

# Kansas Agricultural Experiment Station Research Reports

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Volume 0  
Issue 3 *Director's Report (2001-Current)*

Article 1

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2014

## Director's report of research in Kansas 2014

Kansas State University. Agricultural Experiment Station

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### Recommended Citation

Kansas State University. Agricultural Experiment Station (2014) "Director's report of research in Kansas 2014," *Kansas Agricultural Experiment Station Research Reports*: Vol. 0: Iss. 3. <https://doi.org/10.4148/2378-5977.3313>

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## Director's report of research in Kansas 2014

### Abstract

This report contains the title, author, and publication information for manuscripts published by station scientists.

### Keywords

Kansas; Agricultural Experiment Station; Research; Publications; Finances; Projects

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# DIRECTOR'S REPORT OF RESEARCH IN KANSAS 2014

JULY 1, 2013–JUNE 30, 2014



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, 2014. 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 2014 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 2014 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



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<i>19</i>	Diagnostic Medicine/Pathobiology
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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 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  
John C. Pair Horticultural Center (Haysville)  
K-State Research and Extension Center for Horticultural Crops (Olathe)  
Northwest Research-Extension Center (Colby)  
Southeast Agricultural Research Center (Parsons, Columbus, Mound Valley)  
Southwest Research-Extension Center (Garden City)  
Southwest Research-Extension Center–Tribune

## **Experiment Fields**

East Central – Ottawa  
Kansas River Valley – Rossville, Topeka  
North Central and Irrigation – Belleville, Scandia  
Pecan Field – Chetopa  
South Central – Hutchinson

## **Associated Programs**

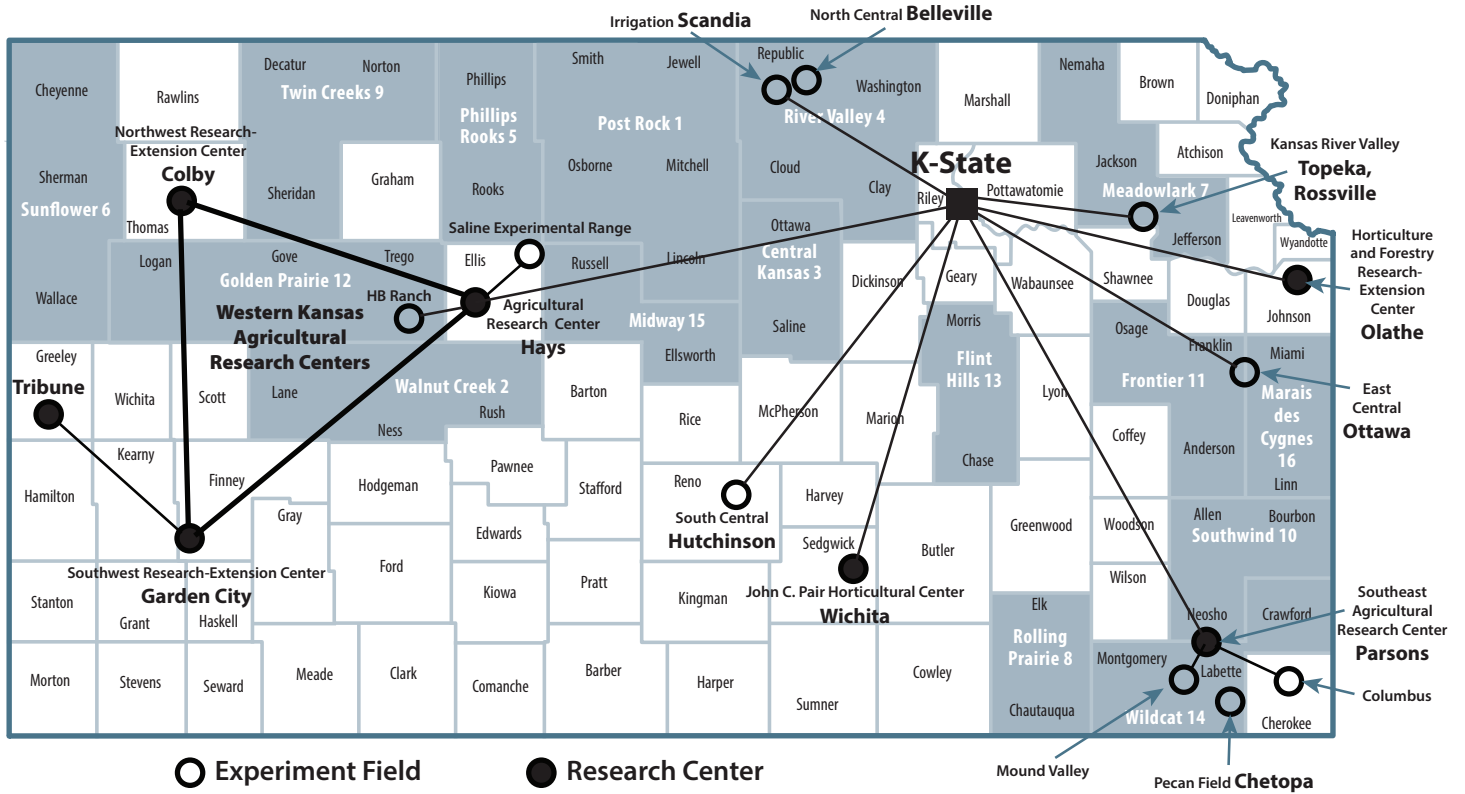
Bioprocessing and Industrial Value-Added Program  
Center for Biobased Products by Design  
Center for Sustainable Energy  
Food Science Institute  
Great Plains Diagnostic Network  
Great Plains Sorghum Improvement and Utilization Center  
IGP Institute  
International Meat and Livestock Program  
K-State 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  
National Science Foundation Industry/University Cooperative Research for Wheat Genetics  
Plant Biotechnology Center  
Veterinary Diagnostic Lab  
Weather Data Library  
Wheat Genetics Resource Center

## **USAID Feed the Future Innovation Labs**

Applied Wheat Genomics  
Reduction of Post-Harvest Loss  
Sorghum and Millet  
Sustainable Intensification

\* List includes units having faculty with KAES appointments in fiscal year 2014. 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](http://www.ksre.ksu.edu), and click on “About Us” in the sidebar.

# Kansas State University Agricultural Research Locations



# Station Publications

## Reports of Progress

SRP 1089	K-State Turfgrass Research 2013
SRP 1090	2013 Kansas Performance Tests with Winter Wheat Varieties
SRP 1091	2013 Kansas Performance Tests with Corn Hybrids
SRP 1092	Swine Day 2013
SRP 1093	Dairy Research 2013
SRP 1094	2013 Kansas Performance Tests with Soybean Varieties
SRP 1095	2013 Kansas Performance Tests with Grain Sorghum Hybrids
SRP 1096	2013 Kansas Performance Tests with Sunflower Hybrids
SRP 1097	2013 Kansas Performance Tests with Alfalfa Varieties
SRP 1098	2013 National Winter Canola Variety Trial
SRP 1099	2014 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland
SRP 1100	2013 Kansas Performance Tests with Cotton Varieties
SRP 1101	Cattlemen's Day 2014
SRP 1102	Field Research 2014
SRP 1103	Kansas Fertilizer Research 2014
SRP 1104	Roundup 2014, Agricultural Research Center-Hays
SRP 1105	2014 Agricultural Research, Southeast Agricultural Research Center
SRP 1106	Field Day 2014, Southwest Research-Extension Center

## Special Publications

DRR13	Director's Report of Research in Kansas 2013
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## 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](http://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, simply paste the doi into your browser or 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**

14-022-J Regression estimates of different land type prices and time adjustments  
B. Wilson, B. Schurle, A. Featherstone, M. Taylor, G. Ibendahl  
Journal of the American Society of Farm Managers and Rural Appraisers  
192-203, 2014

14-060-S The impact of climate, disease, and wheat breeding on wheat variety yields in Kansas, 1985-2011  
A. Barkley, J. Tack, L.L. Nalley, J. Bergtold, R. Bowden, A. Fritz  
KS Agric. Exp. Stn. Special Bulletin 665, August 2013

14-347-T Baseline Feed the Future Indicators for Northern Ghana 2012  
Y.A. Zereyesus, K.L. Ross, V. Amanor-Boadu, T.J. Dalton  
USAID/GHANA/METSS Report  
Kansas State University, Manhattan, KS, March 2014  
ISBN 978-0-9898866-0-4 (printed)  
ISBN 978-0-9898866-1-1 (pdf)

### **Agricultural Research Center–Hays**

13-216-J Genotypic variation in sorghum [*Sorghum bicolor* (L.) Moench] exotic germplasm collections for drought and disease tolerance  
M.H. Kapanigowda, R. Perumal, M. Djanaguiraman, R.M. Aiken, T. Tesso, P.V. Vara Prasad, C.R. Little  
SpringerPlus  
650(2):1-13, 2013  
doi:10.1186/2193-1801-2-650

13-222-J Carcass and meat quality characteristics of Brahman cross bulls and steers finished on tropical pastures in Costa Rica  
J. Rodriguez, J. Unruh, M. Villarreal, O. Murillo, S. Rojas, J. Camacho, J. Jaeger, C. Reinhardt  
Meat Science  
96(3):1340-1344, 2014  
doi:10.1016/j.meatsci.2013.10.024

14-014-J Registration of 'Clara CL' Wheat  
T.J. Martin, G. Zhang, A.K. Fritz, R. Miller, M-S. Chen  
Journal of Plant Registrations  
8:38-42, 2014  
doi:10.3198/jpr2013.07.0040crc

14-019-S 2013 Kansas Performance Tests with Winter Wheat Varieties  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1090, July 2013

14-038-S 2013 Kansas Performance Tests with Corn Hybrids  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1091, November 2013

14-039-S 2013 Kansas Performance Tests with Soybean Varieties  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1094, December 2013

14-040-S 2013 Kansas Performance Tests with Grain Sorghum Hybrids  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1095, December 2013

14-041-S 2013 Kansas Performance Tests with Sunflower Hybrids  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1096, February 2014

- 14-042-S 2013 Kansas Performance Tests with Alfalfa Varieties  
Multiple authors  
Coordinating author: J. Lingenfelter  
KS Agric. Exp. Stn. Report of Prog. 1097, February 2014
- 14-043-S 2013 Kansas Performance Tests with Cotton Varieties  
Multiple authors  
Coordinating author: J. Lingenfelter  
KS Agric. Exp. Stn. Report of Prog. 1100, June 2014
- 14-239-A Long-term tillage and nitrogen fertilizer application effects on crop yields and precipitation use efficiency in a wheat-sorghum cropping system  
A.K. Obour, P.W. Stahlman  
Great Soil Fertility Proceedings  
Denver, CO, 2014, Vol. 15 pp. 6-11
- 14-266-J Non-target effects of sunflower seed treatments on *Orius insidiosus* (Hemiptera: Anthracoridae)  
P.C. Gontijo, V.F. Moscardini, J.P. Michaud, G.A. Carvalho  
Pest Management Science  
2014  
doi:10.1002/ps.3798
- 14-294-J Non-target effects of chlorantraniliprole and thiamethoxam on *Chrysoperla carnea* when employed as sunflower seed treatments  
P.C. Gontijo, V.F. Moscardini, J.P. Michaud, G.A. Carvalho  
Journal of Pest Science  
2014  
doi:10.1007/210340-014-0611-5
- 14-333-S Roundup 2014  
Multiple authors  
Coordinating author: K. Harmony  
KS Agric. Exp. Stn. Report of Prog. 1104, April 2014
- 14-376-J Inheritance of Wheat Streak Mosaic Virus Resistance in KS03HW12  
G. Zhang, D.L. Seifers, T.J. Martin  
Austin Journal of Plant Biology  
1(1):1-4, 2014
- 14-393-S Field Day 2014 – SWREC  
Multiple authors  
SRP1106  
KS Agric. Exp. Stn. Report of Prog. 1106, July 2014
- 14-399-J Grain sorghum response and Palmer amaranth control with postemergence application of fluthiacet-methyl  
S.S. Reddy, P.W. Stahlman, P.W. Geier  
International Journal of Pest Management  
2014  
doi:10.1080/09670874.2014.934407
- 14-416-J Biological properties of isolates of Triticum mosaic virus from the Great Plains states of the USA  
D.L. Seifers, S.N. Wegulo, G.L. Hein, E. Byamukama, E. De Wolf, M.A.C. Langham  
Canadian Journal of Plant Pathology  
36(3): 389-395, 2014  
doi:10.1080/07060661.2014.924028
- Agronomy**
- 13-129-J Harmony Park: A Decision Case on Gardening on a Brownfield Site  
A.M.R. Harms, D.R. Presley, G. Hettiarachchi, C. Attanayake, S.J. Thien  
Natural Sciences Education  
43:33-41, 2014  
doi:10.4195/nse2013.02.0003
- 13-150-J Nitrous oxide fluxes from a commercial beef cattle feedlot in Kansas  
O.A. Aguilar, R. Maghirang, C.W. Rice, S.L. Trabue, L.E. Erickson  
Air, Soil, and Water Research  
7:35-45, 2014  
doi:10.4137/ASWR.S12841
- 13-280-J Stomatal responses to changes in vapor pressure deficit reflect tissue-specific differences in hydraulic conductance  
T.W. Ocheltree, J.B. Nippert, and P.V.V. Prasad  
Plant Cell and Environment  
37(1):132-139, 2014  
doi:10.1111/pce.12137

- 13-359-J Cedar afforestation of prairie alters soil properties on a decadal time scale  
M.R. Busch, D. Ricks Presley  
Soil Horizons  
55(5), 2014  
doi:10.2136/sh13-05-0015
- 13-364-J Field evaluations on soil plant transfer of lead from an urban garden soil  
C.P. Attanayake, G.M. Hettiarachchi, A. Harms, D. Presley, S. Martin, G.M. Pierzynski  
Journal of Environmental Quality  
43(2):475-487, 2014  
doi:10.2134/jeq2013.07.0273
- 13-396-J Grain sorghum nutrient uptake and yield following turkey litter and fertilizer applications on a claypan soil  
D.W. Sweeney, G.M. Pierzynski, P.L. Barnes  
Crop Management  
12(1), 2014  
doi:10.1094/CM-2013-0085-RS
- 13-403-J Fusarium-damaged kernels and deoxynivalenol in fusarium-infected U.S. winter wheat  
F. Jin, G. Bai, D. Zhang, Y. Dong, L. Ma, W. Bockus, F. Dowell  
Phytopathology  
104(5):472-478, 2014  
doi:10.1094/PHYTO-07-13-0187-R
- 13-407-J Remediation of heavy metal(loid)s contaminated soils - to mobilize or to immobilize?  
N.Bolan, A. Kunhikrishnan, J. Kumpiene, J. Park, T. Makino, M.B. Kirkham, K. Scheckel  
Journal of Hazardous Materilas  
266:141-166, 2014  
doi:10.1016/j.jhazmat.2013.12.d18
- 14-002-B Corn and grain sorghum comparison: All things considered  
Y. Assefa, K. Roozeboom, C. Thompson, A. Schlegel, L. Stone, J.E. Lingenfelser  
Academic Press/Elsevier, Amsterdam, 2014, 128 pp.  
ISBN: 978-0-12-800112-7
- 14-014-J Registration of 'Clara CL' Wheat  
T.J. Martin, G. Zhang, A.K. Fritz, R. Miller, M-S. Chen  
Journal of Plant Registrations  
8:38-42, 2014  
doi:10.3198/jpr2013.07.0040crc
- 14-019-S 2013 Kansas Performance Tests with Winter Wheat Varieties  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1090, July 2013
- 14-030-J Variability for root traits in spring wheat germplasm  
S. Narayanan, Am Mohan, K.S. Gill, P.V. Vara Prasad  
PLOS ONE  
June 2014  
doi:10.1371/journal.pone.0100317
- 14-038-S 2013 Kansas Performance Tests with Corn Hybrids  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1091, November 2013
- 14-039-S 2013 Kansas Performance Tests with Soybean Varieties  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1094, December 2013
- 14-040-S 2013 Kansas Performance Tests with Grain Sorghum Hybrids  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1095, December 2013
- 14-041-S 2013 Kansas Performance Tests with Sunflower Hybrids  
Multiple authors  
Coordinating author: J. Lingenfelser  
KS Agric. Exp. Stn. Report of Prog. 1096, February 2014



- 14-042-S 2013 Kansas Performance Tests with Alfalfa Varieties  
Multiple authors  
Coordinating author: J. Lingenfelter  
KS Agric. Exp. Stn. Report of Prog. 1097, February 2014
- 14-043-S 2013 Kansas Performance Tests with Cotton Varieties  
Multiple authors  
Coordinating author: J. Lingenfelter  
KS Agric. Exp. Stn. Report of Prog. 1100, June 2014
- 14-047-A Methodologies for estimating future climate change scenarios of surface solar radiation  
A. Anandhi, V.V. Srinivas, D. Nagesh Kumar, R.S. Nanjundiah, P.H. Gowda  
American Geophysical Union, Fall Meeting 2013  
San Francisco, CA, 2013  
<http://adsabs.harvard.edu/abs/2013AGUFMGC23B0917S>
- 14-051-J High-throughput micro-plate HCl-vanillin assay for screening tannin content in sorghum grain  
T.J. Herald, P. Gadgil, R. Perumal, S.R. Bean, J.D. Wilson  
Journal of the Science of Food and Agriculture  
94(10):2133-36, 2014  
doi:10.1002/jsfa.6538
- 14-056-J Genome-wide association analysis identified SNPs closely linked to a gene resistant to soil-borne wheat mosaic virus  
S. Liu, X. Yang, D. Zhang, G. Bai, S. Chao, W. Bockus  
Theoretical and Applied Genetics  
127(5):1039-47, 2014  
doi:10.1007/s00122-014-2277-z
- 14-076-J Association analysis of stem rust resistance in U.S. winter wheat  
D. Zhang, G. Bai, R.L. Bowden, J. Yu, B. Carver  
PLOS ONE  
2014  
doi:10.1371/journal.pone.0103747
- 14-086-J Investigation of phenoxy resistance in wild radish (*Raphanus raphanistrum*)  
J. Mithila, N. DiMeo, L. Veldhis, M. Walsh, J.C. Hall  
Journal of Agriculture and Food Chemistry  
61(51):12516-12521, 2013  
doi:10.1021/jf404095h
- 14-087-J Introgression of phenoxy herbicide resistance from *Raphanus raphanistrum* into *Raphanus sativus*  
J. Mithila, M. Walsh, J.C. Hall  
Plant Breeding Journal  
133(4):489-492, 2014  
doi:10.1111/pbr.12168
- 14-108-J Understanding genetics of herbicide resistance in weeds: implications for weed management  
J. Mithila, A.S. Godar  
Advances in Crop Science and Technology  
1(4):115, 2013  
doi:10.4172/2329-8863.1000115
- 14-118-J Temporal dynamics of oxygen isotope compositions of soil and canopy CO<sub>2</sub> fluxes in a temperate deciduous forest  
E. Santos, C. Wagner-Riddle, X. Lee, J. Warland, S. Brown, R. Staebler, P. Bartlett, K. Kim  
Journal of Geophysical Research  
119:996-1013, 2014  
doi:10.1002/2013JG002525
- 14-122-J Winter canola yield and survival as a function of environment, genetics, and management  
Y. Assefa, K. Roozeboom, M. Stamm  
Crop Science  
2014  
doi:10.2135/cropsci2013.10.0678
- 14-138-J Evaluation of wheat planted on 15-inch row spacing in eastern Kansas  
D.E. Shoup, E.A. Adee  
Crop Management  
2014  
doi:10.2134/CM-2013-0015a-RS
- 14-149-J Assessment of phosphorus retention in irrigation laterals  
J.A Ippolito, N.O. Nelson  
Journal of Soil and Water Conservation  
68:450-459, 2013



- 14-150-J Development and application of algorithms for simulating terraces within SWAT  
H. Shao, C. Baffaut, J.E. Gao, N.O. Nelson, K.A. Janssen, G.M. Pierzynski, P.L. Barnes  
Transactions of the ASABE  
56:1715-1730, 2013
- 14-178-S 2014 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland  
Multiple authors  
Coordinating author: D. Peterson  
KS Agric. Exp. Stn. Report of Prog. 1099, December 2013
- 14-202-B Climate change and agriculture in the United States: Effects and adaptation  
C.L. Walthall, J. Hatfield, P. Backlund, L. Lengnick, E. Marshall, M. Walsh, S. Adkins, M. Aillery, E.A. Ainsworth, C. Ammann, C.J. Anderson, I. Bartomeus, L.H. Baumgard, F. Booker, B. Bradley, D.M. Blumenthal, J. Bunce, K. Burkey, S.M. Dabney, J.A. Delgado, J. Dukes, A. Funk, K. Garrett, M. Glenn, D.A. Grantz, D. Goodrich, S. Hu, R.C. Izaurralde, R.A.C. Jones, S-H. Kim, A.D.B. Leaky, K. Lewers, T.L. Mader, A. McClung, J. Morgan, D.J. Muth, M. Nearing, D.M. Oosterhuis, D. Ort, C. Parmesan, W.T. Pettigrew, W. Polley, R. Rader, C. Rice, M. Rivington, E. Rosskopf, W.A. Salas, L.E. Sollenberger, R. Srygley, C. Stöckle, E.S. Takle, D. Timlin, J.W. White, R. Winfree, L. Wright-Morton, L.H. Ziska  
USDA Technical Bulletin 1935  
Washington, DC, 186 pp., 2013  
[http://www.usda.gov/oce/climate\\_change/effects.htm](http://www.usda.gov/oce/climate_change/effects.htm)
- 14-217-J Association analysis identified stem rust resistance genes in U.S. winter wheat  
D. Zhang, G. Bai, R.L. Bowden, Y. Jin, J. Yu, B. Carver  
PLOS ONE  
2014  
doi:10.1371/journal.pone.0103747
- 14-242-J Characterization of a spring wheat association mapping panel for root traits  
S. Narayanan, P.V. Vara Prasad  
Agronomy Journal  
106(5):1593-1604, 2014  
doi:10.2134/agronj14.0015
- 14-245-J Assessing the residual from fertilizer nitrogen applied to failed corn on the following wheat crop  
D.W. Sweeney, D. Ruiz Diaz  
Crop Management  
2014  
doi:10.2134/CM-2014-0005-BR
- 14-274-J Influence of nitrogen fertilizer on growth and yield of grain sorghum hybrids and inbred lines  
G.Y. Mahama, P.V. Vara Prasad, D.B. Mengel, T.T. Tesso  
Agronomy Journal  
106(5):1623-1630, 2014  
doi:10.2134/agronj14.0092
- 14-285-J Quantifying potential benefits of drought and heat tolerance in rainy season sorghum for adapting to climate change  
P. Singh, S. Nedumaran, P.C.S. Traore, K.J. Boote, H.F.W. Rattunde, P.V.V. Prasad, N.P. Singh, K. Srinivas, M.C.S. Bantilan  
Agricultural and Forest Meteorology  
185:37-48, 2014  
doi:10.1016/j.agrformet.2013.10.012
- 14-288-J Natural variation in the regulation of leaf senescence and relation to N and root traits in wheat  
K.B. Hebbar, J. Rane, S. Ramana, S. Navraten Panwar, S. Ajay, A. Subba Rao, P.V.V. Prasad  
Plant and Soil  
378(1-2):99-112, 2014  
doi:10.1007/s11104-013-2012-6
- 14-293-J Safety of gardening on lead- and arsenic-contaminated urban brownfields  
P.P. Defoe, G.M. Hettiarachchi, C. Benedict, S. Martin  
Journal of Environmental Quality  
43(6):2064-2078, 2014  
doi:10.2134/jeq2014.03.0099

- 14-304-S 2013 Kansas Fertilizer Research  
Multiple authors  
Coordinating author: D. Ruiz Diaz Suarez  
KS Agric. Exp. Stn. Report of Prog. 1103,  
April 2014
- 14-305-S 2013 National Winter Canola Variety Trial  
Multiple authors  
Coordinating author: M. Stamm  
KS Agric. Exp. Stn. Report of Prog. 1098,  
April 2014
- 14-352-S 2014 Field Research  
Multiple authors  
Coordinating author: E. Adee  
KS Agric. Exp. Stn. Report of Prog. 1102,  
April 2014
- 14-368-J Consistency of wind erosion assessments  
across land use and land cover types: a  
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13-245-J Nutrient database for sorghum distillers dried grains with solubles from ethanol plants in the western plains region and their effects on nursery pig performance  
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13-248-J Effects of lowering dietary fiber before marketing on finishing pig growth performance, carcass characteristics, carcass fat quality, and intestinal weights  
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