



DIRECTOR'S REPORT OF RESEARCH IN KANSAS 2012

JULY 1, 2011–JUNE 30, 2012



Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Letter of Transmittal

Office of the Director

To the Honorable Sam Brownback, Governor of Kansas

It is my pleasure to transmit herewith the report of the Agricultural Experiment Station of the Kansas State University of Agriculture and Applied Science for the fiscal year ending June 30, 2012. This report contains the title, author, and publication information for manuscripts published by station scientists. The report was published only in electronic format.

John D. Floros, Ph.D.
Director, K-State Research and Extension
and Dean, College of Agriculture

A Message from the Director

We are pleased to provide this 2012 Director's Report of Research in Kansas. The report is intended to inform you about our research programs underway and some of our accomplishments. K-State Research and Extension is dedicated to a safe and sustainable food and fiber system and to strong, healthy communities, families, and youth through integrated research, analysis, and education.

This report is produced and distributed in electronic format only. An annual report distributed via the Internet provides information in a more timely fashion, eliminates printing costs, and makes the report accessible to a broader audience.

The 2012 Director's Report of Research in Kansas provides a list of journal articles, station publications, and other published manuscripts from scientists in our departments, centers, fields, and associated programs.

The Agricultural Experiment Station is the research component of [K-State Research and Extension](#). Our research programs provide the latest information used by our extension programs to address the grand challenges facing Kansas citizens.

John D. Floros, Ph.D.
Director, K-State Research and Extension
and Dean, College of Agriculture



Contents

- I*** *Letter of Transmittal*
- II*** *A Message from the Director*
- 3*** *Research Components of the Kansas Agricultural Experiment Station*
- 4*** *Kansas State University Agricultural Research Locations*
- 5*** *Station Publications*
- 6*** *Publications of Station Scientists*
 - 6*** Agricultural Economics
 - 7*** Agricultural Research Center–Hays
 - 8*** Agronomy
 - 12*** Anatomy and Physiology
 - 13*** Animal Sciences and Industry
 - 15*** Biochemistry and Molecular Biophysics
 - 15*** Biological and Agricultural Engineering
 - 17*** Chemical Engineering
 - 17*** Clinical Sciences
 - 17*** Diagnostic Medicine/Pathobiology
 - 18*** Division of Biology
 - 19*** Entomology
 - 21*** Grain Science and Industry
 - 23*** Horticulture, Forestry, and Recreation Resources
 - 23*** Human Nutrition
 - 25*** Northwest Research–Extension Center
 - 26*** Plant Pathology
 - 30*** Southeast Agricultural Research Center
 - 31*** Southwest Research–Extension Center
 - 33*** Statistics

Search Tips

To find publications by a particular author, type the surname in the “find” search box in the Acrobat toolbar in this document. Use “Find Next” until all relevant publications are found.

To minimize irrelevant items when searching for common names such as Smith, go to the page for the author’s unit (or use the unit bookmark) to start your search.

Research Components of the Kansas Agricultural Experiment Station*

(see map, next page)

Academic Departments

College of Agriculture

Agricultural Economics
Agronomy
Animal Sciences and Industry
Communications and Agricultural Education
Entomology
Grain Science and Industry
Horticulture, Forestry, and Recreation Resources
Plant Pathology

College of Arts and Sciences

Biochemistry and Molecular Biophysics
Biology
Sociology, Anthropology, and Social Work
Statistics

College of Engineering

Biological and Agricultural Engineering
Chemical Engineering

College of Human Ecology

Apparel, Textiles, and Interior Design
Hospitality Management and Dietetics
Human Nutrition

College of Veterinary Medicine

Anatomy and Physiology
Clinical Sciences
Diagnostic Medicine/Pathobiology

Research Centers

Agricultural Research Center–Hays
Horticulture and Forestry Research-Extension Center
John C. Pair Horticultural Center
Northwest Research-Extension Center
Southeast Agricultural Research Center
Southwest Research-Extension Center

Experiment Fields

East Central - Ottawa
Kansas River Valley - Rossville, Silver Lake
North Central - Belleville
Pecan Field - Chetopa
South Central - Hutchinson

Associated Programs

Bioprocessing and Industrial Value-Added Program
Center for Animal Identification
Center for Biobased Products by Design
Center for Sustainable Energy
Food Science Institute
Great Plains Diagnostic Network
Great Plains Sorghum Improvement
and Utilization Center
K-State Libraries
Kansas Agriculture and Rural Leadership
Kansas Center for Agricultural Resources
and the Environment
Kansas Center for Sustainable Agriculture
and Alternative Crops
Kansas Water Resources Institute
Konza Prairie Biological Station
International Grains Program
International Meat and Livestock Program
Plant Biotechnology Center
Veterinary Diagnostic Lab
Weather Data Library
Wheat Genetic and Genomic Resources Center

* List includes units having faculty with KAES appointments in fiscal year 2012. For a full list of departments and programs of the Kansas State University Agricultural Experiment Station and Cooperative Extension Service and for additional information on K-State Research and Extension, see www.ksre.ksu.edu, and click on “About Us” in the sidebar.

Station Publications

Reports of Progress

SRP 1053	K-State Turfgrass Research 2011
SRP 1054	2011 Kansas Performance Tests with Winter Wheat Varieties
SRP 1055	2011 Kansas Performance Tests with Corn Hybrids
SRP 1056	Swine Day 2011
SRP 1057	Dairy Research 2011
SRP 1058	2011 Kansas Performance Tests with Soybean Varieties
SRP 1059	2011 Kansas Performance Tests with Grain Sorghum Hybrids
SRP 1060	2011 Kansas Performance Tests with Sunflower Hybrids
SRP 1061	2011 Kansas Performance Tests with Alfalfa Varieties
SRP 1062	2011 National Winter Canola Variety Trial
SRP 1063	2012 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland
SRP 1064	2011 Kansas Performance Tests with Cotton Varieties
SRP 1065	Cattlemen's Day 2012
SRP 1066	Field Research 2012
SRP 1067	Kansas Fertilizer Research 2011
SRP 1069	2012 Agricultural Research, Southeast Agricultural Research Center
SRP 1070	Field Day 2012, Southwest Research-Extension Center

Special Publications

DRR11	Director's Report of Research in Kansas 2011
-------	--

Suffix Letters for Contribution Numbers

A	Proceedings of meeting or symposium
B	Book or book chapter
C	Computer program
D	Department report
J	Journal manuscript
S	Station publication (Report of Progress, Keeping up with Research, Special Publication, or Bulletin)
T	Trade publication

Categories are based on information received before manuscripts are published. Type of publication sometimes changes later.

Station publications are available at:
www.ksre.ksu.edu/bookstore

Department reports are available only from the appropriate department office. Copies of journal articles or other external publications must be obtained from authors, journals, or a library. Some citations include a digital object identifier (doi) for use in retrieving manuscripts online. To locate an object using its doi, visit <http://dx.doi.org/>.

Publications of Station Scientists

Manuscripts are listed by unit and contribution number, and are cross-listed under all relevant units according to authors' affiliations and appointments (i.e., Kansas Agricultural Experiment Station tenths).

Agricultural Economics

- 12-007-J Determining the probability of default of agricultural loans in a French bank
A. Joualt, A.M. Featherstone
Journal of Applied Finance and Banking, 1(1):1-30, 2011
- 12-008-J Labor productivity convergence in the Kansas farm sector: A three-stage procedure using data envelopment analysis and semiparametric regression analysis
A. Muger, M. Langemeier, A. Featherstone
Journal of Productivity Analysis, 38(1):63-79, 2012
doi:10.1007/s11123-011-0235-1, 2011
- 12-035-J On the relationship between openness to trade and efficiency levels in low-income countries: Evidence from the Latin American and the Caribbean countries
A. Chacon-Cascante, A.M. Featherstone
International Research Journal of Finance and Economics, 74:169-87, 2011
- 12-082-D Impact of tillage system on input demands for farms
E. Yeager, M. Langemeier, T. Xia
Agricultural Economics Staff Paper no. 12-01, 2011, 19 pp.
- 12-118-D Staff, programs, and publications in Agricultural Economics, Kansas State University 2010
J. Maberry
Agricultural Economics Staff Paper no. 11-04, 2011, 55 pp.
- 12-119-D Staff, programs, and publications in Agricultural Economics, Kansas State University 2009
J. Maberry
Agricultural Economics Staff Paper no. 10-3, 2010, 47 pp.
- 12-213-J Measuring the benefits to advertising under monopolistic competition
Boland, M.A., J.M. Crespi, J. Silva, T. Xia
Journal of Agricultural and Resource Economics, 37(1):144-155, 2012
- 12-236-D 2011 nonirrigated crop-share leasing arrangements in Kansas
J.B. Schlegel, L.J. Tsoodle
Agricultural Economics Staff Paper no. 12-02, 2011, 22 pp.
- 12-272-J Fixed effects estimation of the intensive and extensive margins of irrigation water demand
N.P. Hendricks, J.M. Peterson
Journal of Agricultural and Resource Economics, 37(1):1-19, 2012
- 12-285-A Do men and women perform differently on different types of test questions?
A.S. Thompson, A.L. Jager, R.O. Burton, Jr.
Proceedings of SAEA [Southern Agricultural Economics Association] annual meeting
Birmingham, AL, 2012
- 12-291-J Nitrogen fertilization affects economic return from crabgrass hay
J.L. Moyer, K. Dhuyvetter, D.W. Sweeney
Forage and Grazinglands, 2012
doi:10.1094/FG-2012-0320-01-RS
- 12-365-D Staff, programs, and publications in Agricultural Economics, Kansas State University 2011
Agricultural Economics Staff Paper no. 12-03, 2011, 73 pp.
- 12-396-J A stochastic production function analysis of maize hybrids and yield variability in drought-prone areas of Kenya
A.D. Jones, T.J. Dalton, M. Smale
Tegemeo Institute of Agricultural Policy and Development, WPS 49, 2012

Agricultural Research Center–Hays

- 12-017-S 2011 Kansas Performance Tests with Winter Wheat Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1054, July 2011
- 12-052-J Sorghum pathology and biotechnology - A fungal disease perspective: Part II. Anthracnose, stalk rot, and downy mildew
T. Tesso, R. Perumal, C.R. Little, A. Adeyanju, G.L. Radwan, L.K. Prom, C.W. Magill
European Journal of Plant Science and Biotechnology, 6(1):31-45, 2012
- 12-055-J Effects of prepartum and postpartum bolus injections of trace minerals on performance of beef cows and calves grazing native range
L.R. Mundell, J.R. Jaeger, J.W. Waggoner, J.S. Stevenson, D.M. Grieger, L.A. Pacheco, J.W. Bolte, N.A. Aubel, G.J. Eckerle, M.J. Macek, S.M. Ensley, L.J. Havenga, KC Olson
The Professional Animal Scientist, 28(1):82-88, 2012
- 12-088-J Larval food supply constrains female reproductive schedules in *Hippodamia convergens* (Coleoptera: Coccinellidae)
G. Vargas, J.P. Michaud, J.R. Nechols
Annals of the Entomological Society of America, 105(6):832-839, 2012
- 12-090-J Comparing morphological development and nutritive value of Caucasian old world bluestem and native grasses
K.R. Harmony, K.R. Hickman
Forage and Grazinglands, 2012
doi:10.1094/FG-2012-0127-01-RS
- 12-096-J Effects of a new herbicide (Aminocyclopyrachlor) on buffalograss and forbs in shortgrass prairie
K.R. Harmony, P.W. Stahlman, P.W. Geier, R. Rupp
Weed Technology, 26(3):455-459, 2012
- 12-137-A Subsurface drip irrigation in alfalfa
F.R. Lamm, K.R. Harmony, A.A. Aboukheira, S.K. Johnson
Proceedings of the Irrigation Association Technical Conference, San Diego, California, November 6-8, 2011, 10 pp.
- 12-150-J Single and sequential applications of tribenuron on broadleaf weed control and crop response in tribenuron-resistant sunflower
A.S. Godar, P.W. Stahlman, J.A. Dille
Weed Technology, 25(3):391-397, 2011
doi:10.1614/WT-D-10-00154.1
- 12-184-J Summer cover crops fix nitrogen, increase crop yield, and improve soil-crop relationships
H. Blanco-Canqui, M.M. Claassen, D.R. Presley
Agronomy Journal, 104(1):137-147, 2012
- 12-198-J Cryptic maternal effects in the ladybird beetle *Hippodamia convergens* vary with maternal age and body size
G.A. Vargas, J.P. Michaud, J.R. Nechols
Entomologia Experimentalis et Applicata, 146: 302-311, 2012
- 12-209-S 2012 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland
Multiple authors
Coordinating authors: D. Peterson, C.R. Thompson
KS Agric. Exp. Stn. Report of Prog. 1063, December 2011
- 12-214-S 2011 Kansas Performance Tests with Soybean Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1058, December 2011
- 12-215-S 2011 Kansas Performance Tests with Corn Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1055, November 2011

- 12-216-S 2011 Kansas Performance Tests with Grain Sorghum Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1059, December 2011
- 12-221-J Alfalfa production with subsurface drip irrigation in the Central Great Plains
F.R. Lamm, K.R. Harmoney, A.A. Aboukheira, S.K. Johnson
Transactions of the ASABE, 55(4):1203-1212, 2012
- 12-245-S 2011 Kansas Performance Tests with Sunflower Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1060, January 2012
- 12-246-S 2011 Kansas Performance Tests with Alfalfa Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1061, January 2012
- 12-259-J Multi-location study of soil enzyme activities as affected by types and rates of manure application and tillage practices
V. Acosta-Martinez, M.M. Mikha, K.R. Sistani, P.W. Stahlman, J.G. Benjamin, M.F. Vigil, R. Erickson
Agriculture, 1(1):4-21, 2011
doi:10.10.3390/agriculture1010004
- 12-293-S 2012 Field Research
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1066, April 2012
- 12-294-S 2011 Kansas Fertilizer Research
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1067, April 2012
- 12-333-J New sources of resistance in Sorghum [*Sorghum bicolor* (L.) Noench] 'Minicor' germplasm are effective against a diverse array of Potyvirus species
D.L. Seifers, R. Perumal, C. Little
Plant Disease, 96(12):1775-1779, 2012
- 12-358-J Field Day 2012 SWREC
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1070, May 2012
- Agronomy**
- 12-005-J Interpreting relationships between soil variables and soybean iron deficiency using factor analysis
A.M. Liesch, D.A. Ruiz Diaz
Soil Science Society of America Journal, 76(4):1311-1318, 2012
doi:10.2136/sssaj2011.0379
- 12-014-J Physicochemical properties and adhesion performance of canola protein modified with sodium bisulfite
N. Li, G. Qi, X.S. Sun, M. J. Stamm, D. Wang
Journal of the American Oil Chemists' Society, 89(5):897-908, 2012
doi:10.1007/s11746-011-1977-7
- 12-017-S 2011 Kansas Performance Tests with Winter Wheat Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1054, July 2011
- 12-031-J Dryland and irrigated corn yield with climate, management, and hybrid changes from 1939 through 2009
Y. Assefa, K.L. Roozeboom, S.A. Staggenborg, J. Du
Agronomy Journal, 104(2):473-482, 2012
- 12-051-J Sorghum pathology and biotechnology - A fungal disease perspective: Part I. Grain mold, head smut, and ergot
C.R. Little, R. Perumal, T. Tesso, L.K. Prom, G.N. Odvody, C.W. Magill
European Journal of Plant Science and Biotechnology, 6(1):10-30, 2012

- 12-052-J Sorghum pathology and biotechnology - A fungal disease perspective: Part II. Anthracnose, stalk rot, and downy mildew
T. Tesso, R. Perumal, C.R. Little, A. Ad-eyanju, G.L. Radwan, L.K. Prom, C.W. Magill
European Journal of Plant Science and Biotechnology, 6(1):31-45, 2012
- 12-056-J Integrating rare-variant testing, function prediction, and gene network in composite resequencing-based genome-wide association studies (CR-GWAS)
C. Zhu, X. Li, J. Yu
G3: Gene, Genomes, Genetics, 1(3):233-243, 2011
doi:10.1534/g3.111.000364
- 12-057-D Effects of Austrian winter pea cover crop and nitrogen rates on grain sorghum yield in a cover crop, grain sorghum, winter wheat rotation
W. Heer, K. Roozeboom, J. Shroyer
KS. Agric. Exp. Sta. Keeping up with Research (SRL) 142, September 2011
- 12-066-J Speciation of phosphorus in a fertilized, reduced till soil system: In-field treatment incubation study
R. Khatiwada, G.M. Hettiarachchi, D.B. Mengel
Soil Science Society of America Journal, 76(6):2006-2018, 2012
doi:10.2136/sssaj2011.0299
- 12-068-J Genotypic variation within sorghum in transpiration response to drying soil
M. Gholipour, T. R. Sinclair, P.V.V. Prasad
Plant Soil, 357(1-2):35-40, 2012
- 12-072-J High-iron biosolids compost-induced changes in lead and arsenic speciation and bioaccessibility in co-contaminated soils
S.L. Brown, I. Clausen, M.A. Chappell, K.G. Scheckel, M. Newville, G.M. Hettiarachchi
Journal of Environmental Quality, 41(5):1612-1622, 2012
doi:10.2134/jeq2010.0139
- 12-089-J Managing diminished irrigation capacity with preseason irrigation and plant density for corn production
A. Schlegel, L. Stone, T. Dumler, F. Lamm
Transactions of the ASABE, 55(2):525-531, 2012
- 12-093-J Quantitative trait loci responsible for Fusarium head blight resistance in Chinese landrace Baishanyuehuang
X. Zhang, H. Pan, G. Bai
Theoretical and Applied Genetics, 125(3):495-502, 2012
doi:10.1007/s00122-012-1848-0
- 12-113-J Registration of malt sorghum varieties, Macia and Red Swazi
A. Adugna, T. Tesso, T. Tadesse, E. Degu, G. Gebeyehu, S. Yetneberk, S. Admase, M. Bekele, Z. Elias, T. Woldu, T. Hadis, M. Teshome
Ethiopian Journal of Agricultural Science, 21:136-137, 2011
- 12-114-J Registration of pearl millet [*Pennisetum glaucum* (L.) R. Br.] Variety, Kola-1
A. Adugna, T. Tesso, E. Degu, T. Tadesse, S. Yetneberk, S. Admase, M. Bekele, Z. Elias, T. Woldu, T. Hadis, M. Teshome
Ethiopian Journal of Agricultural Science, 21:138-139, 2011
- 12-150-J Single and sequential applications of tribenuron on broadleaf weed control and crop response in tribenuron-resistant sunflower
A.S. Godar, P.W. Stahlman, J.A. Dille
Weed Technology, 25(3):391-397, 2011
doi:10.1614/WT-D-10-00154.1
- 12-162-J Impact of pelleting and acid pretreatment on biomass structure and thermal properties of wheat straw, corn stover, big bluestem, and sorghum stalk
K. Theerarattananoon, F. Xu, J. Wilson, S. Staggenborg, L. Mckinney, P. Vadlani, Z.J. Pei, D. Wang
Transactions of the ASABE, 55(5):1845-1858, 2012

- 12-184-J Summer cover crops fix nitrogen, increase crop yield, and improve soil-crop relationships
Humberto Blanco-Canqui, M.M. Claassen, D.R. Presley
Agronomy Journal, 104(1):137-147, 2012
- 12-199-B Computer simulation in plant breeding
X. Li, C. Zhu, J. Wang, J. Yu
Advances in Agronomy, 116:219-264, 2012
- 12-200-J Genic and non-genic contributions to natural variation of quantitative traits in maize
X. Li, C. Zhu, C-T. Yeh, W. Wu, E.M. Takacs, K.A. Petsch, F. Tian, G. Bai, E.S. Buckler, G.J. Muehlbauer, M.C.P. Timmermans, M.J. Scanlon, P. S. Schnable, J. Yu
Genome Research, 22(12):2436-2444, 2012
- 12-201-J Parallel domestication of the *Shattering1* genes in cereals
Z. Lin, X. Li, L.M. Shannon, C-T. Yeh, M.L. Wang, G. Bai, Z. Peng, J. Li, H.N. Trick, T.E. Clemente, J. Doebley, P.S. Schnable, M.R. Tuinstra, T.T. Tesso, F. White, J. Yu
Nature Genetics, 44(6):720-724, 2012
doi:10.1038/ng.2281
- 12-209-S 2012 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland
Multiple authors
Coordinating authors: D. Peterson, C.R. Thompson
KS Agric. Exp. Stn. Report of Prog. 1063, December 2011
- 12-210-J Effect of drought and high temperature stress on synthetic hexaploid wheat
G.P. Pradhan, P.V.V. Prasad, A.K. Fritz, M.B. Kirkham, B.S. Gill
Functional Plant Biology, 39(3):190-198, 2012
- 12-211-J Response of streamflow to climate change and human activities in Xitiaoqi river basin in China
C. Zhang, B. Zhang, W. Li, F. Jin
Hydrological Processes, 2012
doi:10.1002/hyp.9539
- 12-214-S 2011 Kansas Performance Tests with Soybean Varieties
Multiple authors
Coordinating author: J. Lingenfelser
KS Agric. Exp. Stn. Report of Prog. 1058, December 2011
- 12-215-S 2011 Kansas Performance Tests with Corn Hybrids
Multiple authors
Coordinating author: J. Lingenfelser
KS Agric. Exp. Stn. Report of Prog. 1055, November 2011
- 12-216-S 2011 Kansas Performance Tests with Grain Sorghum Hybrids
Multiple authors
Coordinating author: J. Lingenfelser
KS Agric. Exp. Stn. Report of Prog. 1059, December 2011
- 12-217-B Research needs for agriculture under elevated carbon dioxide
M.B. Kirkham
In: Handbook of Climate Change and Agroecosystems: Global and Regional Aspects and Implications, D. Hillel and C. Rosenzweig (Eds.)
London: World Scientific, pp. 225-234, 2012
- 12-226-J Allometric model to quantify sorghum canopy formation
S. Narayanana, R.M. Aiken, P.V. V. Prasad, Z. Xin, G. Paul, J. Yu
ASA CSSA SSSA International Annual Meetings, San Antonio, TX, 2011
- 12-228-J Internationalization of soil physics from an American perspective
M.B. Kirkham
International Agrophysics, 26(2):181-185, 2012
doi:10.2478/v10247-012-0026-6

- 12-245-S 2011 Kansas Performance Tests with Sunflower Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1060, January 2012
- 12-246-S 2011 Kansas Performance Tests with Alfalfa Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1061, January 2012
- 12-257-J Assessing the educational needs of urban gardeners and farmers on the subject of soil contamination
A.M. Raes Harms, D.R. Presley, G.M. Hettiarachchi, S.J. Thien
Journal of Extension, 51(1), 2011
- 12-290-J Nutrient losses in field-scale surface runoff from claypan soil receiving turkey litter and fertilizer
D.W. Sweeney, G.M. Pierzynski, P.L. Barnes
Agriculture, Ecosystems & Environment 150:19–26, 2012
- 12-293-S 2012 Field Research
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1066, April 2012
- 12-294-S 2011 Kansas Fertilizer Research
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1067, April 2012
- 12-302-J Presence of tannins in sorghum grains is conditioned by different natural alleles of *Tannin1*
X. Li, W. Xiang, C. Zhu, Z. Lin, Y. Wu, J. Li, S. Pandravada, D.D. Ridder, G. Bai, M.L. Wang, H.N. Trick, S.R. Bean, M.R. Tuinstra, T.T. Tesso, J. Yu
PNAS, 109(26):10281–10286, 2012
- 12-311-A Assessment of plant-available soil water on producer fields in Western Kansas
F.R. Lamm, D.H. Rogers, A.J. Schlegel, N.L. Klocke, L.R. Stone, R.M. Aiken, L.K. Shaw
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-314-A Optimizing cropping systems under limited irrigation conditions
A. Schlegel, L. Stone, T. Dumler, F. Lamm
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-315-A A return look at dormant-season irrigation strategies
A. Schlegel, L. Stone, T. Dumler, F. Lamm
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-319-J Spatial application of WEPS for estimating wind erosion in the Pacific Northwest
L. Wagner, F. Fox, S. Chung, B. Lamb
Transactions of the ASABE
Proceedings International Symposium on Erosion and Landscape Evolution (ISELE), Anchorage, AK, 2011
- 12-322-J Overview of the management submodel in the Wind Erosion Prediction System
L. Wagner
Proceedings International Symposium on Erosion and Landscape Evolution (ISELE), Anchorage, AK, 2011
- 12-328-J Selenate-enriched urea granules are a highly effective fertilizer for selenium biofortification of paddy rice grain
L. Premarathna, M. McLaughlin, J. Kirby, G.M. Hettiarachchi, S. Stacey, D. Chittleborough
Journal of Agricultural and Food Chemistry, 60(23):6037–6044, 2012
doi:10.1021/jf3005788

- 12-332-B Association mapping of genetic resources: Achievements and future perspectives
S. Sukumaran, J. Yu
2nd International Symposium on Genomics of Plant Genetic Resources
Bologna, Italy, 2010
- 12-336-J A History of Wind Erosion Prediction in the United States Department of Agriculture
J. Tatarko, M.A. Sporcic, E.L. Skidmore
Aeolian Research, 2012
doi:10.1016.j/aeolia.2012.08.004
- 12-349-S 2012 Agricultural Research SEARC Multiple authors
Coordinating author: Lyle Lomas
KS Agric. Exp. Stn. Report of Prog. 1069, April 2012
- 12-372-J Roles of protein synthesis elongation factor EF-Tu in heat tolerance in plants
J. Fu, I. Momcilovic, P.V.V. Prasad
Journal of Botany, 2012
doi:10.1155/2012/835836
- 12-407-S 2011 Kansas Performance Tests with Cotton Varieties
Multiple authors
Coordinating author: J. Lingensfelder
KS Agric. Exp. Stn. Report of Prog. 1064, April 2012
- 12-408-J Changes in stomatal conductance along grass blades reflect changes in leaf structure
T.W. Ocheltree, J.B. Nippert, P.V.V. Prasad
Plant Cell and Environment, 35(6):1040-1049, 2012
- 12-428-B Molecular basis and improvement of heat tolerance in crop plants
J. Fu, I. Momcilovic, P.V.V. Prasad
In: Heat Stress, Causes, Treatment, and Prevention
Hauppauge, NY: Nova Science Publishers, pp. 185-214
- 12-463-J Association mapping for grain quality in a diverse sorghum collection
S. Sukumaran, W. Xiang, S.R. Bean, J.F. Pedersen, M.R. Tuinstra, T.T. Tesso, M.T. Hamblin, J. Yu
The Plant Genome, 5(3):126-135, 2012
- Anatomy and Physiology**
- 12-048-J Ring opening of epoxidized methyl oleate using novel acid-functionalized iron nanoparticle catalyst
B.K. Ahn, H. Wang, S. Robinson, T.B. Shrestha, D.L. Troyer, S. Bossmann, X.S. Sun
Green Chemistry, 14(1): 136-142, 2012
- 12-054-B Channel replacement therapy for cystic fibrosis
J.M. Tomich, U. Bukovnik, J. Layman, B.D. Schultz
In: Cystic Fibrosis - Renewed Hopes Through Research, D.D. Sriramulu (Ed.). InTech Open Access Publisher
doi:10.5772/29832
- 12-112-J Interaction between innate immunity and porcine reproductive and respiratory syndrome virus
Y. Sang, R.R.R. Rowland, F. Blecha
Animal Health Research Reviews, 12(2):149-167, 2011
doi:10.1017/S1466252311000144
- 12-115-J Porcine type 1 interferons: polymorphic sequences and activity against PRRSV
Y. Sang, R.R.R. Rowland, F. Blecha
BMC Proceedings, 5(suppl 4):S8, 2011
- 12-116-J Differential expression and activity of the porcine type I interferon family
Y. Sang, R.R.R. Rowland, R.A. Hesse, F. Blecha
Physiological Genomics, 42(2):248-258, 2010
- 12-117-J Molecular characterization and antiviral analyses of porcine type III interferons
Y. Sang, R.R.R. Rowland, F. Blecha
Journal of Interferon & Cytokine Research, 30(11):801-807, 2010

- 12-148-J A cell-delivered and activated SN38-dextran prodrug increases survival in a murine disseminated pancreatic cancer model
M.T. Basel, S. Balivada, T. Shreshta, G. Seo, M. Pyle, S. H. Bossmann, D.L. Troyer
Small, 2012
doi:10.1002/sml.201101879
- 12-163-J A/C magnetic hyperthermia of melanoma mediated by iron(0)/iron oxide core/shell magnetic nanoparticles: A mouse study
S. Balivada, R.S. Rachakatla, H. Wang, T.N. Samarakoon, R.K. Dani, M. Pyle, F.O. Kroh, B. Walker, X. Leaym, O.B. Koper, M. Tamura, V. Chikan, S.H. Bossmann, D.L. Troyer
BMC Cancer, 10:119, 2010, PMCID: PMC2859385
- 12-258-J Replication-competent recombinant PRRS viruses expressing indicator proteins and antiviral cytokines
Y. Sang, J. Shi, W. Sang, R.R.R. Rowland, F. Blecha
Viruses, 4(1):102-116, 2012
doi:10.3390/v4010102
- Animal Sciences and Industry**
- 12-001-J Prostaglandin F2a and GnRH administration improve progesterone status, luteal number, and proportion of ovular and anovular dairy cows with corpora lutea before a timed artificial insemination program
J.S. Stevenson, S.L. Pulley, H.I. Mellieon, Jr.
Journal of Dairy Science, 95(4):1831-1844, 2012
- 12-028-J In vitro assessment of the nutritive value of expanded soybean meal for dairy cattle
E.A. Elwakeel, E.C. Titgemeyer, Z.J. Cheng, A.M. Nour, M.E.A. Nasser
Journal of Animal Science and Biotechnology, 3:10, 2012
doi:10.1186/2049-1891-3-10
- 12-029-J Hydroxymethyl lysine is a source of bioavailable lysine for ruminants
E.A. Elwakeel, E.C. Titgemeyer, B.R. Faris, D.W. Brake, A.M. Nour, M.E.A. Nasser
Animal Feed Science and Technology, 90(11):3898-3904, 2012
- 12-030-J Relationship of whole body nitrogen utilization to urea kinetics in growing steers
E.C. Titgemeyer, K.S. Spivey, M.L. Jones
Journal of Animal Science, 90(10):3515-3526, 2012
- 12-032-J Incorporating group problem solving to improve student learning in an agricultural genetics class
J.M. Bormann
NACTA Journal, 56(1):57-59, 2012
- 12-055-J Effects of prepartum and postpartum bolus injections of trace minerals on performance of beef cows and calves grazing native range
L.R. Mundell, J.R. Jaeger, J.W. Waggoner, J.S. Stevenson, D.M. Grieger, L.A. Pacheco, J.W. Bolte, N.A. Aubel, G.J. Eckerle, M.J. Macek, S.M. Ensley, L.J. Havenga, KC Olson
The Professional Animal Scientist, 28(1):82-88, 2012
- 12-064-S Swine Day 2011
Multiple authors
Coordinating author: B. Goodband
KS Ag. Exp. Stn. Report of Prog. 1056, November 2011
- 12-165-J Relationships between feedlot health, performance, and carcass traits of Angus steers
C.D. Reinhardt, M.L. Hands, T.T. Marston, J.W. Waggoner, L.R. Corah
Professional Animal Scientist, 28(1):11-19, 2012
- 12-176-S Dairy Research 2011
Multiple authors
Coordinating author: J.S. Stevenson
KS Ag. Exp. Stn. Report of Prog. 1057, December 2011

- 12-231-S Cattlemen's Day 2012
Multiple authors
Coordinating authors: J.S. Drouillard and E.A. Boyle
KS Ag. Exp. Stn. Report of Prog. 1065, March 2012
- 12-265-J Effects of Bovine Respiratory Disease on performance and marbling deposition are mitigated in calves fed to a common yield grade endpoint
D.U. Thomson, E.S. Moore, B.J. White, C.D. Reinhardt
Bovine Practitioner 46(Spring):52, 2012
- 12-388-A Botanical composition of diets grazed by mature, lactating cows with calves and mature, non-lactating cows maintained on burned or unburned native tallgrass prairie
N.A. Aubel, KC Olson, J.R. Jaeger, G.J. Eckerle, L.A. Pacheco, M.J. Macek, L.R. Mundell, L.W. Murray
Proc. West. Sec. Amer. Soc. Anim. Sci., 62:222-227, 2011
- 12-389-A Influence of ruminally-undegradable protein (RUP) supplementation and advancing gestation on forage use and performance by beef cows consuming low-quality, warm-season forage
E.A. Bailey, R.C. Cochran, E.C. Titgemeyer, T.J. Jones, KC Olson
Proc. West. Sec. Amer. Soc. Anim. Sci. 62:217-221, 2011
- 12-390-A High-tannin forage utilization by beef cows I. Intake and digestion of Tallgrass prairie hay contaminated with sericea lespedeza (*Lespedeza cuneata*)
G.J. Eckerle, KC Olson, J.R. Jaeger, J.W. Waggoner, J.L. Davidson, L.A. Pacheco
Proc. West. Sec. Amer. Soc. Anim. Sci., 62:199-202, 2011a
- 12-391-A High-tannin forage utilization by beef cows II. Effects of corn steep liquor (CSL) supplementation on intake and digestion of Tallgrass prairie hay contaminated with sericea lespedeza (*Lespedeza cuneata*)
G.J. Eckerle, KC Olson, J.R. Jaeger, J.W. Waggoner, J.L. Davidson, L.A. Pacheco
Proc. West. Sec. Amer. Soc. Anim. Sci., 62:203-206, 2011b
- 12-392-A High-tannin forage utilization by beef cows III. Effects of corn steep liquor supplementation on voluntary selection of Tallgrass prairie hay contaminated with sericea lespedeza (*Lespedeza cuneata*) and uncontaminated Tallgrass prairie hay
Eckerle, G. J., K. C. Olson, J. R. Jaeger, J. W. Waggoner, J. L. Davidson and L. A. Pacheco
Proc. West. Sec. Amer. Soc. Anim. Sci., 62:307-210, 2011c
- 12-393-A Effects of pre-partum and post-partum bolus injections of trace minerals on performance of beef cows and calves grazing native range
L.R. Mundell, J.R. Jaeger, J.S. Stevenson, D.M. Grieger, L.A. Pacheco, J.W. Bolte, N.A. Aubel, G.J. Eckerle, M.J. Macek, KC Olson
Proc. West. Sec. Amer. Soc. Anim. Sci., 62:379-382, 2011
- 12-394-A Effect of weaning method on welfare and performance of beef calves during receiving
E.A. Bailey, J.R. Jaeger, J.W. Waggoner, G.W. Preedy, L.A. Pacheco, KC Olson
Proc. West. Sec. Amer. Soc. Anim. Sci., 63:25-29, 2012
- 12-395-A Effects of co-grazing on herbivory patterns and performance by cattle and goats grazing native tallgrass rangeland infested by sericea lespedeza (*Lespedeza cuneata*)
L.A. Pacheco, W.H. Fick, E.A. Bailey, D.L. Davis, G.W. Preedy, KC Olson
Proc. West. Sec. Amer. Soc. Anim. Sci. Phoenix, Arizona, 2012, pp. 169-172 (vol. 63)
- 12-399-J The effects of diet form and feeder design on the growth performance of finishing pigs
A.J. Myers, R.D. Goodband, M.D. Tokach, S.S. Dritz, J.M. DeRouchey, J.L. Nelssen
Swine Day, Manhattan, KS, November 17, 2011, pp. 247-256

Biochemistry and Molecular Biophysics

- 12-054-B Channel replacement therapy for cystic fibrosis
J.M. Tomich, U. Bukovnik, J. Layman, B.D. Schultz
In: Cystic Fibrosis - Renewed Hopes Through Research, D.D. Sriramulu (Ed.). InTech Open Access Publisher
doi:10.5772/29832
- 12-190-J Kinetic properties of alternatively spliced isoforms of laccase-2 from *Tribolium castaneum* and *Anopheles gambiae*
M.J. Gorman, L.I. Sullivan, T.D.T. Nguyen, H. Dai, N.T. Dittmer, L.U. Syed, J. Li, D.H. Hua, M.R. Kanost
Insect Biochemistry and Molecular Biology, 42(3):193-202, 2012
- 12-250-J Multicopper oxidase-3 is a laccase associated with the peritrophic matrix and malpighian tubules of *Anopheles gambiae*
M. Lang, M.R. Kanost, M.J. Gorman
PLOS ONE 7(3):e33985, 2012
doi:10.1371/journal.pone.0033985
- 12-460-J Gene families of cuticular proteins analogous to peritrophins (CPAPs) in *Tribolium castaneum* have diverse functions
S. Jasrapuria, C.A. Specht, K.J. Kramer, R.W. Beeman, S. Muthukrishnan
PLOS ONE, 7(11): e49844, 2012
doi:10.1371/journal.pone.0049844
- 12-467-J Proteomic analysis of *Frankliniella occidentalis* and differentially expressed proteins in response to tomato spotted wilt virus infection
I.E. Badillo-Vargas, D. Rotenberg, D. Schneweis, Y. Hiromasa, J.M. Tomich, A.E. Whitfield
Journal of Virology, 86(16):8793-8809, 2012

Biological and Agricultural Engineering

- 12-014-J Physicochemical properties and adhesion performance of canola protein modified with sodium bisulfite
N. Li, G. Qi, X.S. Sun, M. J. Stamm, D. Wang
Journal of the American Oil Chemists' Society, 89(5):897-908, 2012
doi:10.1007/s11746-011-1977-7
- 12-050-J Effects of Sodium Bisulfite on the Physicochemical and Adhesion Properties of Canola Protein Fractions
N. Li, G. Qi, X.S. Sun, D. Wang
Journal of Polymers and the Environment, 20:905-915, 2012
doi:10.1007/s10924-012-0490-x
- 12-162-J Impact of pelleting and acid pretreatment on biomass structure and thermal properties of wheat straw, corn stover, big bluestem, and sorghum stalk
K. Theerarattananoon, F. Xu, J. Wilson, S. Staggenborg, L. Mckinney, P. Vadlani, Z.J. Pei, D. Wang
Transactions of the ASABE, 55(5):1845-1858, 2012
- 12-176-S Dairy Research 2011
Multiple authors
Coordinating author: J.S. Stevenson
KS Ag. Exp. Stn. Report of Prog. 1057, December 2011
- 12-208-J Enhanced production of glucose and xylose with partial dissolution of corn stover in ionic liquid, 1-Ethyl-3-methylimidazolium acetate
F. Xu, Y-C. Shi, D. Wang
Bioresource Technology, 114:720-724, 2012
- 12-209-S 2012 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland
Multiple authors
Coordinating authors: D. Peterson, C.R. Thompson
KS Agric. Exp. Stn. Report of Prog. 1063, December 2011

- 12-254-J 3-D and Quasi-2-D discrete element modeling of grain commingling in a bucket elevator boot system
J.M. Boac, M.E. Casada, R.G. Maghirang, J.P. Harner III
Transactions of the ASABE, 55(2):659-672, 2012
- 12-271-J Chemical and elemental composition of big bluestem as affected by ecotype and planting location along the precipitation gradient of the Great Plains
K. Zhang, L. Johnson, R. Nelson, W. Yuan, Z. Pe, D. Wang
Industrial Crops and Products, 40:210-218, 2012
- 12-290-J Nutrient losses in field-scale surface runoff from claypan soil receiving turkey litter and fertilizer
D.W. Sweeney, G.M. Pierzynski, P.L. Barnes
Agriculture, Ecosystems & Environment, 150:19-26, 2012
- 12-310-A Advanced considerations for SDI
F.R. Lamm, D.H. Rogers
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-311-A Assessment of plant-available soil water on producer fields in Western Kansas
F.R. Lamm, D.H. Rogers, A.J. Schlegel, N.L. Klocke, L.R. Stone, R.M. Aiken, L.K. Shaw
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-313-A Kansas irrigation trends
D.H. Rogers, F.R. Lamm
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012; K-State Research and Extension MF2849
- 12-316-A Using the K-State Center Pivot Sprinkler and SDI Economic Comparison Spreadsheet, 2012
F.R. Lamm, D.M. O'Brien, D.H. Rogers, T.J. Dumler
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-319-J Spatial application of WEPS for estimating wind erosion in the Pacific Northwest
L. Wagner, F. Fox, S. Chung, B. Lamb
Proceedings International Symposium on Erosion and Landscape Evolution (IS-ELE), Anchorage, AK, 2011
- 12-321-J Optimizing catalytic fast pyrolysis of biomass for hydrocarbon yield
X. Wu, J. Markham, X.S. Sun, D. Wang
Transactions of the ASABE, 55(5):1879-1885, 2012
- 12-367-J Acid-functionalized nanoparticles for pretreatment of wheat straw
L. Peña, M. Ikenberry, K.L. Hohn, D. Wang
Journal of Biomaterials and Nanobiotechnology, 3(3):342-352, 2012
- 12-380-J Nonlinear Stochastic Model for Bacterial Disinfection: Analytical Solution and Monte Carlo Simulation
L.T. Fan, A. Argoti, R. Maghirang, S-T. Chou
Industrial & Engineering Chemistry Research, 51(4): 1697-1702, 2012
[dx.doi.org/10.1021/ie200890p](https://doi.org/10.1021/ie200890p)

Chemical Engineering

- 12-271-J Chemical and elemental composition of big bluestem as affected by ecotype and planting location along the precipitation gradient of the Great Plains
K. Zhang, L. Johnson, R. Nelson, W. Yuan, Z. Pe, D. Wang
Industrial Crops and Products, 40:210-218, 2012
- 12-367-J Acid-functionalized nanoparticles for pre-treatment of wheat straw
L. Peña, M. Ikenberry, K.L. Hohn, D. Wang
Journal of Biomaterials and Nanobiotechnology, 3(3):342-352, 2012
- 12-380-J Nonlinear Stochastic Model for Bacterial Disinfection: Analytical Solution and Monte Carlo Simulation
L.T. Fan, A. Argoti, R. Maghirang, S-T. Chou
Industrial & Engineering Chemistry Research, 51(4): 1697-1702, 2012
dx.doi.org/10.1021/ie200890p

Clinical Sciences

- 12-030-J Relationship of whole body nitrogen utilization to urea kinetics in growing steers
E.C. Titgemeyer, K.S. Spivey, M.L. Jones
Journal of Animal Science, 90(10):3515-3526, 2012
- 12-167-J A commercially available siderophore-receptor and porin-based vaccine reduced the prevalence of *E. coli* O157:H7 in the feces of beef cattle under field conditions in 10 commercial feedlots
B. Butler, D.U. Thomson, T.G. Nagaraja, G.H. Loneragan, C.D. Reinhardt
Cattlemen's Day
KS Agric. Exp. Stn. Report of Prog. 1065, p. 92-96, 2012
- 12-169-J Comparison of observational and necropsy-derived diagnosis for cause of death for cattle in commercial beef feedlots
D. Anspaugh, D.U. Thomson, B. Wileman, S. Guillossou, M. Apley, W. Taylor, T. Noffsinger, C.D. Reinhardt
The Plains Nutrition Council 2011 Spring Conference, Amarillo, TX

- 12-176-S Dairy Research 2011
Multiple authors
Coordinating author: J.S. Stevenson
KS Ag. Exp. Stn. Report of Prog. 1057, December 2011
- 12-265-J Effects of Bovine Respiratory Disease on performance and marbling deposition are mitigated in calves fed to a common yield grade endpoint
D.U. Thomson, E.S. Moore, B.J. White, C.D. Reinhardt
Bovine Practitioner 46 (Spring):52, 2012

Diagnostic Medicine/Pathobiology

- 12-112-J Interaction between innate immunity and porcine reproductive and respiratory syndrome virus
Y. Sang, R.R.R. Rowland, F. Blecha
Animal Health Research Reviews, 12(2):149-167, 2011
doi:10.1017/S1466252311000144
- 12-115-J Porcine type 1 interferons: polymorphic sequences and activity against PRRSV
Y. Sang, R.R.R. Rowland, F. Blecha
BMC Proceedings 5(suppl 4):S8, 2011
- 12-116-J Differential expression and activity of the porcine type I interferon family
Y. Sang, R.R.R. Rowland, R.A. Hesse, F. Blecha
Physiological Genomics, 42(2):248-258, 2010
- 12-117-J Molecular characterization and antiviral analyses of porcine type III interferons
Y. Sang, R.R.R. Rowland, F. Blecha
Journal of Interferon & Cytokine Research, 30(11):801-807, 2010
- 12-177-J *Enterococcus faecalis* OG1RF:pMV158 survives and proliferates in the house fly digestive tract
C.W. Doud, L. Zurek
Journal of Medical Entomology 49(1):150-155, 2012

- 12-223-J Applicability of a multiplex PCR to detect the seven major Shiga toxin-producing *Escherichia coli* based on genes that code for serogroup-specific O-antigens and major virulence factors in cattle feces
J. Bai, Z.D. Paddock, X. Shi, S. Li, B. An, T.G. Nagaraja
Foodborne Pathogens and Disease, 9(6):541-548, 2012
- 12-258-J Replication-competent recombinant PRRS viruses expressing indicator proteins and antiviral cytokines
Y. Sang, J. Shi, W. Sang, R.R.R. Rowland, F. Blecha
Viruses 4(1):102-116, 2012
doi:10.3390/v4010102
- 12-270-J Resident cats in small animal veterinary hospitals carry multi-drug resistant enterococci and are likely involved in cross-contamination of the hospital environment
A. Ghosh, K. KuKanich, C.E. Brown, L. Zurek
Frontiers of Microbiology, 3(62):1-14, 2012
- 12-324-J Efficacy of a vaccine and a direct-fed microbial against fecal shedding of *Escherichia coli* O157:H7 in a randomized pen-level field trial of commercial feedlot cattle
C.A. Cull, D.G. Renter, Z.D. Paddock, N.M. Bello, A.H. Babcock, T.G. Nagaraja
Vaccine, 30(43):6210-6215, 2012
doi:10.1016/j.vaccine.2012.05.080
- 12-399-J The effects of diet form and feeder design on the growth performance of finishing pigs
A.J. Myers, R.D. Goodband, M.D. Tokach, S.S. Dritz, J.M. DeRouchey, J.L. Nelssen
Swine Day, Manhattan, KS, November 17, 2011, pp. 247-256

Division of Biology

- 12-020-J Baculovirus infection induces a DNA damage response that is required for efficient viral replication
N. Huang, W. Wu, K. Yang, A. L. Passarelli, G. Rohrmann, R. Clem
Journal of Virology, 85(23):12547-12556, 2011
- 12-034-J Evaluation of in vitro macrophage differentiation during space flight
M.T. Ortega, N. Lu, S.K. Chapes
Advances in Space Research, 49(10):1441-1455, May 2012
- 12-036-J Direct infusion mass spectrometry of oxylipin-containing *Arabidopsis thaliana* membrane lipids reveals varied patterns in different stress responses
H.S. Vu, P. Tamura, N.A. Galeva, R. Chaturvedi, T.D. Williams, X. Wang, J. Shah, R. Welti
Plant Physiology, 158(1):324-329, 2012
- 12-047-J Effects of manipulating apoptosis on Sindbis virus infection of *Aedes aegypti* mosquitoes
H. Wang, T. Gort, D.L. Boyle, R.J. Clem
Journal of Virology, 86(12):6546-6554, 2012
- 12-180-J Prediction of temperature distributions in peaked, leveled and inverted cone grain mass configurations during aeration of corn
J. Lawrence, D.E. Maier
Applied Engineering in Agriculture, 28(5):685-692, 2012
- 12-238-J Levels of *Arabidopsis thaliana* leaf phosphatidic acids, phosphatidylserines, and most trienoate-containing polar lipid molecular species increase during the dark period of the diurnal cycle
S. Maatta, P. Tamura, B. Scheu, M.R. Roth, M. Li, X. Wang, R. Welti
Frontiers in Plant Physiology, 3:49, 2012
doi:10.3389/fpls.2012.00049

- 12-271-J Chemical and elemental composition of big bluestem as affected by ecotype and planting location along the precipitation gradient of the Great Plains
K. Zhang, L. Johnson, R. Nelson, W. Yuan, Z. Pe, D. Wang
Industrial Crops and Products, 40:210-218, 2012
- 12-295-J High richness and dense seeding enhance grassland restoration establishment but have little effect on drought response
D.L. Carter, J.M. Blair
Ecological Applications, 22(4):1308-1319, 2012
dx.doi.org/10.1890/11-1970.1
- 12-329-J Intraspecific cytotypic variation and complicated genetic structure in the *Phlox amabilis*-*P. woodhousei* (Polemoniaceae) complex
S.D. Fehlberg, C.J. Ferguson
American Journal of Botany, 99(5): 865-874, 2012
- 12-338-J Riparian woody expansion and subsequent restoration influences prairie stream metabolism
A. Riley, W.K. Dodds
Freshwater Biology, 57(6):1138-1150, 2012
doi:10.1111/j.1365-2427.2012.02778.x
- 12-351-J On identification of eastern North American *Morus* (Moraceae): taxonomic status of *M. murrayana*
M.P. Nepal, M.H. Mayfield, C.J. Ferguson
Phytoneuron, 26:1-6, 2012
- 12-374-J Hispid pocket mice in tallgrass prairie: abundance, seasonal activity, habitat association, and individual attributes
G.A. Kaufman, D.M. Kaufman, D.W. Kaufman
Western North America Naturalist, 72(3):377-392, 2012
dx.doi.org/10.3398/064.072.0312
- 12-387-J Deciphering the molecular functions of sterols in cellulose biosynthesis
K. Schrick, S. DeBolt, V. Bulone
Frontiers in Plant Physiology 3(84), 2012
doi:10.3389/fpls.2012.00084
- 12-408-J Changes in stomatal conductance along grass blades reflect changes in leaf structure
T.W. Ocheltree, J.B. Nippert, P.V.V. Prasad
Plant Cell and Environment, 35(6):1040-1049, 2012
- 12-437-J Surprises and insights from long-term aquatic data sets and experiments
W.K. Dodds, C.T. Robinson, E.E. Gaiser, G.J.A. Hansen, H. Powell, J.M. Smith, N.B. Morse, S.L. Johnson, S.V. Gregory, T. Bell, T.K. Kratz, W.H. McDowell
BioScience, 62(8):709-721, 2012
dx.doi.org/10.1525/bio.2012.62.8.4
- 12-446-J Climate change and plant health: Designing research spillover from plant genomics for understanding the role of microbial communities
K.A. Garrett, A. Jumpponen, C. Toomajian, L. Gomez-Montano
Canadian Journal of Plant Pathology, 34(3):349-361, 2012
- 12-452-J Cytotypic variation in *Phlox pilosa* ssp. *pilosa* (Polemoniaceae) at the western edge of its range in the central United States
L. Worcester, M.H. Mayfield, C.J. Ferguson
Journal of the Botanical Research Institute of Texas, 6(2):443-451, 2012
- Entomology**
- 12-006-J Functions of duplicated genes encoding CCAP receptors in the red flour beetle, *Tribolium castaneum*
B. Li, R.W. Beeman, Y. Park
Journal of Insect Physiology, 57(9): 1190-1197, 2011
- 12-017-S 2011 Kansas Performance Tests with Winter Wheat Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1054, July 2011

- 12-018-J Antibiosis resistance in soybean plant introductions to *Dectes texanus* (Coleoptera: Cerambycidae)
T. Niide, R.A. Higgins, R.J. Whitworth, W.T. Schapaugh, C.M. Smith, L.L. Buschman
Journal of Economic Entomology, 105(2):598-607, 2012
dx.doi.org/10.1603/EC11253
- 12-077-J Genetic structure of *Tribolium castaneum* (Coleoptera: Tenebrionidae) populations in mills
A.A. Semeao, J.F. Campbell, R.W. Beeman, MD. Lorenzen, R.J. Whitworth, P.E. Sloderbeck
Environmental Entomology, 41(1):188-199, 2012
dx.doi.org/10.1603/EN11207
- 12-083-J Influence of environmental and physical factors on *Tribolium castaneum* (Coleoptera: Tenebrionidae) trap captures in a flour mill
A.A. Semeao, J.F. Campbell, R.J. Whitworth, P.E. Sloderbeck
Journal of Economic Entomology, 105(2): 686-702, 2012
dx.doi.org/10.1603/EC11322
- 12-088-J Larval food supply constrains female reproductive schedules in *Hippodamia convergens* (Coleoptera: Coccinellidae)
G. Vargas, J.P. Michaud, J.R. Nechols
Annals of the Entomological Society of America, 105(6):832-839, 2012
- 12-100-J Using a population growth model to simulate response of *Plodia interpunctella* Hübner to temperature and diet
E.A. Fontenot, F.H. Arthur, J.R. Nechols, J.E. Throne
Journal of Pest Science, 85(1): 163-167, 2012
- 12-101-J Using a population growth model to simulate response of *Plodia interpunctella* Hübner populations to timing and frequency of insecticide treatments
E.A. Fontenot, F.H. Arthur, J.R. Nechols, J.E. Throne
Journal of Pest Science, 85(4):469-476, 2012
- 12-132-J Identification and characterization of a novel chitinase gene cluster (AgCht5) possibly derived from tandem duplications in the African malaria mosquito, *Anopheles gambiae*
J. Zhang, X. Zhang, Y. Arakane, S. Muthukrishnan, K.J. Kramer, E. Ma, K.Y. Zhu
Insect Biochemistry and Molecular Biology, 41(8):521-528, 2011
- 12-171-J Management recommendations for soybean aphid (Hemiptera: Aphididae)
E.W. Hodgson, B.P. McCornack, K. Tilmon, J.J. Knodel
Journal of Integrated Pest Management, 3(1):E1-E10, 2012
dx.doi.org/10.1603/IPM11019
- 12-177-J *Enterococcus faecalis* OG1RF:pMV158 survives and proliferates in the house fly digestive tract
C.W. Doud, L. Zurek
Journal of Medical Entomology, 49(1):150-155, 2012
- 12-182-J Cholinergic and non-cholinergic functions of two acetylcholinesterase genes revealed by gene-silencing in *Tribolium castaneum*
Y. Lu, Y. Park, X. Gao, X. Zhang, J. Yao, Y.-P. Pang, H. Jiang, K.Y. Zhu
Scientific Reports, 2(288), 2012
doi:10.1038/srep00288
- 12-183-J Induction of reproductive diapause in *Habrobracon hebetor* (Hymenoptera: Braconidae) when reared at different photoperiods at low temperatures
H. Chen, H. Zhang, K.Y. Zhu, J.E. Throne
Environmental Entomology, 41(3):697-705, 2012
- 12-198-J Cryptic maternal effects in the ladybird beetle *Hippodamia convergens* vary with maternal age and body size
G.A. Vargas, J.P. Michaud, J.R. Nechols
Entomologia Experimentalis et Applicata, 146:302-311, 2012

- 12-206-J Identification and characterization of two chitin synthase genes in African malaria mosquito, *Anopheles gambiae*
X. Zhang, J. Zhang, Y. Park, K.Y. Zhu
Insect Biochemistry and Molecular Biology, 42(9):674-682, 2012
- 12-214-S 2011 Kansas Performance Tests with Soybean Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1058, December 2011
- 12-215-S 2011 Kansas Performance Tests with Corn Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1055, November 2011
- 12-216-S 2011 Kansas Performance Tests with Grain Sorghum Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1059, December 2011
- 12-219-J Dewatered sewage biosolids provide a productive larval habitat for stable flies and house flies (Diptera: Muscidae)
C.W. Doud, D.B. Taylor, L. Zurek
Journal of Medical Entomology, 49(2):286-292, 2012
- 12-222-J Neural control of salivary glands in ixodid ticks
L. Simo, D. Zitnan, Y. Park
Journal of Insect Physiology, 58(4):459-466, 2012
dx.doi.org/10.1016/j.jinsphys.2011.11.006
- 12-270-J Resident cats in small animal veterinary hospitals carry multi-drug resistant enterococci and are likely involved in cross-contamination of the hospital environment
A. Ghosh, K. KuKanich, C.E. Brown, L. Zurek
Frontiers of Microbiology, 3(62):1-14, 2012
- 12-273-J Endocrine regulation of insect diuresis in the early postgenomic era
Y. Park
Canadian Journal of Zoology, 90(4):507-520, 2012
doi:10.1139/z2012-013
- 12-275-J Effect of light intensity on *Brassica rapa* chemistry and *Plutella xylostella* (Lepidoptera: Plutellidae) life history traits
W.A. Johnson, J.R. Nechols, R.A. Cloyd, D. Rotenberg, M.M. Kennelly
Journal of Entomological Science, 47(4):327-349, 2012
- 12-363-J Effect of nitrogen source on pac choi (*Brassica rapa* L.) chemistry and interactions with the diamondback moth (*Plutella xylostella* L.)
W.A. Johnson, R.A. Cloyd, J.R. Nechols, K.A. Williams, N.O. Nelson, D. Rotenberg, M.M. Kennelly
HortScience, 47(10):1457-1465, 2012
- 12-436-J Multiple categories of resistance to wheat curl mite expressed in Aegilops species accessions
S. Garcés Carrera, H. Davis, L. Aguirre-Rojas, M. Murugan, M. Smith
Journal of Economic Entomology, 105(6):2180-2186, 2012
- Grain Science and Industry**
- 12-014-J Physicochemical properties and adhesion performance of canola protein modified with sodium bisulfite
N. Li, G. Qi, X.S. Sun, M. J. Stamm, D. Wang
Journal of the American Oil Chemists' Society, 89(5):897-908, 2012
doi:10.1007/s11746-011-1977-7
- 12-017-S 2011 Kansas Performance Tests with Winter Wheat Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1054, July 2011

- 12-021-J High-amylose rice improves indices of animal health in normal and diabetic rats
L-J. Zhu, M-H. Gu, X-L. Meng, S.C.K. Cheung, H-X. Yu, J. Huang, Y. Sun, P.C.Y. Tong, Y-C. Shi, Q-Q. Liu
Plant Biotechnology
10(3):353-362, 2012
doi:10.1111/j.1467-7652.2011.00667.x
- 12-023-J Synthesis and characterization of amphiphilic reduced graphene oxide with epoxidized methyl oleate
B.K. Ahn, J. Sung, N. Mohanty, M. Ikenberry, P. Nguyen, K. Hohn, V. Berry, X.S. Sun
Advanced Materials, 24(16):2123-2129, 2012
doi:10.1002/adma.201104080
- 12-026-J Development and validation of a headspace model for a stored grain silo filled to its eave
J. Lawrence, D.E. Maier, J. Hardin, C.L. Jones
Journal of Stored Products Research, 49:176-183, 2012
- 12-048-J Ring opening of epoxidized methyl oleate using novel acid-functionalized iron nanoparticle catalyst
B.K. Ahn, H. Wang, S. Robinson, T.B. Shrestha, D.L. Troyer, S. Bossmann, X.S. Sun
Green Chemistry, 14(1): 136-142, 2012
- 12-070-J Study on melting and crystallization of short-chain amylose by in situ synchrotron wide-angle X-ray diffraction
L. Cai, Y. Bai, Y-C. Shi
Journal of Cereal Science, 55(3):373-379, 2012
- 12-073-J Mechanism and enzymatic contribution to in vitro test method of digestion for maize starches differing in amylose content
L.R. Brewer, L. Cai, Y.C. Shi
Journal of Agricultural and Food Chemistry, 60(17):4379-4387, 2012
- 12-077-J Genetic structure of *Tribolium castaneum* (Coleoptera: Tenebrionidae) populations in mills
A.A. Semeao, J.F. Campbell, R.W. Beeman, MD. Lorenzen, R.J. Whitworth, P.E. Sloderbeck
Environmental Entomology, 41(1):188-199, 2012
dx.doi.org/10.1603/EN11207
- 12-160-B Insect management with aerosols in food-processing facilities
D.R. Boina, B. Subramanyam
In: Insecticides - Advances in Integrated Pest Management, Dr. Farzana Perveen (Ed.). InTech Open Access Publisher, 2012
doi:10.5772/28959
- 12-162-J Impact of pelleting and acid pretreatment on biomass structure and thermal properties of wheat straw, corn stover, big bluestem, and sorghum stalk
K. Theerarattananoon, F. Xu, J. Wilson, S. Staggenborg, L. Mckinney, P. Vadlani, Z.J. Pei, D. Wang
Transactions of the ASABE, 55(5):1845-1858, 2012
- 12-174-J Population structure of and mycotoxin production by *Fusarium graminearum* from maize in Korea
J. Lee, H. Kim, J-J. Jeon, H-S. Kim, K.A. Zeller, L.L.A. Carter, J.F. Leslie, Y-W. Lee
Applied and Environmental Microbiology, 78(7): 2161-2167, 2012
- 12-180-J Prediction of temperature distributions in peaked, leveled and inverted cone grain mass configurations during aeration of corn
J. Lawrence, D.E. Maier
Applied Engineering in Agriculture, 28(5):685-692, 2012
- 12-202-J Delayed mortality responses of *Rhyzopertha dominica* (F.) adults subjected to short exposures on spinosad-treated wheat
D.R. Boina, S. Bhadriraju, K. Mutambuki
Journal of Stored Products Research, 48:149-152, 2012
dx.doi.org/10.1016/j.jspr.2011.12.002

- 12-208-J Enhanced production of glucose and xylose with partial dissolution of corn stover in ionic liquid, 1-Ethyl-3-methylimidazolium acetate
F. Xu, Y-C. Shi, D. Wang
Bioresource Technology, 114:720-724, 2012
- 12-267-J Mid-IR and near-IR chemical imaging: Complementary for biological materials
D.L. Wetzel
Vibrational Spectroscopy, 60:29-33, 2012
- 12-305-B Chemical control in stored products
F.H. Arthur, B. Subramanyam
In: Stored Product Protection, D.W. Hagstrum, T.W. Phillips, and G. Cuperus (Eds.), K-State Research and Extension S156, pp. 95-100, 2012
- 12-306-B Extreme temperatures
P. Fields, B. Subramanyam, R. Hulasare
In: Stored Product Protection, D.W. Hagstrum, T.W. Phillips, and G. Cuperus (Eds.), K-State Research and Extension S156, pp. 179-190, 2012
- 12-307-B Role of extension educators and consultants
D.W. Hagstrum, B. Subramanyam
In: Stored Product Protection, D.W. Hagstrum, T.W. Phillips, and G. Cuperus (Eds.), K-State Research and Extension S156, pp. 289-296, 2012
- 12-321-J Optimizing catalytic fast pyrolysis of biomass for hydrocarbon yield
X. Wu, J. Markham, X.S. Sun, D. Wang
Transactions of the ASABE, 55(5):1879-1885, 2012
- 12-331-B Processing and industrial applications of natural polymer nanocomposites
X.Z. Tang, S. Alavi, K.P. Sandeep, P. Kumar
In: Natural Polymers: Volume 2. Royal Society of Chemistry, United Kingdom, pp. 234-254, 2012

Horticulture, Forestry, and Recreation Resources

- 12-025-J Ponderosa pine family growth comparisons in the central great plains of Kansas
W.A. Geyer, K.D. Lynch
Open Journal of Forestry, 1(2):27-30, 2011
doi:10.4236/ojf.2011.12004
- 12-229-T Water and native pecans
W. Reid
Pecan South, 44(6):8-11, 2011
- 12-252-T Evaluation of conventional and alternative products for silvery-thread moss control in creeping bentgrass
C. Thompson, J. Fry, M. Kennelly
Applied Turfgrass Science, 2011
doi:10.1094/ATS-2011-1018-01-RS
- 12-286-J Soil quality after eight years under high tunnels
S.J.B. Knewtson, R. Janke, M.B. Kirkham, E.E. Carey
HortScience, 47(11):1630-1633, 2012
- 12-375-S Turfgrass Research 2012
Multiple authors
Coordinating author: J. Fry
KS Agric. Exp. Stn. Report of Prog. 1071, July 2012

Human Nutrition

- 12-033-J The effect of finasteride and dutasteride on the growth of WPE1-NA22 prostate cancer xenografts in nude mice
A.B. Opoku-Acheampong, M.K. Nelsen, D. Unis, B.L. Lindshield
PLOS ONE, 7(1):e29068, 2012
doi:10.1371/journal.pone.0029068
- 12-037-J Evolution of sensory aroma attributes from coffee beans to brewed coffee
N. Bhumiratana, K. Adhikari, E. Chambers IV
LWT-Food Science and Technology, 44(10): 2185-2192, 2011
dx.doi.org/10.1016/j.lwt.2011.07.001

- 12-038-J Statistical package clustering may not be best for grouping consumers to understand their most liked products
R. Yenket, E. Chambers IV, D.E. Johnson
Journal of Sensory Studies, 26(3):209-225, 2011
- 12-039-B Sensory quality control and assurance of alcoholic beverages through sensory evaluation
D. McGrew, E. Chambers IV
In: *Alcoholic Beverages: Sensory evaluation and consumer research*, J. Piggott (Ed.)
Cambridge, UK: Woodhead, 2011
- 12-040-B Sensory analysis of frozen foods
E. Chambers IV
In: *Handbook of Frozen Food Processing and Packaging*, 2nd edition, D.W. Sun (Ed.)
Boca Raton, FL: CRC Press, Taylor & Francis, pp. 587-604, 2011
- 12-041-J Ethnic food awareness and perceptions of consumers in Thailand and the United States
B. Bell, K. Adhikari, P. Cherdchu, T. Suwonsichon, E. Chambers IV
Nutrition and Food Science, 41(4):268-277, 2011
- 12-042-J A comparison of seven preference mapping techniques using four software programs
R. Yenket, K. Adhikari, E. Chambers IV
Journal of Sensory Studies, 26(2):135-150, 2011
- 12-043-J Sensory and chemical properties of organically and conventionally grown pac choi (*Brassica rapa* var. Mei Qing Choi) change little during 18 days of refrigerated storage
M. Talavers-Bianchi, D. H. Chambers, K. Adhikari, E.E. Carey, E. Chambers IV
Food Science and Technology, 44(6):1536-1545, 2011
- 12-059-J The Kansas State University Human Nutrition (HN 400) Flexbook
B.L. Lindshield, K. Adhikari
Educause Quarterly, 34(4), 2011
- 12-104-J Wolfberry water-soluble phytochemicals down-regulate ER stress biomarkers and modulate multiple signaling pathways leading to inhibition of proliferation and induction of apoptosis in Jurkat cells
Y. Jiang, Y. Zhang, L. Wark, E. Ortiz, S. Lim, H. He, W. Wang, D. Medeiros, D. Lin
Journal of Nutrition and Food Sciences, S2-001, 2011
- 12-220-J IGF-1 mediates exercise-induced phospholipid alteration in the murine skin tissue
Y. Jiang, H. Ma, J. Chen, J. Standard, R. Welti, X. Su, W. Wang
Journal of Nutrition and Food Sciences, S2-003, 2012
- 12-241-J Flavour and acceptance of Estonian cheeses
K. Koppel, E. Chambers IV, D.H. Chambers
Agronomy Research, 9(Special Issue II): 409-414, 2011
- 12-242-J References for “musty” odor notes in sensory analysis of grain sorghum
L. Vázquez-Araújo, E. Chambers IV, D.B. Funk
Journal of Cereal Science, 54(3):460-466, 2011
[dx.doi.org/10.1016/j.jcs.2011.08.012](https://doi.org/10.1016/j.jcs.2011.08.012)
- 12-243-J Development of a lexicon for beef flavor in intact muscle
K. Adhikari, E. Chambers IV, R. Miller, L. Vazquez-Araujo, N. Bhumiratana, C. Philip
Journal of Sensory Studies, 26(6): 413-420, 2011
[doi:10.1111/j.1745-459X.2011.00356.x](https://doi.org/10.1111/j.1745-459X.2011.00356.x)
- 12-317-J Predicting success for new flavors with information known pre-launch: a flavored snack food case study
A. Doan, E. Chambers IV
Food Quality and Preference, 25(2):116-120, 2012

Northwest Research–Extension Center

- 12-017-S 2011 Kansas Performance Tests with Winter Wheat Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1054, July 2011
- 12-074-J Inferring transpiration control from sap flow gauges and the Penman-Monteith equation
R.M. Aiken, N.L. Klocke
Transactions of the ASABE 55(2): 543-549, 2012
- 12-076-J Subsurface drip irrigation: Status of the technology 2010
F.R. Lamm, J.P. Bordovsky, L.J. Schwankl, G.L. Grabow, J. Enciso-Medina, R.T. Peters, P.D. Colaizzi, T.P. Trooien, D.O. Porter
Transactions of the ASABE 55(2):483-491, 2012
- 12-089-J Managing diminished irrigation capacity with pre-season irrigation and plant density for corn production
A. Schlegel, L. Stone, T. Dumler, F. Lamm
Transactions of the ASABE, 55(2):525-531, 2012
- 12-135-A Oilseed crop water use and water productivity
R.M. Aiken, F.L. Lamm, A.A. Aboukheira
Proceedings of the Irrigation Association Technical Conference
San Diego, CA, 2011, 10 pp.
- 12-137-A Subsurface drip irrigation in alfalfa
F.R. Lamm, K.R. Harmoney, A.A. Aboukheira, S.K. Johnson
Proceedings of the Irrigation Association Technical Conference
San Diego, CA, 2011, 10 pp.
- 12-214-S 2011 Kansas Performance Tests with Soybean Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1058, December 2011
- 12-215-S 2011 Kansas Performance Tests with Corn Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1055, November 2011
- 12-216-S 2011 Kansas Performance Tests with Grain Sorghum Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1059, December 2011
- 12-221-J Alfalfa production with subsurface drip irrigation in the Central Great Plains
F.R. Lamm, K.R. Harmoney, A.A. Aboukheira, S.K. Johnson
Transactions of the ASABE, 55(4):1203-1212, 2012
- 12-226-J Allometric model to quantify sorghum canopy formation
S. Narayanan, R.M. Aiken, P.V. V. Prasad, Z. Xin, G. Paul, J. Yu
ASA CSSA SSSA International Annual Meetings, San Antonio, TX, 2011
- 12-245-S 2011 Kansas Performance Tests with Sunflower Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1060, January 2012
- 12-246-S 2011 Kansas Performance Tests with Alfalfa Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1061, January 2012
- 12-293-S 2012 Field Research
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1066, April 2012
- 12-294-S 2011 Kansas Fertilizer Research
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1067, April 2012

- 12-308-A Investigating strategies to improve crop germination when using SDI
J.P. Bordovsky, A.M. Cranmer, P.D. Colaizzi, F.R. Lamm, S.R. Evett, T.A. Howell
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-309-A Erraticity of sprinkler-irrigated corn in 2011
F.R. Lamm
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-310-A Advanced considerations for SDI
F.R. Lamm, D.H. Rogers
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-311-A Assessment of plant-available soil water on producer fields in Western Kansas
F.R. Lamm, D.H. Rogers, A.J. Schlegel, N.L. Klocke, L.R. Stone, R.M. Aiken, L.K. Shaw
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-313-A Kansas irrigation trends
D.H. Rogers, F.R. Lamm
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012; K-State Research and Extension MF2849
- 12-314-A Optimizing cropping systems under limited irrigation conditions
A. Schlegel, L. Stone, T. Dumler, F. Lamm
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-315-A A return look at dormant-season irrigation strategies
A. Schlegel, L. Stone, T. Dumler, F. Lamm
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-316-A Using the K-State Center Pivot Sprinkler and SDI Economic Comparison Spreadsheet, 2012
F.R. Lamm, D.M. O'Brien, D.H. Rogers, T.J. Dumler
Proceedings of the 24th Annual Central Plains Irrigation Conference
Colby, KS, 2012
- 12-426-J Replacing fallow with continuous cropping reduces crop water productivity of semiarid wheat
R.M. Aiken, D.M. O'Brien, B.L. Olson, L. Murray
Agronomy Journal, 105(1):199-207, 2012
doi:10.2134/agronj2012.0165
- Plant Pathology**
- 12-017-S 2011 Kansas Performance Tests with Winter Wheat Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1054, July 2011
- 12-024-J Diversity of Fusarium species isolated from weeds and plant debris in Croatia
J. Postic, J. Cosic, D. Jurkovic, K. Vrandecic, A.A. Saleh, J.F. Leslie
Journal of Phytopathology, 160(2):76-81, 2012
- 12-051-J Sorghum pathology and biotechnology - A fungal disease perspective: Part I. Grain mold, head smut, and ergot
C.R. Little, R. Perumal, T. Tesso, L.K. Prom, G.N. Odvody, C.W. Magill
European Journal of Plant Science and Biotechnology, 6(1):10-30, 2012
- 12-052-J Sorghum pathology and biotechnology - A fungal disease perspective: Part II. Anthracnose, stalk rot, and downy mildew
T. Tesso, R. Perumal, C.R. Little, A. Adeyanju, G.L. Radwan, L.K. Prom, C.W. Magill
European Journal of Plant Science and Biotechnology, 6(1):31-45, 2012

- 12-058-J AFLP, Pathogenicity, and VCG analyses of *Fusarium oxysporum* and *Fusarium pseudo-circinatum* from *Acacia koa*
A. Shiraishi, J.F. Leslie, S. Zhong, J.Y. Uchida
Plant Disease, 96(8):1111-1117, 2012
- 12-071-J Development and molecular characterization of wheat-*Aegilops kotschy* addition and substitution lines with high grain protein, iron and zinc
N. Rawat, K. Neelam, V.K. Tiwari, G.S. Randhawa, B. Friebe, B.S. Gill, H.S. Dhaliwal
Genome, 54(11):943-953, 2011
- 12-091-J Salicylic acid regulates basal resistance to *Fusarium* head blight in wheat
R. Makandar, V. Nalam, H. Lee, H.N. Trick, Y. Dong, J. Shah
Molecular Plant Microbe Interactions, 25(3):431-439, 2012
- 12-107-J Targeted analysis of nucleotide and copy number variation by exon capture in allotetraploid wheat genome
C. Saintenac, D. Jiang, E.D. Akhunov
Genome Biology, 12:R88, 2011
- 12-108-J Leveraging genomic resources of model species for the assessment of diversity and phylogeny in wild and domesticated lentil
F. Alo, B.J. Furman, E. Akhunov, J. Dvorak, P. Gepts
Journal of Heredity, 102(3):315-329, 2011
- 12-109-J Effect of the down-regulation of the high Grain Protein Content (GPC) gene on the wheat transcriptome during monocarpic senescence
D. Cantu, S.P. Pearce, A. Distelfeld, M.W. Christiansen, C. Uauy, E. Akhunov, T. Fahima, J. Dubcovsky
BMC Genomics, 12:492, 2011
doi:10.1186/1471-2164-12-492
- 12-110-J N.I. Vavilov's theory of centers of diversity in the light of current understanding of wheat domestication and evolution
J. Dvorak, M.C. Luo, E. Akhunov
Czech Journal of Genetics and Plant Breeding, 47 (Special Issue): S20-S27, 2011
- 12-111-A New tools for wheat genetics and breeding: genome-wide analysis of SNP variation
E. Akhunov, S. Chao, V. Catana, D. See, G. Brown-Guedira, M. Sorrells, A. Akhunova, J. Dubcovsky, C. Cavanagh, M. Hayden
Proceedings of BGRI Technical Workshop Saint Paul, MN, 2011
- 12-136-J Techniques to facilitate the acquisition of accurate spectral measurements and multispectral imagery of plant foliage under artificial lighting conditions
K.R. Summy, C.R. Little
Subtropical Plant Science, 63:45-53, 2011
- 12-174-J Population structure of and mycotoxin production by *Fusarium graminearum* from maize in Korea
J. Lee, H. Kim, J.-J. Jeon, H.-S. Kim, K.A. Zeller, L.L.A. Carter, J.F. Leslie, Y.-W. Lee
Applied and Environmental Microbiology, 78(7): 2161-2167, 2012
- 12-185-B Climate, globalization and trade: Impacts on dispersal and invasion of fungal plant pathogens
M.J. Jeger, M. Pautasso, J.P. Stack
In: Fungal Diseases: An Emerging Threat to Human, Animal and Plant Health
L. Olsen, E.R. Choffnes, D.A. Relman, L. Pray (Eds.). Washington, DC: National Academies Press, pp. 273-296, 2011
- 12-186-J Inducer-dependent nuclear localization of a Zn(II)2Cys6 transcriptional activator, AmyR, in *Aspergillus nidulans*
T. Makita, Y. Katsuyama, S. Kitagawa, S. Suzuki, N. Kato, S. Tani, R.B. Todd, M.J. Hynes, N. Tsukagoshi, M. Kato, T. Kobayashi
Bioscience, Biotechnology and Biochemistry, 73(2):391-399, 2009
- 12-196-J Information networks for disease: Commonalities in human management networks and within-host signaling networks
K.A. Garrett
European Journal of Plant Pathology, 133(1):75-88, 2012
doi:10.1007/s10658-012-9963-y

- 12-197-J Identifying highly connected counties compensates for resource limitations when sampling national spread of an invasive pathogen
S. Suttrave, C. Scoglio, S.A. Isard, J.M.S. Hutchinson, K.A. Garrett
PLOS ONE, 7(6), 2012: e37793
doi:10.1371/journal.pone.0037793
- 12-205-J Bridging taxonomic and disciplinary divides in infectious disease
E.T. Borer, J. Antonovics, L.L. Kinkel, P.J. Hudson, P. Daszak, M.J. Ferrari, K.A. Garrett, C.R. Parrish, A.F. Read, D.M. Rizzo
EcoHealth, 8(3):261-267, 2011
- 12-210-J Effect of drought and high temperature stress on synthetic hexaploid wheat
G.P. Pradhan, P.V.V. Prasad, A.K. Fritz, M.B. Kirkham, B.S. Gill
Functional Plant Biology, 39(3):190-198, 2012
- 12-214-S 2011 Kansas Performance Tests with Soybean Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1058, December 2011
- 12-215-S 2011 Kansas Performance Tests with Corn Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1055, November 2011
- 12-216-S 2011 Kansas Performance Tests with Grain Sorghum Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1059, December 2011
- 12-218-J Preliminary assessment of resistance among U.S. wheat (*Triticum aestivum*) cultivars to the *Triticum* pathotype of *Magnaporthe oryzae*
C.D. Cruz, W.W. Bockus, J.P. Stack, X. Tang, B. Valent, K.F. Pedley, G.L. Peterson
Plant Disease, 96(10):1501-1505, 2012
- 12-224-J *Fusarium verticillioides* from finger millet in Uganda
A.A. Saleh, J.P. Esele, A. Logrieco, A. Ritieni, J.F. Leslie
Food Additives and Contaminants, 29(11):1762-9, 2012
doi:10.1080/19440049.2012.712062
- 12-240-J Chromosome arm-specific BAC end sequences permit comparative analysis of homoeologous chromosomes and genomes of polyploid wheat
S.K. Sehgal, W.Li, P.D. Rabinowicz, H. Simkova, J. Dolezel, B.S. Gill
BMC Plant Pathology, 12:64, 2012
doi:10.1186/1471-2229-12-64
- 12-249-J Sampling for plant-parasitic nematodes in corn strip trials comparing nematode management products
G.L. Tylka, T.C. Todd, T.L. Niblack, A.E. MacGuidwin, T. Jackson
Plant Health Progress, 2011
doi:10.1094/PHP-2011-0901-01-DG
- 12-252-T Evaluation of conventional and alternative products for silvery-thread moss control in creeping bentgrass
C. Thompson, J. Fry, M. Kennelly
Applied Turfgrass Science, 2011
doi:10.1094/ATS-2011-1018-01-RS
- 12-256-J Genomic characterization of drought tolerance related traits in spring wheat
S. Kumar, S.K. Sehgal, A.K. Joshi, U. Kumar, P.V.V. Prasad, B.S. Gill
Euphytica, 186(1):265-276, 2012
- 12-260-J Perceptions of risk, risk aversion, and barriers to adoption of decision support systems and integrated pest management: An introduction
D.H. Gent, E. De Wolf, S.J. Pethybridge
Phytopathology, 101(6):640-643, 2011

- 12-261-J Duplication and partitioning in evolution and function of homoeologous *Q* loci governing domestication characters in polyploid wheat
Z. Zhang, H. Belcram, P. Gornicki, M. Charles, J. Just, C. Huneau, G. Magdelenat, A. Couloux, S. Samain, B.S. Gill, J.B. Rasmussen, V. Barbe, J.D. Faris, B. Chalhoub
Proceedings of the National Academy of Sciences USA, 108(46):18737-18742, 2011
- 12-262-A Wheat genome and gene analysis
B.S. Gill, S.K. Sehgal, B. Friebe, E. Akhunov
Proceedings of the International Wheat Quality Conference IV
Wheat Science Dynamics: Challenges and Opportunities (Proceedings International Wheat Quality Conference-IV), 2011, pp. 483-491
- 12-263-J International agricultural research tackling the effects of global and climate changes on plant diseases in the developing world
S. Savary, A. Nelson, A.H. Sparks, L. Willocquet, E. Duveiller, G. Mahuku, G. Forbes, K.A. Garrett, D. Hodson, J. Padgham, S. Pande, M. Sharma, J. Yuen, A. Djurle
Plant Disease, 95(10):1204-1216, 2011
- 12-275-J Effect of light intensity on *Brassica rapa* chemistry and *Plutella xylostella* (Lepidoptera: Plutellidae) life history traits
W.A. Johnson, J.R. Nechols, R.A. Cloyd, D. Rotenberg, M.M. Kennelly
Journal of Entomological Science, 47(4):327-349, 2012
- 12-278-J Segregation of gibberellin, mycotoxin and bikaverin biosynthesis in hybrids of *Fusarium fujikuroi* and *Fusarium proliferatum*
L. Studt, C. Troncoso, F. Gong, P. Hedden, J.F. Leslie, C. Toomajian, H-U. Humpf, M.C. Rojas, B. Tudzynski
Fungal Genetics and Biology, 49(7):567-577, 2012
dx.doi.org/10.1016/j.fgb.2012.005
- 12-283-J Compatibility of foliar insecticides and *Heterodera glycines* bioassays
C.R. Brady, J. Li, T.C. Todd, T.R. Oakley, H.N. Trick
Plant Health Progress, 2012
doi:10.1094/PHP-2012-0409-01-BR
- 12-296-J Two new complete genome sequences offer insight into host and tissue specificity of plant pathogenic *Xanthomonas* spp.
A.J. Bogdanove, R. Koebnik, H. Lu, A. Furutani, S.V. Angiuoli, P.B. Patil, M.A. Van Sluys, R.P. Ryan, D.F. Meyer, S.W. Han, G. Aparna, M. Rajaram, A.L. Delcher, A.M. Phillippy, D. Puiu, M.C. Schatz, M. Shumway, D.D. Sommer, C. Trapnell, F. Benahmed, G. Dimitrov, R. Madupu, D. Radune, S. Sullivan, G. Jha, H. Ishihara, S.W. Lee, A. Pandey, V. Sharma, M. Sriariyanun, B. Szurek, C.M. Vera-Cruz, K.S. Dorman, P.C. Ronald, V. Verdier, J.M. Dow, R.V. Sonti, S. Tsuge, V.P. Brendel, P.D. Ra-binowicz, J.E. Leach, F.F. White, S.L. Salzberg
Journal of Bacteriology, 193(19):5450-5464, 2011
- 12-297-J Alien introgressions represent a rich source of genes for crop improvement
B.K. Gill, B.R. Friebe, F.F. White
Proceedings of the National Academy of Sciences USA, 108(19):7657-7658, 2011
- 12-299-J Mutational analysis of type III effector genes from *Xanthomonas citri* subsp. *citri*
J.F.L. Figueiredo, G.V. Minsavage, J.H. Graham, F.F. White, J.B. Jones
European Journal of Plant Pathology, 130(3): 339-347, 2011
doi:10.1007/s10658-011-9757-7
- 12-300-J Agrobacterium-mediated transient expression in citrus leaves: A rapid tool for gene expression and functional gene assay
J.F.L. Figueiredo, P. Römer, T. Lahaye, J.H. Graham, F.F. White, J.B. Jones
Plant Cell Report, 30(7):1339-1345, 2011
doi:10.1007/s00299-011-1045-7

- 12-301-J Comparative genomics reveals diversity among xanthomonads infecting tomato and pepper
N. Potnis, K. Krasileva, V. Chow, N.F. Almeida, P.B. Patil, R.P. Ryan, M. Sharlach, F. Behlau, J.M. Dow, M.T. Momol, F.F. White, J.F. Preston, B.A. Vinatzer, R. Koebnik, J.C. Setubal, D.J. Norman, B.J. Staskawicz, J.B. Jones
BMC Genomics, 12:146, 2011
- 12-333-J New sources of resistance in Sorghum [*Sorghum bicolor* (L.) Noenck] 'Minicor' germplasm are effective against a diverse array of Potyvirus species
D.L. Seifers, R. Perumal, C. Little
Plant Disease, 96(12):1775-1779, 2012
- 12-349-S 2012 Agricultural Research SEARC
Multiple authors
Coordinating author: Lyle Lomas
KS Agric. Exp. Stn. Report of Prog. 1069, April 2012
- 12-353-B *Rhabdoviridae*
R.G. Dietzgen, C.H. Calisher, G. Kurath, I.V. Kuzmin, L.L. Rodriguez, D.M. Stone, R.B. Tesh, N. Tordo, P.J. Walker, T. Wetzel, A.E. Whitfield
In: Virus taxonomy: classification and nomenclature of viruses: Ninth Report of the International Committee on Taxonomy of Viruses. A.M.Q. King, M.J. Adams, E.B. Carstens, and E.J. Lefkowitz (Eds.)
Elsevier, pp. 686-713, 2012
- 12-375-S Turfgrass Research 2012
Multiple authors
Coordinating author: J. Fry
KS Agric. Exp. Stn. Report of Prog. 1071, July 2012
- 12-430-J Cloning and functional analysis of a novel chitinase gene *Trchi1* from *Trichothecium roseum*
H. Xian, J. Li, L. Zhang, D. Li
Biotechnology Letters, 34(10):1921-1928, 2012
doi:10.1007/s10529-012-0989-1
- 12-436-J Multiple categories of resistance to wheat curl mite expressed in *Aegilops* species accessions
S. Garcés Carrera, H. Davis, L. Aguirre-Rojas, M. Murugan, M. Smith
Journal of Economic Entomology, 105(6): 2180-2186, 2012
- 12-446-J Climate change and plant health: Designing research spillover from plant genomics for understanding the role of microbial communities
K.A. Garrett, A. Jumpponen, C. Toomajian, L. Gomez-Montano
Canadian Journal of Plant Pathology, 34(3): 349-361, 2012
- 12-467-J Proteomic analysis of *Frankliniella occidentalis* and differentially expressed proteins in response to tomato spotted wilt virus infection
I.E. Badillo-Vargas, D. Rotenberg, D. Schneweis, Y. Hiromasa, J.M. Tomich, A.E. Whitfield
Journal of Virology, 96(16):8793-8809, 2012
- Southeast Agricultural Research Center**
- 12-017-S 2011 Kansas Performance Tests with Winter Wheat Varieties
Multiple authors
Coordinating author: J. Lingenfelser
KS Agric. Exp. Stn. Report of Prog. 1054, July 2011
- 12-214-S 2011 Kansas Performance Tests with Soybean Varieties
Multiple authors
Coordinating author: J. Lingenfelser
KS Agric. Exp. Stn. Report of Prog. 1058, December 2011
- 12-215-S 2011 Kansas Performance Tests with Corn Hybrids
Multiple authors
Coordinating author: J. Lingenfelser
KS Agric. Exp. Stn. Report of Prog. 1055, November 2011

- 12-216-S 2011 Kansas Performance Tests with Grain Sorghum Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1059, December 2011
- 12-245-S 2011 Kansas Performance Tests with Sunflower Hybrids
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1060, January 2012
- 12-246-S 2011 Kansas Performance Tests with Alfalfa Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1061, January 2012
- 12-290-J Nutrient losses in field-scale surface runoff from claypan soil receiving turkey litter and fertilizer
D.W. Sweeney, G.M. Pierzynski, P.L. Barnes
Agriculture, Ecosystems & Environment, 150:19–26, 2012
- 12-291-J Nitrogen fertilization affects economic return from crabgrass hay
J.L. Moyer, K. Dhuyvetter, D.W. Sweeney
Forage and Grazinglands, 2012
doi:10.1094/FG-2012-0320-01-RS
- 12-293-S 2012 Field Research
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1066, April 2012
- 12-294-S 2011 Kansas Fertilizer Research
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1067, April 2012
- 12-349-S 2012 Agricultural Research SEARC
Multiple authors
Coordinating author: Lyle Lomas
KS Agric. Exp. Stn. Report of Prog. 1069, April 2012
- 12-407-S 2011 Kansas Performance Tests with Cotton Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1064, April 2012
- Southwest Research–Extension Center**
- 12-017-S 2011 Kansas Performance Tests with Winter Wheat Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1054, July 2011
- 12-018-J Antibiosis resistance in soybean plant introductions to *Decetes texanus* (Coleoptera: Cerambycidae)
T. Niide, R.A. Higgins, R.J. Whitworth, W.T. Schapaugh, C.M. Smith, L.L. Buschman
Journal of Economic Entomology, 105(2):598-607, 2012
dx.doi.org/10.1603/EC11253
- 12-051-J Sorghum pathology and biotechnology - A fungal disease perspective: Part I. Grain mold, head smut, and ergot
C.R. Little, R. Perumal, T. Tesso, L.K. Prom, G.N. Odvody, C.W. Magill
European Journal of Plant Science and Biotechnology, 6(1):10-30, 2012
- 12-055-J Effects of prepartum and postpartum bolus injections of trace minerals on performance of beef cows and calves grazing native range
L.R. Mundell, J.R. Jaeger, J.W. Waggoner, J.S. Stevenson, D.M. Grieger, L.A. Pacheco, J.W. Bolte, N.A. Aubel, G.J. Eckerle, M.J. Macek, S.M. Ensley, L.J. Havenga, KC Olson
Professional Animal Scientist, 28(1):82-88, 2012
- 12-074-J Inferring transpiration control from sap flow gauges and the Penman-Monteith equation
R.M. Aiken, N.L. Klocke
Transactions of the ASABE, 55(2): 543-549, 2012

12-089-J	Managing diminished irrigation capacity with preseason irrigation and plant density for corn production A. Schlegel, L. Stone, T. Dumler, F. Lamm Transactions of the ASABE, 55(2):525-531, 2012	12-246-S	2011 Kansas Performance Tests with Alfalfa Varieties Multiple authors Coordinating author: J. Lingenfelter KS Agric. Exp. Stn. Report of Prog. 1061, January 2012
12-095-J	Sorghum yield response to deficit irrigation N.L. Klocke, R.S. Currie, D.J. Tomsicek, J.W. Koehn Transactions of the ASABE, 55(3):947-955, 2012	12-293-S	2012 Field Research Multiple authors KS Agric. Exp. Stn. Report of Prog. 1066, April 2012
12-175-J	Registration of 'Riley' Winter Canola M. Stamm, A. Berrada, J. Buck, P. Cabot, M. Claassen, G. Cramer, C. Godsey, W. Heer, J. Holman, J. Johnson, R. Koehnower, J. Krall, D. Ladd, J. Moore, M.K. O'Neill, C. Pearson, C.L. Rife, D. Santra, R. Sidwell, J. Sij, W.D. Spradlin, D. Starner, W. Wiebold Journal of Plant Registrations, 6(3):243-245, 2012 doi:10.3198/jpr2011.10.0555crc	12-294-S	2011 Kansas Fertilizer Research Multiple authors KS Agric. Exp. Stn. Report of Prog. 1067, April 2012
12-214-S	2011 Kansas Performance Tests with Soybean Varieties Multiple authors Coordinating author: J. Lingenfelter KS Agric. Exp. Stn. Report of Prog. 1058, December 2011	12-311-A	Assessment of plant-available soil water on producer fields in Western Kansas F.R. Lamm, D.H. Rogers, A.J. Schlegel, N.L. Klocke, L.R. Stone, R.M. Aiken, L.K. Shaw Proceedings of the 24th Annual Central Plains Irrigation Conference Colby, KS, 2012
12-215-S	2011 Kansas Performance Tests with Corn Hybrids Multiple authors Coordinating author: J. Lingenfelter KS Agric. Exp. Stn. Report of Prog. 1055, November 2011	12-314-A	Optimizing cropping systems under limited irrigation conditions A. Schlegel, L. Stone, T. Dumler, F. Lamm Proceedings of the 24th Annual Central Plains Irrigation Conference Colby, KS, 2012
12-216-S	2011 Kansas Performance Tests with Grain Sorghum Hybrids Multiple authors Coordinating author: J. Lingenfelter KS Agric. Exp. Stn. Report of Prog. 1059, December 2011	12-315-A	A return look at dormant-season irrigation strategies A. Schlegel, L. Stone, T. Dumler, F. Lamm Proceedings of the 24th Annual Central Plains Irrigation Conference Colby, KS, 2012
12-245-S	2011 Kansas Performance Tests with Sunflower Hybrids Multiple authors Coordinating author: J. Lingenfelter KS Agric. Exp. Stn. Report of Prog. 1060, January 2012	12-316-A	Using the K-State Center Pivot Sprinkler and SDI Economic Comparison Spreadsheet, 2012 F.R. Lamm, D.M. O'Brien, D.H. Rogers, T.J. Dumler Proceedings of the 24th Annual Central Plains Irrigation Conference Colby, KS, 2012
		12-358-S	Field Day 2012 SWREC Multiple authors KS Agric. Exp. Stn. Report of Prog. 1070, May 2012

12-407-S 2011 Kansas Performance Tests with
Cotton Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1064,
April 2012

Statistics

12-324-J Efficacy of a vaccine and a direct-fed mi-
crobial against fecal shedding of *Escherichia*
coli O157:H7 in a randomized pen-level
field trial of commercial feedlot cattle
C.A. Cull, D.G. Renter, Z.D. Paddock,
N.M. Bello, A.H. Babcock, T.G. Nagaraja
Vaccine, 30(43):6210-6215, 2012
doi:10.1016/j.vaccine.2012.05.080

12-388-A Botanical composition of diets grazed by
mature, lactating cows with calves and
mature, non-lactating cows maintained on
burned or unburned native tallgrass prairie
N.A. Aubel, KC Olson, J.R. Jaeger,
G.J. Eckerle, L.A. Pacheco, M.J. Macek,
L.R. Mundell, L.W. Murray
Proc. West. Sec. Amer. Soc. Anim. Sci.,
62:222-227, 2011

DIRECTOR'S REPORT OF RESEARCH IN KANSAS 2012

Copyright 2013 Kansas State University Agricultural Experiment Station and Cooperative Extension Service. Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, give credit to the author(s), Directors Report of Research in Kansas 2012, Kansas State University, August 2013.

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Publications from Kansas State University are available at: www.ksre.ksu.edu

KANSAS STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATION
AND COOPERATIVE EXTENSION SERVICE