

Curriculum Vita
Douglas M. Kingman, Ph.D.

Contact Information

Department of Agricultural and Industrial Sciences
Sam Houston State University
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Education

Ph.D., Agricultural Systems Management, 2002, Purdue University, West Lafayette, Indiana
M.S., Agricultural Systems Management, 1999, Purdue University, West Lafayette, Indiana
M.Ed., Agricultural Education, 1998, Texas A&M University, College Station, Texas
B.S., Agricultural Systems Management, 1991, Texas A&M University, College Station, Texas

Professional Experience

Assistant Professor, Department of Agricultural and Industrial Sciences, Sam Houston State University (2006-present)

Visiting Program Specialist, Texas AgriLife Extension Service, Biological and Agricultural Engineering Department, Texas A&M University (2008)

Independent Agricultural and Industrial Safety Consultant, Expert Witness (1998-present)

Managing Member, Liberty Rescue Systems, L.L.C. (2005-present)

Assistant Professor, Department of Agriculture, Illinois State University (2001-2005)

Safety Training Instructor, Purdue University, West Lafayette, Indiana (1998-2001)

Research Assistant, Department of Agricultural and Biological Engineering, Purdue University, West Lafayette, Indiana (1998-2001)

Student Technician, Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station, Texas (1997-98)

Engineering Technician, USDA/ARS Aerial Application Research Unit, College Station, Texas (1997-98)

Maintenance Manager, Camp Cooley Ranch, Ltd., Franklin, Texas (1994-97)

Research Technician, USDA/ARS Aerial Application Research Unit, College Station, Texas (1993-94)

Irrigation Equipment Sales, Design, Installation, ATS Irrigation, Inc., Brenham, Texas (1992-93)

Teaching

Sam Houston State University

- AGR 162 Introduction to Ag. Mechanization and Engineering (3 hrs.)
- AGR 331 Teaching Agricultural Technology (3 hrs.)
- AGR 380 Agricultural Machinery (3 hrs.)
- AGR 383 Soil and Water Conservation Engineering (3 hrs.)
- AGR 386 Agricultural Structures and Environmental Control Systems (3 hrs.)
- AGR 471 Agricultural Safety and Health (3 hrs.)
- AGR 490 Turf and Cropland Irrigation and Drainage (3 hrs.)
- AGR 492 GPS Applications in Agriculture and Construction (3 hrs.)
- AGR 493 Alternative Energies in Agriculture (3 hrs.)
- IT 472 Industrial Safety (3 hrs.)

Illinois State University

- AGR 130 Introduction to Ag. Engineering Technology (3 hrs.)
- AGR 231 Agricultural Construction and Maintenance (3 hrs.)
- AGR 232 Agricultural Power Units and Machinery (3 hrs.)
- AGR 234 Soil and Water Conservation (3 hrs.)
- AGR 235 Farm Utilities (3 hrs.)
- AGR 237 GIS and GPS Applications In Agriculture (3 hrs.)
- AGR 340 Equipment for Producing and Handling Agricultural Products (3 hrs.)

Purdue University

- ASM 350 Agricultural Safety
- ASM 591B Turf Irrigation and Drainage (assisted Department Head)

Undergraduate Research Projects

- Paben, R. 2008. Power output and exhaust temperature of recovered transmission lubricant. Sam Houston State University.
- Martin, J. 2008. Power output and consumption under heavy load for used vegetable oil and choice white grease. Sam Houston State University.
- Jackson, L. 2008. Converting turf grass equipment to biodiesel (Houston Astros MLB Grounds Department). Sam Houston State University
- Kiker, J. 2007. Engulfment awareness on Texas rice farms. Sam Houston State University
- Kiker, J. and C. Brown. 2006. Power output from selected bio-diesel fuels and oils. Sam Houston State University.
- Nelson, K. 2005. Cultivating Youth for Farm Safety. Illinois State University.

Rader, A. and K. Nelson. 2004. Design, Construction, and Testing of a Heated Fuel Tank for Vegetable Oil. Illinois State University.

Oest, M., C. Ishmael, and D. Russel. 2003. Power Output Efficiency of Alternative Fuels, Powering a Tractor Engine with Used Vegetable Oil from an ISU Cafeteria. Illinois State University.

Graduate Research Committees

Patel, J. 2008. Masters Thesis: Power output and exhaust temperatures of B20 vs. B50 biodiesel from choice white grease. Committee Chair. Sam Houston State University

Fletcher, K. 2006. Masters Thesis: Customer Opinions of John Deere AutoTrac Systems. Committee Chair. Illinois State University.

Meteer, W. 2006. Masters Thesis: Application and Evaluation of the Farm Grain Hazard Assessment Tool in Illinois. Committee Chair. Illinois State University.

Russel, D. 2004. Masters Thesis: Phytoremediation of Crude Oil Contaminated Soil. Committee Member. Illinois State University.

Master's Committee

Langley, Meagan. 2006. Master's Committee. Member. Sam Houston State University.

Guest lecturer

Provided lectures on the following topics in undergraduate classes at Sam Houston State University, Illinois State University and Purdue University: wind energy, wind measurement, hazard assessment, livestock handler safety, hazards of flowing grain, safety education and accident investigation.

Research

Patents

Kingman, D.M. 2007. Provisional patent: Liberty Tube Driver: Mechanism for inserting Liberty Tube sections into loose grain or other flowable material.

Kingman, D.M. 2005. Provisional patent: Liberty Tube: Prototype plastic device for use during the rescue of an individual partially engulfed in loose grain or other flowable material.

Refereed Publications

Kingman, D.M., J.E. Muller, and K. Nelson. 2007. Prototype Engulfment Rescue Tube Testing. *Journal of Agricultural Systems, Technology, and Education*. Vol. 22.

Rhykerd, R.L., K.W. Tudor, B.R. Wiegand, D.M. Kingman, and D.G. Morrish. 2006. Enhancing experiential learning through a hands-on crop production and marketing contest. *NACTA Journal* 50(4).

Kingman, D.M. and W.E. Field. 2005. Using fault tree analysis to identify contributing factors to engulfment in flowing grain in on-farm grain bins. *Journal of Agricultural Safety and Health*. American Society of Agricultural Engineers. Vol. 11(4).

- Kingman, D.M., A.M. Yoder, N.S. Hodge, R. Ortega, and W.E. Field. 2005. Utilizing expert panels in agricultural safety and health research. *Journal of Agricultural Safety and Health*. American Society of Agricultural Engineers. Vol. 11(1).
- Kingman, D.M., A. Spaulding, and W.E. Field. 2004. Predicting the potential of engulfment utilizing an on-farm grain storage hazard assessment tool. *Journal of Agricultural Safety and Health*. American Society of Agricultural Engineers. Vol. 10(4).
- Kingman, D.M., G.R. Deboy and W.E. Field. 2003. Contributing factors to engulfments in on-farm grain storage bins: 1980 through 2001. *Journal of Agromedicine*. Vol. 9(1).
- Kingman, D.M., W.E. Field and D.E. Maier. 2001. Summary of fatal entrapments in on-farm grain storage bins, 1966-1998. *Journal of Agricultural Safety and Health*. American Society of Agricultural Engineers. Vol. 7(3).

Research Funding

- \$5,000 from the Parten Foundation for bio-diesel fuel research and assessment of power output from vegetable oils (2007).
- \$68,000 from Hewlett Packard to establish the HP Agriculture Technology Learning Laboratory that consists of 25 laptops and ancillary equipment (2007).
- \$5,000 in-kind contribution (JD 4520 tractor) from Paben Farms, Inc. for support of the SHSU bio-diesel research initiative: Output of selected alternative bio-diesel fuels (2006).
- \$1,000,000 from the U.S. Department of Energy for wind energy research and curriculum development at Illinois State University (2005).
- \$500,000 from the Illinois Clean Energy Community Foundation for the installation of a Vestas NM82 Wind Turbine Generator at the ISU farm (2004).
- \$4,638 from John Deere Company, Crop Systems Research for a project to identify the opinions of customers who own and operate John Deere Auto Trac™ Self-Steering Systems on their tractors, combines, or applicators (2004) .
- \$135,000 from the National Institute for Occupational Safety and Health through the Great Lakes Center for Agricultural Safety and Health over two years to field test the Farm Grain Hazard Assessment Tool (FGHAT) with 100 Illinois farmers and 25 commercial facility operators. In addition, a web based version of the FGHAT will be developed and pilot tested with Illinois farmers (2003).
- \$40,000 from the Illinois Clean Energy Community Foundation for the installation of a 82m tall meteorological tower at the ISU farm (2003).
- \$65,000 in-kind contribution from NEG-Micon, an Illinois-based wind turbine manufacturer that served as the contractor in erecting the meteorological tower with a total project cost of about \$105,000 (2003).
- \$13,437 C-FAR/ISU Departmental Competitive Grant to measure and evaluate the wind-regime at the Illinois State University Farm at Lexington, Illinois (2003).
- \$24,445 C-FAR/ISU Departmental Competitive Grant to design and field-test a containment system (Liberty Tube™, provisional patent pending) to assist rescue workers during the extrication of a victim who is partially engulfed in grain (2002).

\$5,000 Illinois State University Research Grant to construct and field-test a containment system to assist rescue workers during the extrication of a victim who is partially engulfed in grain (2002).

\$25,000 NIOSH grant through the Midwest Center for Agricultural Disease and Injury Research, Education and Prevention to address the problem of flowing grain entrapments in on-farm grain structures by using a systems approach to develop an assessment tool at Purdue University (1999).

Education and Workshop Funding

\$3,000 from Southwestern Ag & Safety Center, Tyler, Texas to promote engulfment hazards to rice farmers in Texas (2007).

\$25,998 from Texas Education Agency for the 2007 Agricultural Mechanization Certification Workshop. Ullrich, D.R., Pavelock, D., Kingman, D., and Muller, J.E. (2007).

\$5,000 from Texas Education Agency for the 2006 Agricultural Mechanization Certification Workshop. Ullrich, D.R., Pavelock, D., Kingman, D., and Muller, J.E. (2006).

Peer Reviewed Papers, Presentations, and Posters

Kingman, D., J. Muller, and M. Lau. 2008. "BioDiesel Power Output Management." Poster presentation presented at the American Farm Bureau Federation Annual Convention, New Orleans, LA, January 13-15.

Pavelock, D., D.R Ullrich, and D.M. Kingman. 2008. Do service activities really attract students? *Horticultural Science*, 43 (3) (Abstract).

Pavelock, D., J. Largent, D.R. Ullrich, D.M. Kingman, J.E. Muller, and S.F. Kelley. 2008. Demographics and extracurricular involvement of students participating in the 2007 Houston Livestock Show and Rodeo Agricultural Mechanics Project Show: A follow-up study. 2008 Annual Conference of the American Association for Agricultural Education, Reno, NV. (Presentation).

Pavelock, D., D. Ullrich, and D. Kingman. 2007. Recruitment through service activities: Does it really help? *NACTA Journal* (Abstract), 51 (2): 111.

Largent, J., D.M. Kingman, J. Muller, D. Pavelock, S. Kelley, & D. Ullrich. 2007. Demographics and Extracurricular Involvement of Students Participating in the 2007 Houston Livestock Show and Rodeo Agricultural Mechanics Project Show. 25th Annual National Agricultural Mechanics Professional Development Seminar and Blue Ribbon Presentations, Indianapolis, Indiana. (Published Proceedings, Poster, Presentation)

Fletcher, K.R., D.M. Kingman, B. Wiegand, A. Spaulding, P. O'Rourke. 2007. Selected Opinions and Perceptions of John Deere Autotractor Self-Steering Systems. 25th Annual National Agricultural Mechanics Professional Development Seminar and Blue Ribbon Presentations, Indianapolis, Indiana. (Published Proceedings, Poster, Presentation)

Fletcher, K.R. and D.M. Kingman. 2006. Presentation: John Deere AutoTrac: Customer Opinions of a Guidance System. Agricultural Equipment Technology Conference, Louisville, KY.

- Kingman, D.M. 2006. Presentation: Farm Grain Hazard Assessment Tool. NIOSH Research Initiatives; Great Lakes Center of Agricultural Safety and Health, The Ohio State University.
- Fletcher, K.R., D.M. Kingman, A.D. Spaulding, P.D. O'Rourke. 2006. Poster: Customer Opinions of John Deere AutoTrac Self-Steering Systems. session presented at the Agricultural Equipment Technology Conference, Louisville, KY.
- Fletcher, K.R. and D.M. Kingman. 2006. Presentation: John Deere AutoTrac: Customer Opinions of a Guidance System. Quad City Section Winter Meeting, American Society of Agricultural and Biological Engineers, Moline, IL.
- Fletcher, K. and D.M. Kingman. 2005. Poster: John Deere Customer Opinions' of John Deere AutoTrac Systems. American Society of Agronomy, Salt Lake City, Utah.
- Kingman, D.M., R.L. Rhykerd, K.W. Tudor, B.R. Wiegand, and D.G. Morrish. 2005. Paper/Presentation: Enhancing Experiential Learning Through a Hands-on Crop Production and Marketing Contest. National Agricultural Mechanics Blue Ribbon Paper Session. National FFA Convention, Louisville, KY.
- Nelson, K. and D.M. Kingman. 2005. Presentation: Cultivating Youth for Farm Safety. National Institute of Farm Safety, Wintergreen, Virginia.
- Meteer, W., K. Nelson, and D.M. Kingman. 2005. Poster: Application and Assessment of the Farm Grain Hazard Assessment Tool. National Institute of Farm Safety, Wintergreen, Virginia.
- Meteer, W. and D.M. Kingman. 2005. Presentation: Field Testing the Farm Grain Hazard Assessment Tool. National Institute of Farm Safety, Wintergreen, Virginia.
- Rhykerd, R.L., D.M. Kingman, K.W. Tudor, and B.R. Wiegand. 2005. Presentation: Cultivating Active Learning in Agriculture. Enhancing the Campus Learning Culture: A University-Wide Symposium on Teaching and Learning, Bloomington, Illinois.
- Kingman, D.M. and M.J. Fleming. 2004. Poster: Improvements to a Prototype Plastic Grain Rescue Tube. National Institute of Farm Safety, Keystone, Colorado.
- Kingman, D.M. 2004. Paper/Article: Liberty Tube™ Prototype Plastic Grain Rescue Tube. *Resource Magazine*, September 2004 Vol. 11(7). Published by ASAE, St. Joseph, Michigan.
- Nelson, K. and D.M. Kingman. 2004. Presentation: A Web-based version of the Farm Grain Hazard Assessment Tool. National Institute of Farm Safety, Keystone, Colorado.
- Rhykerd, R.L., K.W. Tudor, B.R. Wiegand, and D.M. Kingman. 2004. Paper: Impact of a Crop Production and Marketing Contest on Student Learning. In *With Zeal Unceasing, Essays on Teaching at Illinois State University*. D. Hesse, L. Ostergaard, and K. McKinney eds. Normal, IL, pp 139-144.
- Kingman, D.M. and M.J. Fleming. 2004. Poster: Prototype Plastic Grain Rescue Tube. Improving Agricultural Health and Safety Programs Through Evaluation Conference, The Ohio State University. March 2004, Columbus, Ohio.
- Kingman, D.M. and W.E. Field. 2003. Presentation: Using Fault Tree Analysis to Identify Contributing Factors to Engulfment in Flowing Grain in On-Farm Grain Bins. Fifth

International Symposium: Future of Rural Peoples, Rural Economy, Healthy People, Environment, Rural Communities. Saskatoon, Saskatchewan, Canada.

Rhykerd, R.L., K.W. Tudor, B.R. Wiegand, D.M. Kingman. 2002. Paper/Presentation: Agricultural Production and Profit: Student Contest. American Society of Agronomy Abstracts. November 13, 2002, Indianapolis, IN.

Kingman, D.M. and W.E. Field. 2001. Paper/Article: Buried Alive. *Resource Magazine*, January 2001 Vol.8(1). Published by ASAE, St. Joseph, Michigan (cover article).

Kingman, D.M., D.E. Maier and W.E. Field. 2000. Poster: Summary of Fatal Entrapments In On-Farm Bins and Recommended Intervention Strategies. AETC Poster No. 00AETC-109. Kansas City, Missouri.

Extension Publications and Technical Papers

Kingman, D.M. 2001. Corn Fungus, A Deadly Threat To Crop And Man. News Release: Purdue University Extension Service, West Lafayette, Indiana.

Kingman, D.M., W.E. Field and B.A. Talbert. 2000. Development of a Prototype On-Farm Flowing Grain Hazard Awareness and Rescue Curriculum. ASAE Paper No. 00-7020. St. Joseph, Michigan: ASAE.

Kingman, D.M., D.E. Maier and W.E. Field. 1999. Summary of Entrapments In On-Farm Grain Storage Bins. ASAE Paper No. 99-7041. St. Joseph, Michigan: ASAE.

Kingman, D.M. 1999. Routinely Working With Diesel Can Make You Dangerous With Gasoline. News Release:
<http://news.uns.purdue.edu/UNS/html3month/990604.Kingman.gasoline.html> Purdue University Extension Service, West Lafayette, Indiana.

Kingman, D.M. 1999. Unusual East Winds Create Deadly Conditions In Some Grain Bins. News Release: Purdue University Extension Service, West Lafayette, Indiana.

Teaching and Instructional Materials

Kingman, D.M. 1999. Horse Handler Safety. Purdue University ASM 350 Class Notes and Lesson Plans.

Kingman, D.M. 1998. Agricultural Mechanics - PEL. Instructional Materials Service, Texas A&M University, College Station, Texas.

Kingman, D.M. 1998. Agricultural Power and Machinery - PEL. Instructional Materials Service, Texas A&M University, College Station, Texas.

Kingman, D.M. 1998. Agricultural Structures Technology. Instructional Materials Service, Texas A&M University, College Station, Texas.

Kingman, D.M. 1998. Curriculum Guide for Agricultural Power Technology. Instructional Materials Service, Texas A&M University, College Station, Texas.

Kingman, D.M. 1998. Curriculum Guide for Home Maintenance and Improvement. Instructional Materials Service, Texas A&M University, College Station, Texas.

Kingman, D.M. 1998. Livestock Handler Safety. Purdue University ASM 350 Class Notes and Lesson Plans.

Kingman, D.M. 1998. Performing Basic Plumbing Skills. Instructional Materials Service, Texas A&M University, College Station, Texas.

Kingman, D.M. 1998. Planning and Maintaining Water Management Systems. Instructional Materials Service, Texas A&M University, College Station, Texas.

Kingman D.M. and J. Muller. 1998. Oxyfuel Cutting and Welding Principles and Procedures. Instructional Materials Service, Texas A&M University, College Station, Texas.

Muller, J. and D.M. Kingman. 1997. Gas Arc Welding Principles and Procedures. Instructional Materials Service, Texas A&M University, College Station, Texas.

Service

National

National Institute Farm Safety

National FFA Ag Mechanics CDE, Associate Superintendent, Environment and Natural Resources.

Reviewer: Journal of Agricultural Safety and Health, American Society of Agricultural Engineers

Journal of Natural Resources and Life Sciences Education

Reviewer: National Ag Mechanics Committee, Blue Ribbon Presentations

Reviewer: U.S. Civilian Research & Development Foundation (CRDF)

American Society of Agricultural & Biological Engineers (ASABE)

University

Department of Agricultural and Industrial Sciences Committees

Commencement

Who's Who Selection

COAS Engineering Technology

Advisor: SHSU Ag Mechanization Club

Regional and State

Texas Section of American Society of Agricultural & Biological Engineers

Ag Mechanics Judge: multiple venues throughout Texas

State Ag Mechanics Committee

Houston Livestock Show and Rodeo Associate Superintendent. Youth FFA Ag Mechanics Project Show.

Brazos County Youth Livestock Show Association. Ag Mechanics Show Superintendent.

Outreach Events and Activities

Conducted interview with KSAM Radio about LRS tube development and research (2008).

Conducted interview with Texas Department of Agriculture about engulfment issues and hazards in Texas (2008).

Conducted two television, four live-radio and several telephone interviews with reporters (1998-2005).

- Organized seven extension events in Illinois and Indiana and presented grain bin safety and other agriculture safety information to over 450 children and their parents (1999-2005).
- Hosted members of the Illinois Network of Agricultural Safety and Health (INASH) professionals at a two-day conference at Illinois State University. (2003)
- Organized ten rescue training workshops in Illinois, Indiana and Ohio for over 800 volunteer emergency rescue personnel (1998-2005).
- Promoted agricultural safety by participating with Purdue's Agricultural Safety and Health Program booth at numerous events, including the Indiana State Fair and Louisville Farm Machinery Show (1998-2001).
- Coordinated and provided safety training for over 120 Purdue farm employees as part of the Purdue Farm Employee Safety Training Program (1998-2001).
- Organized and trained 125 full-time rescue personnel during a three-day workshop for the Indianapolis Fire Department on the hazards of flowing grain and rescue techniques for individuals partially and fully engulfed in grain (2001).

Awards and Honors

- University Research Initiative Award, Illinois State University (2006)
- Graduate Research Faculty Member, Sam Houston State University (2006)
- Fellow, Illinois State University Teaching Technology Program (2003)
- Graduate Research Faculty Member, Illinois State University (2002)
- Outstanding Graduate Student Teaching Award, Purdue University (1999)
- Outstanding Agricultural Education Graduate Student Runner-up, Texas A&M (1998)
- Gamma Sigma Delta Agriculture Honor Society
- Alpha Zeta Agriculture Honor Society

Other Interests

- College and Adult Sunday School Teacher. 2006-present. CBC, Bryan, Texas.
- Co-Leader of Men's Ministry Core Leadership Team. ECC (2002-2005).
- Organized and served as Master of Ceremonies for personal development conferences attended by an average of 220 individuals at the Lake Williams Retreat Center, Carlinville, Illinois (2002, 2003, and 2004).
- Organized golf tournament for 70 participants at the Illinois State University golf course (2003).
- Volunteered with C.H.A.P.S., Purdue University's Assisted Riding Program (1999-2001).
- Licensed amateur radio operator (HAM), Call sign: KE5HCI