

DIRECTOR'S REPORT OF RESEARCH IN KANSAS 2011

JULY 1, 2010 TO JUNE 30, 2011



KANSAS AGRICULTURAL
EXPERIMENT STATION

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, 2011. This report contains the title, author, and publication information for manuscripts published by station scientists. The report was published only in electronic format.

Gary Pierzynski
Interim Director, K-State Research and Extension
and Interim Dean, College of Agriculture

A Message from the Director

We are pleased to provide this 2011 Director's Report of Research in Kansas. The report is intended to inform you about our research programs under way 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 2011 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 issues facing Kansas citizens.

Gary Pierzynski
Interim Director, K-State Research and Extension
and Interim Dean, College of Agriculture



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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
Entomology
Grain Science and Industry
Horticulture, Forestry and Recreation Resources
Plant Pathology

College of Arts and Sciences

Biochemistry
Biology
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
Veterinary Diagnostic Lab

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

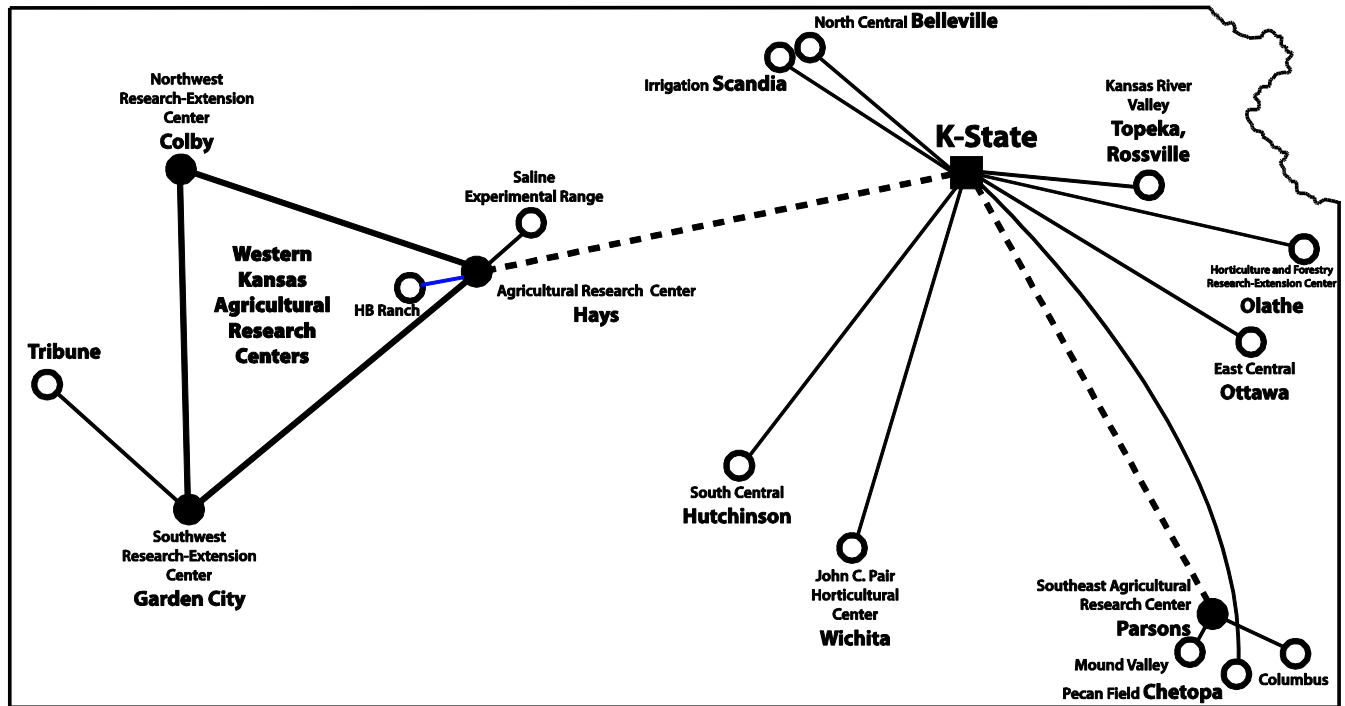
East Central - Ottawa
Kansas River Valley - Rossville, Silver Lake
North Central - Belleville
Pecan Field - Chetopa
South Central - Hutchinson

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
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
Weather Data Library
Wheat Genetic and Genomic Resources Center

* List includes units having faculty with KAES appointments in fiscal year 2011. 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.

Kansas State University Agricultural Research Locations



Station Publications

Reports of Progress

- SRP 1035 K-State Turfgrass Research 2010
SRP 1036 2009 Kansas Performance Tests with Winter Wheat Varieties
SRP 1037 2009 Kansas Performance Tests with Corn Hybrids
SRP 1038 Swine Day 2010
SRP 1039 Dairy Research 2010
SRP 1040 2010 Kansas Performance Tests with Soybean Varieties
SRP 1041 2010 Kansas Performance Tests with Grain Sorghum Hybrids
SRP 1042 2010 Kansas Performance Tests with Sunflower Hybrids
SRP 1043 2010 Kansas Performance Tests with Alfalfa Varieties
SRP 1044 2010 National Winter Canola Variety Trial
SRP 1045 2011 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland
SRP 1046 2010 Kansas Performance Tests with Cotton Varieties
SRP 1047 Cattlemen's Day 2011
SRP 1048 Field Research 2011
SRP 1049 Kansas Fertilizer Research 2010
SRP 1050 Roundup 2011, ARC-Hays
SRP 1051 2010 Agricultural Research, Southeast Agricultural Research Center
SRP 1052 Field Day 2010, Southwest Research-Extension Center

Special Publications

- DRR10 Director's report of research in Kansas 2010

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/library

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).

Administration

DRR10 Director's report of research in Kansas
2010
May 2011, 47 pp. (electronic only)
<http://ksre.ksu.edu/library/p.aspx?tabid=40drr10.pdf>

Agricultural Economics

10-290-J From farm management to agricultural and applied economics: The expansion of a professional society as seen through a census of its dissertations from 1951 to 2005
M. Boland, J. Crespi
Applied Economic Perspectives and Policy, 32(3):456-471, 2010

11-039-D Kansas farm management SAS data bank documentation
M.R. Langemeier
Agricultural Economics Staff Paper no. 11-01, 2010, 110 pp.

11-040-D Comparison of 2007 census and KFMA farms
M. Langemeier
Agricultural Economics Staff Paper no. 11-02, 2010, 17 pp.

11-127-D 2010 fence material and construction cost survey in Kansas
J.B. Schlegel, L.J. Tsoodle
Agricultural Economics Staff Paper no. 11-03, 2010, 4 pp.

11-258-D 2010 pasture leasing arrangements in Kansas
J.B. Schlegel, L.J. Tsoodle
Agricultural Economics Staff Paper no. 11-05, 2011, 14 pp.

11-269-J Productive efficiency in the Middle East and North America
M. Zaher, A.M. Featherstone
Applied Economics, 42(7):899-915, 2010

11-271-J Predicting credit default: Comparative results from an artificial neural network, logistic regression and adaptive neuro-fuzzy inference system
O.O. Odeh, A.M. Featherstone, S. Das
International Research Journal of Finance and Economics, 42:7-18, 2010

11-272-J The genetic and economic impact of the CIMMYT wheat breeding program on local producers in the Yaqui Valley, Sonora Mexico
L.L. Nalley, A.P. Barkley, A.M. Featherstone
Agricultural Economics, 41(5):453-462, 2010

11-273-J Reliability of statistical software
O.O. Odeh, A.M. Featherstone, J.S. Bergtold
American Journal of Agricultural Economics, 92(5):1472-1489, 2010

11-274-J Risk behavior in the presence of government programs
T. Serra, B.K. Goodwin, A.M. Featherstone
Journal of Econometrics, 162(1):18-24, 2011

Agronomy

06-365-J NEXRAD stage III precipitation local bias adjustment for streamflow prediction
P. Tuppad, K.R. Mankin, J.K. Koeliker, J.M.S. Hutchinson, M.C. Knapp
Transactions of the ASABE, 53(5):1511-1520, 2010

08-166-B Water conservation for agriculture
P.W. Unger, M.B. Kirkham, D.C. Nielsen
In: Advances in Soil and Water Conservation, T.M. Zobeck, W.F. Schillinger (Eds.).
Soil Science Society of America Special Publication 60, 2010

09-068-J Primary and residual effects of Abrams tank traffic on prairie soil properties
P.S. Althoff, S.J. Thien, T.C. Todd
Soil Science Society of America Journal, 74(6):2151-2161, 2010

09-083-B Water dynamics in soils
M.B. Kirkham
In: Soil management: Building a stable base for agriculture, J.L. Hatfield, T.J. Sauer (Eds.). Madison, WI: Soil Science Society of America, pp. 53-66, 2011

- 09-161-J Modeling and mapping QTL for senescence-related traits in winter wheat under high temperature
K. Vijayalakshmi, B.S. Gill, A.K. Fritz, G. Bai, S. Pandravada, G.M. Paulsen
Molecular Breeding, 26(2):163-175, 2010
- 09-183-J Longevity and temperature response of pollen as affected by elevated growth temperature and carbon dioxide in peanut and grain sorghum
P.V.V. Prasad, K.J. Boote, L.H. Allen, Jr.
Environmental and Experimental Botany, 70(1):51-57, 2011
- 09-263-B Ethanol from grain crops
R. Zhao, X. Wu, S. Bean, D. Wang
In: *Industrial crops and uses*, B.P. Singh (Ed.).
Cambridge, MA: CAB International, pp. 84-103, 2010
- 09-347-J Features of fermentation performance of sweet sorghum juice after harvest
X. Wu, S. Staggenborg, J.L. Propheter, J. Yu, W.L. Rooney, D. Wang
Journal of Industrial Microbiology and Biotechnology, 101(1):1220-1226, 2010
- 09-345-J Dissection of genetic components of preharvest sprouting resistance in white wheat
S. Liu, G. Bai, S. Cai, C. Chen
Molecular Breeding, 27(4):511-523, 2011
- 10-025-J Simulation of kernel number and yield using CERES-Maize 3.51
A.A. James, R.L. Vanderlip, S. Welch
Agronomy Journal, 2010
- 10-059-J Response of acetolactate synthase-resistant grain sorghum to nicosulfuron plus rimsulfuron
D.S. Hennigh, K. Al-Khatib, M.R. Tuinstra
Weed Technology, 24(4):411-415, 2010
- 10-063-A Optimizing water use with high-transpiration-efficiency plants
P.A. Thevar, M.B. Kirkham, R.M. Aiken, K.D. Kofoid, Z. Xin
Proceedings of the 19th World Congress of Soil Science
Brisbane, Australia, 2010
- 10-075-J Weed control with selected herbicides in acetolactate synthase-resistant sorghum
D.S. Hennigh, K. Al-Khatib, M.R. Tuinstra, R.S. Currie, P.W. Geier, P.W. Stahlman, M.W. Claassen
Crop Protection, 29(8):879-883, 2010
- 10-081-J Response of barnyardgrass (*Echinochloa crus-galli*), green foxtail (*Setaria viridis*), longspine sandbur (*Cenchrus longispinus*), and large crabgrass (*Digitaria sanguinalis*) to nicosulfuron and rimsulfuron
D.S. Hennigh, K. Al-Khatib
Weed Science, 58(3):189-194, 2010
- 10-093-J Impacts of deficit irrigation on carbon sequestration and soil physical properties under no-till
H. Blanco-Canqui, N.L. Klocke, A.J. Schlegel, L.R. Stone, C.W. Rice
Soil Science Society of America Journal, 74(4):1301-1309, 2010
- 10-122-J Continuous cropping systems reduce near-surface maximum compaction in no-till soils
H. Blanco-Canqui, L.R. Stone, A.J. Schlegel, J.G. Benjamin, M.F. Vigil, P.W. Stahlman
Agronomy Journal, 102(4):1217-1225, 2010
- 10-147-A Genetic resources, breeding and production of millets in Ethiopia
E. Degu, A. Adugna, T. Tadesse, T. Tesso
Proceedings of International Workshop on New Approaches to Plant Breeding of Orphan Crops in Africa
Bern, Switzerland, 2007, pp. 43-56
- 10-166-J Genetic diversity, population structure, and linkage disequilibrium in U.S. elite winter wheat
D. Zhang, G. Bai, C. Zhu, J. Yu, B.F. Carver
Plant Genome, 3(2):117-127, 2010
- 10-186-J Field-level targeting using SWAT: Mapping output from HRUs to fields and assessing limitations of GIS input data
P. Daggupati, K.R. Douglas-Mankin, A.Y. Sheshukov, P.L. Barnes, D.L. Devlin
Transactions of the ASABE, 54(2):501-514, 2011
- 10-191-J Effect of tillage on the hydrology of a claypan soil in Kansas
M.E. Buckley, G.J. Kluitenberg, D.W. Sweeney, K.W. Kelley, L.R. Stone
Soil Science Society of America Journal, 74(6):2109-2119, 2010

- 10-219-J Analysis of host plant resistance to multiple *Fusarium* species associated with stalk rot disease in sorghum [*Sorghum bicolor* (L.) Moench]
T.T. Tesso, C.R. Little, N. Ochanda, L. Clafin, M.R. Tuinstra
Field Crops Research, 118(2):177-182, 2010
- 10-232-J Controlled traffic impacts on physical and hydraulic properties in an intensively cropped no-till soil
H. Blanco-Canqui, M.M. Claassen, L.R. Stone
Soil Science Society of America Journal, 74(6):2142-2150, 2010
- 10-246-J Selenium protects sorghum leaves from oxidative damage under high temperature stress by enhancing antioxidant defense system
M. Djanaguiraman, P.V.V. Prasad, M. Seppanen
Plant Physiology and Biochemistry, 48(12):999-1007, 2010
- 10-251-J Stalk strength and reaction to infection by *Macrophomina phaseolina* of brown midrib maize (*Zea mays*) and sorghum (*Sorghum bicolor*)
T. Tesso, G. Ejeta
Field Crops Research, 120(2):271-275, 2011
- 10-253-J Ethylene perception inhibitor 1-MCP decreases oxidative damage of leaves through enhanced antioxidant defense mechanisms in soybean plants grown under high temperature stress
M. Djanaguiraman, P.V.V. Prasad, K. Al-Khatib
Environmental and Experimental Botany, 71(2):215-223, 2011
- 10-256-J Analysis of induction and establishment of dwarf bunt of wheat under marginal climatic conditions
B.J. Goates, G.L. Peterson, R.L. Bowden, L. Maddux
Plant Disease, 95(4):478-484, 2011
- 10-271-J Registration of 34 sorghum germplasm lines resistant to acetolactate synthase inhibitor herbicides
T.T. Tesso, K. Kershner, N. Ochanda, K. Al-Khatib, M.R. Tuinstra
Journal of Plant Registrations, 5(2):215-219, 2011
- 10-276-J Equations for drainage component of the field water balance
L.R. Stone, N.L. Klocke, A.J. Schlegel, F.R. Lamm, D.J. Tomsicek
Applied Engineering in Agriculture, 27(3):345-350, 2011
- 10-283-J Modeling nutrient runoff yields from combined in-field crop management practices using SWAT
K.R. Douglas-Mankin, D. Maski, K.A. Janssen, P. Tuppad, G.M. Pierzynski
Transactions of the ASABE, 53(5):1557-1568, 2010
- 10-284-J Phosphorus adsorption and desorption potential of stream sediments and field soils in agricultural watersheds
S.C. Agudelo, N.O. Nelson, P.L. Barnes, T. Keane, G.M. Pierzynski
Journal of Environmental Quality, 40(1):144-152, 2011
- 10-285-J Dissection and fine mapping of a major QTL for preharvest sprouting resistance in white wheat Rio Blanco
S.B. Liu, G.H. Bai
Theoretical and Applied Genetics, 121(8):1395-1404, 2010
doi:10.1007/s00122-010-1396-4
- 10-303-J Changes in microbial properties after manure, lime, and bentonite application to a heavy metal-contaminated mine waste
L.R. Baker, P.M. White, G.M. Pierzynski
Applied Soil Ecology, 48(1):1-10, 2011
- 10-304-J Wheat gene expression is differentially affected by a virulent Russian wheat aphid biotype
X. Liu, J. Meng, S. Starkey, C.M. Smith
Journal of Chemical Ecology, 37(5):472-482, 2011
- 10-306-J Chromosome size in diploid eukaryotic species centers on the average length with a conserved boundary
X. Li, C. Zhu, Z. Lin, Y. Wu, D. Zhang, W. Song, G. Bai, M. Scanlon, M. Zhang, J. Yu
Molecular Biology and Evolution, 28:1901-191, 2011
- 10-309-J Hydrothermal conversion of corn cobs and crude glycerol
J. Gan, W. Yuan, N.O. Nelson, S.C. Agudelo
Biological Engineering, 2(4):197-210, 2010

- 10-313-J Genetic variability of transpiration response to vapor pressure deficit among sorghum genotypes
M. Gholipoor, P.V.V. Prasad, R.N. Mutava, T.R. Sinclair
Field Crops Research, 119(1):85-90, 2010
- 10-328-J Release of dissolved cadmium and sulfur nanoparticles from oxidizing sulfide minerals
J. de Livera, M.J. McLaughlin, D. Beak, G.M. Hettiarachchi, J. Kirby
Soil Science Society of America Journal, 75(3):842-854, 2011
- 10-344-J Association between morphological traits and yield components in the durra sorghums of Ethiopia
T. Tesso, A. Tirfess, H. Mohammed
Hereditas, 148(3):98-109, 2011
- 10-356-J Cadmium solubility in paddy soils: Effects of soil oxidation, metal sulfides and competitive ions
J. de Livera, M.J. McLaughlin, G.M. Hettiarachchi, J.K. Kirby, D.G. Beak
Science of the Total Environment, 409(8):1489-1497, 2011
- 10-366-B Impacts of high temperature stress and potential opportunities for breeding
R.P. Singh, P.V.V. Prasad, A.K. Sharma, K.R. Reddy
In: Crop Adaptation to Climate Change, S.S. Yadav, J.L. Hatfield, R. Redden, H. Lotze-Campen, A. Hall (Eds.).
West Sussex, UK: John Wiley and Sons, pp. 166-185, 2011
- 10-372-J Pyroxasulfone with and without sulfentrazone in sunflower (*Helianthus annuus*)
B.L.S. Olson, R.K. Zollinger, C.R. Thompson, D.E. Peterson, B. Jenks, M. Moechnig, P.W. Stahlman
Weed Technology, 25(2):217-221, 2011
- 11-012-S 2010 Kansas Performance Tests with Winter Wheat Varieties
Multiple authors
Coordinating author: J. Lingenfelter
SRP 1036, August 2010
- 11-032-J Single nucleotide polymorphism in wheat chromosome region harboring *Fhb1* for Fusarium head blight resistance
A. Bernado, D. Zhang, H. Ma, G. Bai
Theoretical and Applied Genetics, 29(2):477-488, 2011
doi:10.1007/s11032-011-9565-y
- 11-038-J Physical properties of pellets made from sorghum stalk, corn stover, wheat straw, and big bluestem
K. Theerarattananoon, F. Xu, J. Wilson, R. Ballard, L. Mickinney, S. Staggenborg, P. Vadlani, J.Z. Pei, D. Wang
Industrial Crops and Products, 33(2):325-332, 2011
- 11-041-J Resistance to tan spot and insensitivity to Ptr ToxA in wheat
A.J. Noriel, X. Sun, W. Bockus, G. Bai
Crop Science, 51(3):1059-1067, 2011
- 11-042-J Cobalt distribution and speciation: Effect of aging, intermittent submergence and in situ rice roots
D.G. Beak, J.K. Kirby, G.M. Hettiarachchi, L.A. Wendling, M.J. McLaughlin, R. Khatiwanda
Journal of Environmental Quality, 40(3):679-695, 2010
- 11-045-J Reclamation of abandoned swine lagoon soils using hybrid poplar in a greenhouse soil-column study
K.R. Doulgas-Mankin, K. Precht, M.B. Kirkham, S.L. Hutchinson
International Journal of Agricultural and Biological Engineering, 3(4):44-51, 2010
- 11-050-J A novel quantitative trait locus for Fusarium head blight resistance in chromosome 7A of wheat
D.V. Jayatilake, G.H. Bai, Y.H. Dong
Theoretical and Applied Genetics, 122(6):1189-1198, 2011
- 11-051-J Nitrogen and phosphorus availability in biochar amended soils
N.O. Nelson, S.C. Agudelo, W. Yuan, J. Gan
Soil Science, 176(5):218-226, 2011
doi:10.1097/SS.0b013e3182171eac
- 11-058-J From dawn to dawn – China’s journey to agricultural self-sufficiency
M.B. Kirkham, G.H. Liang
Journal of Environmental Quality, 39(5):1864-1865, 2011

- 11-059-B Elevated carbon dioxide: Impacts on soil and plant water relations
M.B. Kirkham
Boca Raton, Florida: CRC Press, 399 pp., 2011
- 11-073-J Cadmium solubility in paddy soils: effects of soil oxidation, sulfide equilibria and competitive ions
J. de Livera, M.J. McLaughlin, G.M. Hettiarachchi, J.K. Kirby, D.G. Beak
Science of the Total Environment, 409(8):1489-1497, 2011
- 11-111-J Multivariate analysis of maize disease resistances suggests a pleiotropic genetic basis and implicates a glutathione S-transferase gene
R.J. Wisser, J.M. Kolkman, M.E. Patzoldt, J.B. Holland, J. Yu, M. Krakowsky, R.J. Nelson, P.J. Balint-Kurti
Proceedings of National Academy of Sciences, 108(18):7339-7344, 2011
- 11-112-J Evaluation of drought and heat-stressed grain sorghum (*Sorghum bicolor*) for biofuel production
N. Ananda, P.V. Vadlani, P.V. Vara Prasad
Industrial Crops and Products, 33(3):779-782, 2011
- 11-119-J Effects of Planting Date and Tillage on Winter Canola
J. Holman, S. Maxwell, M. Stamm, K. Martin
Crop Management, 2011
doi:10.1094/CM-2011-0324-01-RS
- 11-120-J Utilization of dry distillers grains and charcoal as nitrogen fertilizer in corn
K.J. Shroyer, S.A. Staggenborg, J. Propheter
Agronomy Journal, 103(5):1321-1328, 2011
- 11-130-S 2010 Kansas Performance Tests with Corn Hybrids
Multiple authors
Coordinating author: J. Lingenfelser
SRP 1037, November 2010
- 11-131-S 2011 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland
Multiple authors
Coordinating author: C.R. Thompson
KS Agric. Exp. Stn. Report of Prog. 1045, January 2011
- 11-134-S 2010 Kansas Performance Tests with Soybean Varieties
Multiple authors
Coordinating author: W.T. Schapaugh
KS Agric. Exp. Stn. Report of Prog. 1040, December 2010
- 11-144-S 2010 Kansas Performance Tests with Grain Sorghum
Multiple authors
Coordinating author: J. Lingenfelser
KS Agric. Exp. Stn. Report of Prog. 1041, December 2010
- 11-165-T 2010 National Winter Canola Variety Trial
Multiple authors
Coordinating author: M. Stamm
KS Agric. Exp. Stn. Report of Prog. 1044, January 2011
- 11-180-J Quantitative trait loci for resistance to fusarium head blight in a Chinese wheat landrace Haiyanzhong
T. Li, G. Bai, S. Wu, S. Gu
Theoretical and Applied Genetics, 122(8):1497-1502, 2011
doi:10.1007/s00122-011-1549-0
- 11-184-S 2010 Kansas Performance Tests with Sunflower Hybrids
Multiple authors
Coordinating author: P. Evans
SRP 1042, January 2011
- 11-190-J Advanced in situ spectroscopic techniques and their applications in environmental biogeochemistry: Introduction to the special section
E. Lombi, G.M. Hettiarachchi, K.G. Scheckel
Journal of Environmental Quality, 40(3):659-666, 2011
- 11-217-J Volunteer glyphosate-tolerant corn reduces soil water storage and winter wheat yields
A. Schlegel, B. Olson, S. Maxwell, K. Martin
Plant Management Network, 2011
- 11-220-J Association study of resistance to soilborne wheat mosaic virus in U.S. winter wheat
D. Zhang, G. Bai, R.M. Hunger, W.W. Bockus, J. Yu, B.F. Carver, G. Brown-Guedira
Phytopathology, 101(11):1322-1329, 2011

- 11-223-S Field Research 2011
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1048,
April 2011
- 11-224-S Kansas Fertilizer Research 2010
Multiple authors
KS Agric. Exp. Stn. Report of Prog. 1049,
April 2011
- 11-259-S 2010 Kansas Performance Tests with Cotton
Varieties
Multiple authors
Coordinating author: S. Staggenborg
KS Agric. Exp. Stn. Report of Prog. 1046,
March 2011
- 11-306-S Agricultural Research 2011
Multiple authors
Coordinating author: L. Lomas
KS Agric. Exp. Stn. Report of Prog. 1051,
April 2011
- 11-334-J Influence of precipitation, temperature, and
56 years on winter wheat yields in western
Kansas
J.D. Holman, A.J. Schlegel, C.R. Thompson,
J.E. Lingenfelter
Plant Management Network, 2011
doi:10.1094/CM-2011-1228-01-RS
- 11-377-S 2010 Kansas Performance Tests with Alfalfa
Varieties
Multiple authors
Coordinating author: J. Lingenfelter
KS Agric. Exp. Stn. Report of Prog. 1043,
June 2011
- 11-396-J A Farewell to Wilford Gardner
M.B. Kirkham
WISPAS 109:10, 2011
- 11-406-A Deficit irrigation management decision tools
N.L. Klocke, L.R. Stone
Proceedings of the ASABE 5th National
Decennial Irrigation Conference
Phoenix, AZ, 2010

Anatomy and Physiology

- 09-125-J Non-random tissue distribution of human
naïve umbilical cord matrix stem cells
D.K. Maurya, C. Doi, M. Pyle, R.S.
Rachakatla, D. Davis, M. Tamura, D. Troyer
World Journal of Stem Cells, 3(4):34-42,
2011

- 10-361-J Tumor necrosis factor alpha increases P-
glycoprotein expression in a BME-UV *in*
vitro model of mammary epithelial cells
M.M. Al-Bataineh, D. van der Merwe, B.D.
Schultz, R. Gehring
Biopharmaceutics and Drug Disposition,
31(8-9):506-515, 2010
- 11-281-J Swine models of cystic fibrosis reveal male
reproductive tract phenotype at birth
F. Pierucci-Alves, V. Akoyev, J.C. Stewart
III, L-H. Wang, K.S. Janardhan, B.D.
Schultz
Biology of Reproduction, 2011
doi:10.1095/biolreprod.111.090860
- 11-317-J Structural modifications modulate the
biophysical properties of a synthetic
channel-forming peptide: Designing a
clinically relevant anion selective pore
U. Bukovnik, J. Gao, G.A. Cook, L.P.
Shank, M.B. Seabra, J. Chen, B.D. Schultz,
T. Iwamoto, J.M. Tomich

Animal Sciences and Industry

- 07-265-J Use of serum biomarkers to predict the
development and severity of
osteocondrosis lesions in the distal portion
of the femur in pigs
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