper, GRSC 900 Seminar in Grain Science, October 17, 2013.
- Guest lecture on Agricultural and Food Processing Industry in India, GenAg 200 International Agriculture, April 24, 2013.
- Guest lecture on Grant proposal preparation, GRSC 920 Professional development in Grain Science, February 27, 2013.
- Guest lecture on International Agriculture on Agriculture and Food Processing Industry in India, GENAG 200 course on International Agriculture, 2012, Spring semester.
- Guest lecture on The Process of Writing a Scientific Paper, GRSC 900 Seminar Class, 2012, Fall semester.
- One guest lectures on Sanitation and Pest Management, GRSC 101 Introduction to Grain Science, 2012, Fall semester.
- Organized Vernon Larson Lecture Series for Fall 2011 and Spring 2012 as a member of the Executive Committee, K-State Friends of International Programs, Manhattan, KS.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

- Panel discussion with four other K-State faculty members during a visit of International Officers from the US Army Command and General Staff College, International student Military Division at Fort Leavenworth, September 6, 2011, Holiday Inn, Manhattan, KS (116 officers from 86 countries).
- Gave a presentation on identifying stored-product insects to 7 Cochran Fellows from Tajikistan, April 30-May 14, 2011, Kansas State University, Manhattan, KS.
- Officers from the US Army Command and General Staff College, International student Military Division at Fort Leavenworth, September 23, 2010, Alumni Center, Kansas State University, Manhattan, KS.
- Met with Tacarra Birmingham, USDA/FAS Borlaug Program, November 17-18, 2010, at Kansas State University regarding role of K-State in India and Africa Borlaug Fellowship Programs.
- Guest lecture on Grant Proposal Preparation, GRSC 905, Professional Development Course 920, 2010, Spring semester.
- Guest lecture on International Agriculture on Agriculture and Food Processing Industry in India, GENAG 200 course on International Agriculture, 2010, Spring semester.
- Guest lecture on The Process of Writing a Scientific Paper, GRSC 900 Seminar Class, 2010, Fall semester.
- Three guest lectures on Sanitation and Pest Management, GRSC 101 Introduction to Grain Science, 2010, Fall semester.
- Hosted scientists/representatives from Altria Client Services interested in management of insects in their facilities. Altria Client Services visit to K-State Campus, January 12, 2010.
- Guest lecture on Grant Proposal Preparation, GRSC 905, Professional Development Course 905, 2009, Spring semester.
- Guest lecture on Retail industries and Food Parks in India, GENAG 200 International Agriculture, 2009 Spring semester.
- Guest lecture on The Process of Writing a Scientific Paper, GRSC 900 Seminar Class, 2009, Fall semester.
- Four guest lectures on Sanitation, Food Safety, and Pest Management, GRSC 101 Introduction to Grain Science, 2009, Fall semester.
- Four guest lectures on Sanitation, Food Safety, and Pest Management, GRSC 101 Introduction to Grain Science, 2008, Spring and Fall semesters.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

- Four guest lectures on Sanitation, Food Safety, and Pest Management, GRSC 101 Introduction to Grain Science, 2007, Spring and Fall semesters.
- How to give effective presentations. GRSC 900, 2003, Fall semester.
- How to give effective presentations. GRSC 900 class, 2002, Fall semester.
- Bridging the cultural gap. September 23, 2002. Talk given to new Indian students starting their graduate studies at K-State.
- Giving effective presentations. GRSC 900, 2001, Fall semester.
- Heat treatments. Guest lecture, ENTOM 805 course, 2000, Spring semester.
- Objectives of the retail pet store trapping program. Kansas State University. To Petco and PetSmart Managers, Department of Entomology, Kansas State University, November 17, 2000. Manhattan, KS.
- Some issues to consider when presenting research results. GRSC 900, 1999, Fall semester.
- Participated in the USDA/CSREES Equal Opportunity Staff Compliance Review of Research Programs at K-State by meeting Mr. Dick Lorah in September 1, 1999.

### **PAPERS OR POSTERS PRESENTED AT PROFESSIONAL MEETINGS**

*At Kansas State University (1999-present), Total 141*

Andrada, M., and Bh. Subramanyam. 2014. Infestation of *Rhyzopertha dominica* (F.) first instars on sound and artificially-damaged hard red winter wheat kernels. 69<sup>th</sup> Annual Meeting of the North Central Branch Entomological Society of America, March 9-12, 2014, Des Moines, Iowa.

Sehgal, B., and Bh. Subramanyam. 2014. Evaluation of a new deltamethrin formulation on concrete surfaces and wheat against field strains of three stored-grain insect species. 69<sup>th</sup> Annual Meeting of the North Central Branch Entomological Society of America, March 9-12, 2014, Des Moines, Iowa.

Subramanyam, Bh., K. Ambrose, D. E. Maier, and Y-L. Ren. 2014. 3038: Evaluating chlorine dioxide and ozone for controlling phosphine-resistant insects in on-farm and commercial bulk storages. Science Exchange, Cooperative Research Centre Plant Biosecurity, May 5-7, 2014, Brisbane, Australia.

## CURRICULUM VITAE: Bhadriraju Subramanyam

Campbell, J. F., K. Buckman, P. Fields, and Bh. Subramanyam. 2014. Using meta-analysis to analyze efficacy data from multiple mill studies. 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand.

Andrada, M., and Bh. Subramanyam. 2014. Infestation of *Rhyzopertha dominica* (F.) first instars on sound and artificially-damaged hard red winter wheat kernels. 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand.

Subramanyam, Bh., X. E., S. Savoldelli, B. Sehgal, D. E. Maier, and Y-L. Ren. 2014. Efficacy of ozone against stored grain insect species in wheat: laboratory and field observation. 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand.

Subramanyam, Bh., and B. Sehgal. 2014. Presence and distribution of red flour beetles in a city neighborhood surrounding a grain-cleaning facility. 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand.

Subramanyam, Bh., R. M. Mahroof, S. Washburn, P. V. Reddy, K. R. Ambrose, and D. E. Maier. 2014. Enhancing food security in Ethiopia through reduction of postharvest losses and food wastes. 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand.

Subramanyam, Bh., J. Lu, and B. Sehgal. 2014. Laboratory evaluation of a synthetic zeolite against seven stored-grain insect species. 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand.

Bian, Q., K. Ambrose, and Bh. Subramanyam. 2014. Effect of *Rhyzopertha dominica* (F.) infestations on bulk wheat flowability. 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand.

Frederick, J., Bh. Subramanyam, and H. Dogan. 2014. Evaluation of a heat treatment based on trapping data, temperature profiles, and bioassays. 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand. [Poster]

Scheff, D., Bh. Subramanyam, B. Sehgal, and H. Dogan. 2014. Resistance of three energy bar packages to penetration by *Plodia interpunctella* (Hübner) larvae. 11<sup>th</sup> International Working Conference on Stored-Product Protection, November 24-28, 2014, Chiang Mai, Thailand. [Poster]

Subramanyam, Bh. 2013. Science impacting a connected world: solving a red flour beetle nuisance in a city neighborhood. Member Symposium, Stored-product entomology: impacts on a connected world. Entomological Society of America Annual Meeting, November 10-13, 2013, Austin, TX.

Ghimire, M. N., Bh. Subramanyam, and P. W. Flinn. 2013. Effects of direct and residual exposure of aerosols on adult emergence of *Habrobracon hebetor* (Say) (Hymenoptera:

## CURRICULUM VITAE: Bhadriraju Subramanyam

Braconidae). Entomological Society of America Annual Meeting, November 10-13, 2013, Austin, TX. [Poster].

Sehgal, B., Bh. Subramanyam, F. H. Arthur, and B. Gill. 2013. Efficacy of  $\beta$ -cyfluthrin and chlorpyrifos-methyl plus deltamethrin applied to concrete surfaces against field strains of three stored grain insect species. 9<sup>th</sup> Conference of IOBC-WPRS Working Group on Integrated Protection of Stored Products, July 1-4, 2013, Bordeaux, France.

Subramanyam, Bh., D. W. Hagstrum, and B. Sehgal. 2013. Sampling adults of stored-product insects: detection and mean retention efficacy of cracked corn and food mixture bait. 9<sup>th</sup> Conference of IOBC-WPRS Working Group on Integrated Protection of Stored Products, July 1-4, 2013, Bordeaux, France.

Sehgal, B., Bh. Subramanyam, D. R. Boina, and F. Lazzari. 2013. Efficacy of partial treatment of wheat with spinosad against adults of the lesser grain borer, *Rhyzopertha dominica* (F.). North Central Branch Entomological Society of America Annual Meeting, June 16 - 19, 2013, Rapid City, SD.

Andrada, M., and Bh. Subramanyam. 2013. Infestation behavior of *Rhyzopertha dominica* first instars on hard red winter wheat kernels: preliminary observations. North Central Branch Entomological Society of America Annual Meeting, June 16 - 19, 2013, Rapid City, SD.

Sotiroudas, V., C. Athanassiou, and Bh. Subramanyam. 2012. Heat treatment of mills in Greece. Symposium on a Global View of Stored-Products Research: Emerging Concepts and Applications. Entomological Society of America Annual Meeting, November 11-14, 2012, Knoxville, TN.

Buckman, K., J. F. Campbell, and Bh. Subramanyam. 2012. Efficacy of fumigation for management of red flour beetle infesting rice mills. Member Symposium: A Global View of Stored-Products Research: Emerging Concepts and Applications. Entomological Society of America Annual Meeting, November 11-14, 2012, Knoxville, TN.

Sehgal, B. and Bh. Subramanyam. 2012. Susceptibility of field strains of three stored product insect species to spinosad and chlorpyrifos-methyl + deltamethrin. Member Symposium: A Global View of Stored-Products Research: Emerging Concepts and Applications. Entomological Society of America Annual Meeting, November 11-14, 2012, Knoxville, TN.

Lawrence, J., Bh. Subramanyam, D. E. Maier, and W. Chayaprasert. 2012. Efficacy of sulfuryl fluoride against eggs and adults of *Tribolium castaneum* in commercial facilities. 9<sup>th</sup> Intl. Conf. on Controlled Atmosphere and Fumigation in Stored Products, October 15 - 19, 2012, Antalya, Turkey.

Subramanyam, Bh., R. Hulasare, M. Brijwani, and M. Leitman. 2012. Effectiveness of heat treatments against *Tribolium castaneum* life stages in two commercial facilities. 9<sup>th</sup> Intl. Conf. on Controlled Atmosphere and Fumigation in Stored Products, October 15 - 19, 2012, Antalya, Turkey.



## CURRICULUM VITAE: Bhadriraju Subramanyam

Channaiah, L. H., C. Wright, Bh. Subramanyam, and D. E. Maier. 2012. Evaluation of chlorine dioxide gas against eggs, larvae, and adults of *Tribolium castaneum* and *Tribolium confusum*. 9<sup>th</sup> Intl. Conf. on Controlled Atmosphere and Fumigation in Stored Products, October 15 - 19, 2012, Antalya, Turkey.

Subramanyam, Bh., L. H. Channaiah, C. Campabadal, J. Lawrence, L. Cardoso, and D. E. Maier. 2012. Evaluation of silo bags for temporary storage of wheat. 9<sup>th</sup> Intl. Conf. on Controlled Atmosphere and Fumigation in Stored Products, October 15 - 19, 2012, Antalya, Turkey.

Lawrence, J., D. E. Maier, Bh. Subramanyam, and W. Chayaprasert. 2012. Mill pressurization test quantifies fumigant leakage rates during sulfuryl fluoride and methyl bromide fumigation of commercial flour mills. 9<sup>th</sup> Intl. Conf. on Controlled Atmosphere and Fumigation in Stored Products, October 15 - 19, 2012, Antalya, Turkey.

Subramanyam, Bh. 2012. International collaboration in developing food protection programs in developing countries. Symposium on "Protecting Food Supply from Insect Damage: Collaboration Between Research and Application in the North Central Branch". North Central Branch Entomological Society of America Annual Meeting, June 3-6, 2012, Lincoln, NE.

Sehgal, B., Subramanyam, Bh., and F. H. Arthur. 2012. Variation in susceptibility of laboratory and field strains of three stored product insect species to insecticides recommended for empty bin treatments. North Central Branch Entomological Society of America Annual Meeting, June 3-6, Lincoln, NE. [Oral; won second prize].

Subramanyam, Bh., D. R. Boina, F. Lazzari, K. Mutambuki, and T. Prasad. 2011. Factors affecting spinosad toxicity to the lesser grain borer *Rhyzopertha dominica*. In Session on "Contact Insecticides", Conference of the Integrated Organisation for Biological and Integrated Control of Noxious Animals and Plants/West Palearctic Regional Section Working Group on "Integrated Protection of Stored Products", University of Thessaly, July 4-7, Volos, Greece.

Xue, M., Bh. Subramanyam, J. F. Campbell, and Y-C. Shi. 2011. The effects of feeding time, feeding status, and specific nutrients on *Tribolium castaneum* oviposition. North Central Branch Entomological Society of America Annual Meeting, May 13-16, 2011, Minneapolis, MN.

Brijwani, M., Bh. Subramanyam, P. W. Flinn, and M. R. Langemeier. 2011. Effectiveness and costs of three heat treatments in a pilot flour mill. North Central Branch Entomological Society of America Annual Meeting, May 13-16, 2011, Minneapolis, MN.

Subramanyam, Bh., M. Brijwani, M. Hartzer, P. W. Flinn, and J. F. Campbell. 2011. Effectiveness of commercial heat treatments in food-processing facilities. North Central Branch Entomological Society of America Annual Meeting, May 13-16, 2011, Minneapolis, MN.

## CURRICULUM VITAE: Bhadriraju Subramanyam

Subramanyam, Bh., T. Prasad, M. Hartzler, and D. R. Boina. 2011. Factors affecting spinosad toxicity to stored-product insects. North Central Branch Entomological Society of America Annual Meeting, May 13-16, 2011, Minneapolis, MN.

Brijwani, M., Bh. Subramanyam, P. W. Flinn, and M. R. Langemeier. 2011. Influence of sanitation on responses of red flour beetle life stages during flour mill heat treatments. NC-213, "Marketing and Delivery of Quality Grains and Bioprocess Coproducts", February 16-17, 2011, Kansas City, MO.

Hartzler, M., and Bh. Subramanyam. 2011. Performance of precommercial release formulations of spinosad against five stored-product insects on three commodities. NC-213, "Marketing and Delivery of Quality Grains and Bioprocess Coproducts", February 16-17, 2011, Kansas City, MO.

Subramanyam, Bh. 2010. Differences in susceptibility of stored-product insects to high temperatures used during structural heat treatments. Symposium on Diversity in Stored Product Pests, Their Biology, and Management Solutions. Annual Meeting of the Entomological Society of America, December 12-15, 2010, San Diego, CA.

Brijwani, M., Bh. Subramanyam, P. W. Flinn, and M. Langemeier. 2010. Responses of *Tribolium castaneum* life stages to elevated temperatures. Annual Meeting of the Entomological Society of America, December 12-15, 2010, San Diego, CA. [Oral, won the first prize].

Hartzler, M., Bh. Subramanyam, M. Brijwani, W. Chayaprasert, and D. E. Maier. 2010. Methyl bromide, sulfuryl bromide, and heat: effectiveness against red flour beetle. 2010 Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions, November 2-5, 2010, Double Tree Hotel, Orlando, FL.

Subramanyam, Bh. 2010. Effectiveness of methyl bromide, sulfuryl fluoride, and heat treatment against life stages of the red flour beetle. Workshop on Methyl bromide and Alternatives in Food Plants: Past, Present, and Future, May 11-13, 2010, Kansas State University, International Grain Program Conference Center, Manhattan, KS.

Hartzler, M., Bh. Subramanyam, W. Chayaprasert, D. E. Maier, S. Savoldelli, J. F. Campbell, and P. W. Flinn. 2010. Methyl bromide and sulfuryl fluoride effectiveness against red flour beetle life stages. Session on Fumigation, Modified Atmospheres, and Hermetic Storage, Monday June 28, 2010. 10th International Working Conference on Stored Product Protection, June 27 - July 2, 2010, Estoril Conference Centre, Estoril, Portugal.

Chayaprasert, W., D. E. Maier, and Bh. Subramanyam. 2010. Comparison of leakage rates of methyl bromide and sulfuryl fluoride during structural fumigations. Session on Engineering, Tuesday June 29, 2010. 10th International Working Conference on Stored Product Protection, June 27 - July 2, 2010, Estoril Conference Centre, Estoril, Portugal.

## CURRICULUM VITAE: Bhadriraju Subramanyam

Hulasare, R., Bh. Subramanyam, P. G. Fields, and A. Y. Abdelghany. 2010. Heat treatment: a viable methyl bromide alternative for managing stored-product insects in food-processing facilities. Session on Non-chemical Control, Monday June 28, 2010. 10th International Working Conference on Stored Product Protection, June 27 – July 2, 2010, Estoril Conference Centre, Estoril, Portugal.

Flinn, P. W., J. F. Campbell, J. E. Throne, and Bh. Subramanyam. 2010. Simulation model of the red flour beetle in flour mills. Session on Integrated Pest Management, Thursday, July 1, 2010. 10th International Working Conference on Stored Product Protection, June 27 – July 2, 2010, Estoril Conference Centre, Estoril, Portugal.

Xue, M., Bh. Subramanyam, Y. C. Shi, J. F. Campbell, and M. Hartzler. 2010. Development, relative retention, and fecundity of *Tribolium castaneum* (Herbst) on different starches. Poster Session, June 29, 2010. 10th International Working Conference on Stored Product Protection, June 27 – July 2, 2010, Estoril Conference Centre, Estoril, Portugal. [Poster].

Chayaprasert, W., D. E. Maier, and Bh. Subramanyam. 2010. A simplified and improved modeling approach for the structural fumigation process using computation fluid dynamics. Poster Session, June 29, 2010. 10th International Working Conference on Stored Product Protection, June 27 – July 2, 2010, Estoril Conference Centre, Estoril, Portugal. [Poster].

Khamis, M., Bh. Subramanyam, H. Dogan, P. W. Flinn, and J. A. Gwirtz. 2010. Effectiveness of flameless catalytic infrared radiation against life stages of three stored-product insect species in stored wheat. Poster Session, June 29, 2010. 10th International Working Conference on Stored Product Protection, June 27 – July 2, 2010, Estoril Conference Centre, Estoril, Portugal. [Poster].

Brijwani, M., Bh. Subramanyam, P. W. Flinn, and M. R. Langemeier. 2010. Structural heat treatments against *Tribolium castaneum* (Herbst) (Coleoptera: Tenebrionidae): effect of flour depth, life stage, and floor. Poster Session, June 29, 2010. 10th International Working Conference on Stored Product Protection, June 27 – July 2, 2010, Estoril Conference Centre, Estoril, Portugal. [Poster].

Subramanyam, Bh. 2010. Stored grain insects: a major threat to food security. Acharya N. G. Ranga Agricultural University, June 2, 2010, Rajendranagar, Hyderabad, Andhra Pradesh, India.

Subramanyam, Bh. 2010. Implementation of India's 2006 National Food Safety and Standards Act. Kansas State University Workshop on Implementing Food Safety in India: Issues and Challenges, India International Centre, May 31, 2010, New Delhi, India.

Subramanyam, Bh. 2010. Ensuring food safety through multifaceted programs. Kansas State University Workshop on Implementing Food Safety in India: Issues and Challenges, India International Centre, May 31, 2010, New Delhi, India.

## CURRICULUM VITAE: Bhadriraju Subramanyam

Subramanyam, Bh. 2010. Pest management and food safety. Kansas State University Workshop on Implementing Food Safety in India: Issues and Challenges, India International Centre, May 31, 2010, New Delhi, India.

Subramanyam, Bh. 2010. Stored-grain insects: a major threat to food security. Kansas State University-Punjab Agricultural University Joint Workshop on Accomplishing Food Security of Stored Grains Through Novel Storage Practices, Punjab Agricultural University, Ludhiana, May 27, 2010, Punjab, India.

Subramanyam, Bh. 2010. Chemical and nonchemical methods for management of stored-grain insects. Kansas State University-Punjab Agricultural University Joint Workshop on Accomplishing Food Security of Stored Grains Through Novel Storage Practices, May 27, 2010, Punjab Agricultural University, Ludhiana, May 27, 2010, Punjab, India.

Subramanyam, Bh. 2010. Heat treatment versus fumigation to control insects in a grain handling/processing facility. International Association of Operative Millers Annual Conference & Expo, April 19-23, 2010, Las Vegas, NV.

Lakshmikantha H. C., Bh Subramanyam, and L. Zurek. 2010. Horizontal transfer of tetracycline resistance gene tetM from *Enterococcus faecalis* isolated from stored-product insects and animal feed to *Enterococcus faecalis* OG1SSp. Research paper presented at the American Society for Microbiologist, Missouri-Valley Branch Meeting, April 9-10, Manhattan, KS.

Xue, M., Bh. Subramanyam, Y. C. Shi, and J. F. Campbell. 2010. Development, relative retention, and productivity of red flour beetle on resistant starches. K-State Research Forum, Leadership Studies Building Room 111, April 2, 2010, Kansas State University, Manhattan, KS.

Brijwani, M., Bh. Subramanyam, P. W. Flinn, and M. Langemeier. 2010. Efficacy of structural heat treatments against *Tribolium castaneum* (Coleoptera: Tenebrionidae) life stages. K-State Research Forum, Leadership Studies Building, April 2, 2010, Kansas State University, Manhattan, KS. [Oral, won second prize].

Savoldelli, S., Bh. Subramanyam, and D. E. Maier. 2009. Response of *Rhyzopertha dominica* adults (Coleoptera: Bostrichidae) to different ozone concentrations and time periods. Annual Meeting of the Entomological Society of America, December 13-16, 2009, Indianapolis, IN.

Brijwani, M., Bh. Subramanyam, P. W. Flinn, and M. Langemeier. 2009. Effect of different sanitation levels on survival of *Tribolium castaneum* (Coleoptera: Tenebrionidae) exposed to high temperatures during heat treatment of a flour mill. Annual Meeting of the Entomological Society of America, December 13-16, 2009, Indianapolis, IN.

Xue, M., Bh. Subramanyam, J. F. Campbell, and Y. C. Shi. 2009. Development of *Tribolium castaneum* on resistant starches. Annual Meeting of the Entomological Society of America, December 13-16, 2009, Indianapolis, IN.

## CURRICULUM VITAE: Bhadriraju Subramanyam

Chayaprasert, W., D. E. Maier, and Bh. Subramanyam. 2009. Comparing leakage rates of methyl bromide and sulfuryl fluoride during fumigations in a flour mill under nearly identical sealing conditions. 2009 Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions, November 10-13, 2009, San Diego, CA.

Brijwani, M., Bh. Subramanyam, P. W. Flinn, M. Hartzler, and S. Savoldelli. 2009. Efficacy of a structural heat treatment against *Tribolium castaneum* life stages. 2009 Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions, November 10-13, 2009, San Diego, CA.

Xue, M., Bh. Subramanyam, and J. F. Campbell. 2009. Development, relative retention, and productivity of red flour beetle on resistant starches. 2009 Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions, November 10-13, 2009, San Diego, CA.

Hartzler, M., Bh. Subramanyam, W. Chayaprasert, D. E. Maier, and S. Savoldelli. Methyl bromide and sulfuryl fluoride effectiveness against red flour beetle life stages. 2009 Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions, November 10-13, 2009, San Diego, CA.

Lakshmikantha H. C, Bh Subramanyam, and L. Zurek. 2009. Survival of *Enterococcus faecalis* (OG1RF:pCF10) in poultry and cattle feed; vector competence of red flour beetle, *Tribolium castaneum* (Herbst). American Society for Microbiology, Missouri-valley branch meeting, March 27-28, Lawrence, KS. [Oral, won second prize].

Moses, K., Bh. Subramanyam, H. Dogan. 2009. Survival of three stored-product insects exposed to flameless catalytic infrared radiation. North Central Branch Entomological Society of America Annual Meeting, March 15-18, St. Louis, MO.

Moses, K., Bh. Subramanyam, H. Dogan, and J. Gwirtz. 2009. Effects of flameless catalytic infrared radiation on stored-wheat insects and wheat quality. NC-213 Annual Meeting, February 18-20, 2009, Kansas City, KS.

Subramanyam, Bh. 2008. My stored-product entomology career: metamorphose or become extinct. Symposium on Stored-product pest management: decades of change, recent advances, and challenges for the future. Annual Meeting of the Entomological Society of America, November 16-19, 2008, Reno, NV.

Channaiah, L. K., Bh. Subramanyam, and L. Zurek. 2008. Polyphasic characterization of antibiotic resistant and virulent enterococci isolated from feed and stored-product insects. Annual Meeting of the Entomological Society of America, November 16-19, 2008, Reno, NV.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Khamis, M., and Bh. Subramanyam. 2008. Factors influencing effectiveness of flameless infrared radiation in disinfesting stored wheat. Annual Meeting of the Entomological Society of America, November 16-19, 2008, Reno, NV.

Subramanyam, Bh. 2008. Optimizing heat treatments. Evening Workshop. 8<sup>th</sup> International Conference on Controlled Atmosphere and Fumigation in Stored Products, September 21-26, 2008, Chengdu, China.

Subramanyam, Bh. 2008. Control of mites and insects in pet food packages using controlled atmospheres. Session 1 on Advances in basic studies on the application of controlled atmospheres (CA) and fumigation. 8<sup>th</sup> International Conference on Controlled Atmosphere and Fumigation in Stored Products, September 21-26, 2008, Chengdu, China.

Lazzari, F., Bh. Subramanyam, X. Hou. 2008. Characterizing effectiveness of structural heat treatments against insect species in three commercial facilities. North Central Branch, Entomological Society of America Annual Meeting, March 24-28, 2008, Columbus, OH.

Subramanyam, Bh. 2008. Remote monitoring of temperature and insect survival during facility heat treatments. NC-213 "Marketing of Quality Grains and Bioprocess Coproducts", February 25-26, 2008, Omaha, NE.

Lazzari, F., Bh. Subramanyam, and X. Hou. 2007. Optimizing and gauging heat treatment effectiveness in food-processing facilities. Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions, October 29-November 1, 2007, San Diego, CA.

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*Contributed frequently to our extension service newsletter, Plant-Pest Newsletter (now Minnesota Crop News).*

### **GRADUATE STUDENT ADVISING**

#### **M.S. Advised/Graduation year**

Liang Fang 2002

Andy Allen 2004

Zeb Larson 2004

Dhana Raj Boina 2004

Anna Getchell 2006

Chun Yu 2008

Khamis Moses 2009

Xue Meng 2010

Monica Brijwani 2011

Aiswariya Deliephan 2013

Blossom Sehgal 2013

Gustavo Correa (Spring 2015, expected)

Kouame Yao (Fulbright Scholar) 2014

Purnima Rai 2014

Sarah Byington (Spring 2015, expected)

#### **Ph.D. Advised/Graduation year**

Rizana Mahroof 2006

Lakshmikantha Channaiah 2009

Dennis Tilley 2013

Mario Andrada (2016, expected)

Jennifer Fredrick (2015, expected)

Deanna Scheff (2016, expected)

#### **M.S. Co-advised/Graduation year**

Mario Andrada 2004 (Agronomy)

Sam Smith 2005 (Grain Science)

Jeannette Muhareb 2010 (MAB)

Sunil Bansal 2010 (Grain Science)

Kabita Kharel 2013 (Entomology)

Qi Bian 2014 (Grain Science)

Stephen Losey (Entomology; 2016, expected)

Aaron Cato (Entomology; 2016, expected)

Edwin Afful (Entomology; 2016, expected)

#### **Ph.D. Co-advised/Graduation year**

Yaowaluk Changbang 2005 (Entomology)

Godfrey Chin'goma 2006 (Entomology)

Elisa Karkle 2011 (Grain Science)

Angela Tucker 2012 (Entomology)

Barbara Amoah (Entomology, 2015 expected)

Salahe Abbar (Entomology, 2015 expected)

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Moustapha Soumalia Issa (Entomology, 2018  
expected)

- I served as an external Chair on several PhD defense oral examinations (total 5 since joining K-State in 1999).
- I also advised two undergraduates as part of MANNRS and SUROP at K-State. Chassity Wright (2011, 2012) from Tuskegee University, AL and Ezinne Charity Onuoha (2013) from Prairieview A & M University, TX.

### **POSTDOCTORAL RESEARCH ASSOCIATES/RESEARCH ASSISTANTS SUPERVISED (1999-Present) AND THEIR CURRENT POSITION**

Dr. E. Xinyi (2014 – present)

Ms. Blossom Sehgal (2013-2014)

Dr. Marie Stella Doyungan, Instructor, Texas, A & M University, TX

Dr. Anil Menon, BASF, Research Triangle Park, NC.

Dr. Rennie Roesli, Teacher in Washington State.

Dr. Michael Toews, Associate Professor, Department of Entomology, University of Georgia, Tifton, GA.

Dr. Fangneng Huang, Associate Professor, Department of Entomology, Louisiana State University, Baton Rouge, LA.

Dr. Frank Padula, Hudson Valley Community College, Troy, NY.

Dr. Rizana Mahroof, Associate Professor, South Carolina State University, Orangeburg, SC.

Dr. Aqeel Ahmad, Monsanto, St. Louis, MO.

Dr. Xingwei Hou, Pest Management Regulatory Authority, Health Canada.

Dr. Dhana Raj Boina, Assistant Director, National Institute of Plant Health Management, Ministry of Agriculture, Government of India, Rajendranagar, Hyderabad, India.

Dr. Mukti Ghimire (2011-2013). Currently working for USDA in NJ.

### **VISITING SCIENTISTS**

Dr. Lu Jianhua, Henan University of Technology, Zhengzhou, China, January 28, 2013-  
January 22, 2014.

Mr. Robert Emery, CSIRO, New South Wales, July 21-25, 2010.

Dr. Grant Hamilton, University of Queensland, August 19-26, 2010.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Mr. Kimondo Mutambuki, Kenyan Agricultural Research Institute, November 11 – 29, 2010.

Dr. Paul Fields, Agri-Food Canada, during February 9-14, 2009.

Dr. Srinivas Maloo and Dr. Kavitha Waghay, Department of Food Technology, Osmania University, Hyderabad, Andhra Pradesh, March 21-28, 2009

Mrs. Jaitip Uraichuen and Mrs. Atchara Pedchote, Ministry of Agriculture, Thailand, March 23-April 2, 2009.

Dr. Telavrolu Venkara Prasad, National Research Centre, Junaghad, India who spent six weeks in my laboratory as a USDA Borlaug Fellow during March 18-29, 2009.

Dr. Sara Savoldelli, University of Milan, May 8 and August 8, 2009.

Prof. Weili Liang, Hebei Agricultural University, Baoding, and Prof. Wangsheng Gao, China Agricultural University, Beijing, August 28, 2009

Mr. Jan von Graver, CSIRO Fellow, August, 28 to September 1, 2009.

Dr. Yongxue Deng, Assistant Professor, Southwest University, Chongqing, China, August 1, 2007-July 31, 2008.

Dr. Francisco Javier Wong Corral, Professor, Universidad de Sonora April 21 to May 15, 2007

Dr. Christos Athanassiou, Lecturer, Laboratory of Agriocultural Zoology & Entomology, University of Athens, July 2007

Dr. Flavio Lazzari, Consultant & Adjunct Professor, University of Curitiba, July 1, 2006 to August 1, 2007

Dr. Maria Otilio Carvalho, Instituto Investigação Científica Tropical (IICT), Lisboa, Portugal, summer 2006

Dr. Brighton Mvumi, Lecturer, University of Zimbabwe, summer 2005

Dr. Pagadala Eswara Prasad, Sri Venkateshwara University, Tirupati, FAO Fellow from India, November 1999.

Ms. Maria Christina DePaulo and Ms. Marcia Atui from Brazil, visited K-State to learn about diatomaceous earth dusts and to determine contamination of food stuffs with insect fragments, summer 1999.

### **STUDY ABROAD INVOLVEMENT**

Study Abroad Trip: Agriculture and Food Processing in India (GRSC 790, 3 credits)  
May 21-June 6, 2010.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Helped in the initial planning, coordination, and conclusion of this study abroad trip in conjunction with Dr. Sajid Alaivi and Dr. Hulya Dogan of my department.

### **DISTANCE EDUCATION COURSE**

In 2011 I developed a distance education course, “GEAPS 525: Management of insects in Stored Grains” ([http://www.geaps.com/knowledge/dist\\_learn/course\\_525.cfm](http://www.geaps.com/knowledge/dist_learn/course_525.cfm)). The course has 10 modules, and it was offered April 25-May 28, 2011 and in March 19-April 20, 2012. A total of 26 domestic and international students registered for this course in 2011 and 18 in 2012; the feedback from students was very positive. This course was offered again in 2013 with 18 participants.

### **USAID GUIDE**

Menczer, K., Bhadriraju Subramanyam, Maureen Babu, and Alan Schroeder. 2013. Programmatic Environmental Assessment for Fumigation of Title II Food Aid Commodities. United States Agency for International Development (USAID), USAID’s Global Environmental Management Support (GEMS) project, Washington, D. C., pages 189.

This guide was developed based on visits to Ethiopia and Djibouti as part of USAID Team during April 11-26, 2012. The recommendations in the guide will be implemented by all cooperating sponsors receiving USAID.

### **SOFTWARE PROGRAMS DEVELOPED**

**HEAT TREATMENT CALCULATOR:** I developed a software program, Heat Treatment Calculator, in Visual Basic, to calculate heat energy required to heat any commercial food-processing facility. This program will allow users to conduct a heat treatment of their facility on a computer during different times of the year and also estimate costs based on use of different energy sources used for heating (natural gas, propane, electricity, etc.). This program was validated in a pasta facility in 2006 and it closely predicted the actual heat energy consumed by the facility for conducting a 16-17 hour heat treatment.

**EARTH SOFTWARE:** A software, written in JavaScript (Efficacy Assessment in Real Time during Heat treatments), was developed to acquire temperature data during heat treatment of facilities through wireless sensors distributed throughout the facility. The data is acquired by the computer into a database, and thermal death kinetic models we developed to predict survival of heat tolerant stages of the red flour beetle (young larvae) and confused flour beetle (old larvae) are invoked. These models have been validated in commercial facilities. The time-dependent temperature data and predicted survival of insects as a function of temperature are graphed by location of wireless sensors. This allows the users to take corrective action to enhance efficacy of heat treatments in real time, and also stop a heat treatment when all of the insects have died.

## **CURRICULUM VITAE: Bhadriraju Subramanyam**

Both programs can be licensed to commercial facilities or heat treatment service providers.

**SUPERNOVA PROGRAM:** In order to process large amounts of temperature data collected during heat treatments of commercial facilities, we developed a program in C-Sharp called Supernova. This program requires temperature data by location to be in .xls format (Microsoft Excel). The program reads each column of data by location and provides information on starting temperature, time to 50°C, time above 50°C, rate of heating to 50°C, and maximum temperature. In addition, it also integrates the two thermal death kinetic models for the red and confused flour beetles, and provides information by location on predicted time in hours required to kill to 90, 95, and 99% of these two insect species. Work that would take several weeks to process temperature data from commercial facilities can be processed in less than a minute.

As companies replace methyl bromide and other fumigants like sulfuryl fluoride in the future in favor of heat treatments, these three programs will help end users in analyzing, summarizing, and optimizing heat treatments.