

Technology Transfer Efforts for Center Pivot Irrigation (CP)

January 1, 2017 – February 21, 2018



BOOK CHAPTERS

Bell, J., R. Schwartz, K. McInnes, Q. Xue, and D. Porter. 2017. **Improving Water Management in Sorghum Cultivation**. Ch. 15 in: Achieving Sustainable Cultivation of Sorghum. William Rooney, editor. Burleigh Dodds Science Publishing. Cambridge, UK. (in press)

REFEREED PUBLICATIONS

Colaizzi, P. D., O'Shaughnessy, S. A., Evett, S. R., Mounce, R. B. 2017. **Crop evapotranspiration calculation using infrared thermometers aboard center pivots**. Agric. Water Manage. 187, 173-189.
<http://dx.doi.org/10.1016/j.agwat.2017.03.016>

O'Shaughnessy, S.A., Andrade, M.A., Evett, S.R. 2017. **Using an integrated crop water stress index for irrigation scheduling of two corn hybrids**. Irrigation Science. Vol. 335(5): 451-167. DOI 10.1007/s00271-017-0552-x

Kisekka, I., T. Oker, G. Nguyen, J. Aguilar and D. Rogers. 2017. **Revisiting Precision Mobile Drip Irrigation under Limited Water**. Irrigation Science. 1-18. DOI: 10.1007/s00271-017-0555-7.

NATIONAL AND INTERNATIONAL CONFERENCES

Kothari, K., Ale, S., Bordovsky, J., Hoogenboom, G., and Munster, C. 2017. Poster Presentation of **Assessment of climate change impacts and evaluation of adaptation strategies for grain sorghum and cotton production in the Texas High Plains**. American Geophysical Union Fall Meeting. Dec. 11-15, New Orleans, LA.

Lamm, F. R., T. A. Howell, and J. P. Bordovsky. 2017. **Erraticity of sprinkler-irrigated corn under drought**. In: Proc. 2017 Irrigation Association Technical Conference, Nov. 6-10, Orlando FL. 13 pp.

Lamm, F. R. and D. O. Porter. 2017. **Ogallala aquifer program center pivot irrigation technology transfer effort**. In: Proc. 2017 Irrigation Association Technical Conference, Nov. 6-10, Orlando FL. 6 pp.

LaRue, J. 2017. **Discussion of Why VRI May Not Being Used to Its Full Potential**. In: Proc. 2017 Irrigation Association Technical Conference, Nov. 6-10, Orlando FL. 4 pp.

Sui, R. 2017. **Evaluation of Variable Rate Irrigation in Humid Region**. In: Proc. 2017 Irrigation Association Technical Conference, Nov. 6-10, Orlando FL. 6 pp.

Andrade, M. A., S. A. O'Shaughnessy and S. R. Evett. 2017. **Site specific irrigation management of a center pivot irrigation system using a sensor based decision support system**. In: Proc. 2017 Irrigation Association Technical Conference, Nov. 6-10, Orlando FL. 12 pp.

Stone, K. and P. Bauer. 2017 **Remote Sensing for Variable Rate Irrigation Management**. In: Proc. 2017 Irrigation Association Technical Conference, Nov. 6-10, Orlando FL. 7 pp.

Evett, S. R., S. A. O'Shaughnessy and M. A. Andrade. 2017. **Precision Agriculture and Irrigation – Current U.S. perspectives**. In: Proc. 2017 Irrigation Association Technical Conference, Nov. 6-10, Orlando FL. 16 pp.

Bordovsky, J., B. Stoker, P. Bilnoski, C. Garcia, D. Porter, S.Ale, K. Biggers and J. Wall. 2017. **Dashboard for Irrigation Efficiency Management (DIEM)**. In: Proc. 2017 Irrigation Association Technical Conference, Nov. 6-10, Orlando FL. 11 pp.

Charles Swanson, C., G. Fipps, and C. Hillyer. 2017. **Evaluating Water Use and Management of Center Pivot Drag-line Drip Irrigation Systems**. In: Proc. 2017 Irrigation Association Technical Conference, Nov. 6-10, Orlando FL. 8 pp.

O'Shaughnessy, S. A., Andrade, M. A., Evett, S. R., and Colaizzi, P. D. 2017. **A GIS-based Precision Irrigation System Design for Irrigation in the Western U.S.** Oral presentation in: UCOWR/NIWR Annual Conference, Ft. Collins, CO. June 14, 2017.

Lamm, F. R. 2017. **Differential Corn Hybrid Response to Irrigation Management.** Oral presentation at ASABE annual international meeting, July 16-19, Spokane, Washington, USA.

Kothari, K., S. Ale, J. Bordovsky, K. Thorp, D. Porter, C. Munster. 2017. **Evaluation of irrigation management strategies and assessing the impacts of climate change on grain sorghum in the Texas High Plains.** Oral presentation. 2017 ASABE Annual International Meeting. Spokane, WA. July 16-19, 2017.

Porter, D., K. Wagner, J. Aguilar, D. Rogers, T. Marek, and G. Marek. 2017. **Education and Technology Transfer in Agricultural Water Management: Effective Communication with Stakeholders.** Universities Council on Water Resources / National Institutes of Water Resources Annual Conference. Ft. Collins, CO. June 13-15, 2017.

Marek, T., D. Porter, Q. Xue, and J. Bell. 2017. **The challenges of increased irrigated production in the future.** Universities Council on Water Resources / National Institutes of Water Resources Annual Conference. Ft. Collins, CO. June 13-15, 2017.

Aguilar, J., D. Rogers, I. Kisekka, D. Porter, C. Hillyer, A. Andales, D. Rudnick. 2017. **Free online irrigation management tools: From universities to producers.** Universities Council on Water Resources / National Institutes of Water Resources Annual Conference. Ft. Collins, CO. June 13-15, 2017.

Oker, T. E. and I. Kisekka. 2017. **Effect of Mobile Drip Irrigation on corn yield, biomass and water productivity.** Paper #: 1701494. ASABE AIM, July 16-19, 2017 Spokane, Washington, USA.

Adhikari, D., R. Andrus, A. Berger, D. Berne, C. Kurtis, R. Andres Ferreyra, C. Hillyer, B. Nef, J. Russo, and P. M. Sigle. 2017. **An Application of the Precision Ag Irrigation Language.** ASABE Annual International Meeting, Spokane, WA. July 16- 20, 2017

Evett, S. R., S. A. O'Shaughnessy, M. A. Andrade, P. D. Colaizzi, H. S. Schomberg and J. LaRue. 2017. **Innovation in Irrigation Management: Fusing the Internet-Of-Things with Irrigation Decision Support Systems.**

Keynote lecture at the international conf. "Advanced Technologies and their Applications in Agriculture", Cairo, Egypt, March 27-29, 2017, National Research Centre (NRC) of Egypt.

O'Shaughnessy, S. A., M. A. Andrade, and S. R. Evett. 2017. **Precision irrigation for improving crop water use efficiency.** Oral presentation In: The Precision Ag Summit. Jamestown, ND. January 16-17, 2017.

Jordan, S., Bordovsky, J. P. and Porter, D. O. 2017. **Comparison of multi-sensor capacitance and TDR soil moisture measurement methods in Texas South Plains irrigated cotton.** Poster presentation. 2017 Beltwide Cotton Conference. Dallas, TX. Jan. 3-4, 2017.

CENTRAL PLAINS IRRIGATION CONFERENCE

Marek, T. and D. Porter. 2018. **Think you understand center pivot safety and maintenance - Really?** In: Proc. 30th annual Central Plains Irrigation Conference, Feb. 20-21, 2018, Colby, KS. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 8-14.

Lamm, F. R., D. M. O'Brien, and D. H. Rogers. 2018. **Using the K-State center pivot sprinkler and SDI economic comparison spreadsheet – 2018.** In: Proc. 30th annual Central Plains Irrigation Conference, Feb. 20-21, 2018, Colby, KS. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 80-88.

Aguilar, J, D. Rogers, B. Golden, A. J. Foster, T. Oker and L. Haag. 2018. **Kansas MDI studies and water technology farms.** In: Proc. 30th annual Central Plains Irrigation Conference, Feb. 20-21, 2018, Colby, KS. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 166-167.

O'Shaughnessy, S., M. Andrade, P. Colaizzi, and S. Evett. 2018. **Drought tolerant (DT) and non-DT corn production with center pivot irrigation in the Texas High Plains.** In: Proc. 30th annual Central Plains Irrigation Conference, Feb. 20-21, 2018, Colby, KS. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 186-198.

Colaizzi, P. and S. O'Shaughnessy. 2018. **Web/smart phone based control & feedback systems for irrigation systems.** In: Proc. 30th annual Central Plains Irrigation Conference, Feb. 20-21, 2018, Colby, KS. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 199-208.

Aguilar, J., D. H. Rogers, I. Kisekka, and A. J. Foster. 2017. **Mobile drip irrigation results from farm demonstration sites.** In: Proc. 29th annual Central Plains Irrigation Conference, Feb. 21-22, 2017, Burlington, CO. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 45-52.

Andrade, M. A., S. A. O'Shaughnessy and S. R. Evett. 2017. **ARSPIVOT, A sensor based decision support tool for the integrated irrigation management of VRI irrigation systems.** In: Proc. 29th annual Central Plains Irrigation Conference, Feb. 21-22, 2017, Burlington, CO. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 5-14.

Kisekka, I., T. E. Oker, J. P. Aguilar, and D. Rogers. 2017. **Mobile drip irrigation evaluation in corn.** In: Proc. 29th annual Central Plains Irrigation Conference, Feb. 21-22, 2017, Burlington, CO. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 35-44.

Lamm, F. R. 2017. **Sprinkler irrigation management of modern corn hybrids under institutional constraints.** In: Proc. 29th annual Central Plains Irrigation Conference, Feb. 21-22, 2017, Burlington, CO. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 53-65.

Rogers, D. H., J. P. Aguilar, I. Kisekka, and F. R. Lamm. 2017. **Center pivot irrigation system losses and efficiency.** In: Proc. 29th annual Central Plains Irrigation Conference, Feb. 21-22, 2017, Burlington, CO. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 19-34.

Rudnick, D., S. Irmak, C. Ray, J. Schneekloth, M. Schipanski, I. Kisekka, A. Schlegel, J. Aguilar, D.H. Rogers, D. Mitchell, C. West, T. Marek, Q. Xue, W. Xu, and D. Porter. 2017. **Deficit Irrigation Management of Corn in the High Plains: A Review.** In: Proc. 29th annual Central Plains Irrigation Conference, Feb. 21-22, 2017, Burlington, CO. Available from CPIA, 760 N. Thompson, Colby, KS. pp. 66-84.

OTHER REGIONAL CONFERENCES

Oker, T. 2018. **Comparing corn production under Mobile Drip Irrigation to LEPA and LESA.** Presentation to High Plains Irrigation Conference, Amarillo TX, February 7, 2018.

Bynum, E. 2018. **Revisiting chemigation for insect pest management.** Presentation to High Plains Irrigation Conference, Amarillo TX, February 7, 2018.

O'Shaughnessy, S. A., S. R. Evett, P. D. Colaizzi, and M. A. Andrade. 2018. **Irrigation Scheduling Technologies with Center Pivot Sprinklers.** Presentation to High Plains Irrigation Conference, Amarillo TX, February 7, 2018.

Colaizzi, P. D., G. Sokora, C. Ash and T. Schaffer. 2018. **Panel Discussion on Variable Frequency Drives.** Presentation to High Plains Irrigation Conference, Amarillo, TX, February 7, 2018.

Bordovsky, J.P. 2017. Oral presentation of **Irrigation management research using site-specific systems.** 2017 Central Texas Irrigation Summit. Gustine, TX. Dec. 12, 2017.

Porter, D. (coordinator). 2017. High Plains Irrigation Conference. Amarillo, TX. February 15, 2017.

Aguilar, J.P., I. Kisekka, T. Oker, G. Nguyen, D. Rogers and K. Shaw. 2017. Oral Presentation of **Applied Research in Irrigated Cropping Systems.** High Plains Irrigation Conference, Amarillo, TX., February 15, 2017.

Evett, S.R. 2017. Keynote lecture **Water Issues & Agriculture: The View from 30,000 Feet** presented at the Missouri Non-point Source Education Conference, Lake Ozark, MO, March 2-3. Sponsored by the Missouri Department of Natural Resources and University of Missouri.

Porter, D. 2017. **South Plains Irrigation Update.** Southern Mesa Crops Conference, Lamesa, TX. January 16, 2017.

Porter, D. 2017. **South Plains Irrigation Update.** West Plains Crop Conference. Brownfield, TX. January 17, 2017.

Porter, D. 2017. **New and Improved Irrigation Technology.** Llano Estacado Cotton Conference. Muleshoe, TX. January 30, 2017.

Porter, D. 2017. **Precision Irrigation Tools.** Hub of the Plains Ag Conference. Lubbock, TX. February 2, 2017.

Porter, D. and B. Auvermann. 2017. **Irrigation Research Programs and Developments in the High Plains.** High Plains Irrigation Conference. Amarillo, TX. February 15, 2017.

Porter, D. 2017. **Agricultural Irrigation.** Invited Panelist on "Planning Ahead: Groundwater Projects for Tomorrow's Needs". 2017 Texas Groundwater Summit, Texas Alliance of Groundwater Districts, San Marcos, TX. August 29-31, 2017.

MISCELLANEOUS TECHNOLOGY TRANSFER

Bordovsky, J. P. 2018. Oral presentation. **Irrigation Management Research (Timing with Deficit Irrigation)**. 2018 Plainview Agricultural Cooperative Annual Meeting, Plainview Country Club. Plainview, TX. Jan. 24, 2018.

Bordovsky, J. P. 2018. Oral presentation. **Irrigation Management Research (Timing with Deficit Irrigation)**. 2018 Llano Estacado Cotton Conference, Muleshoe, TX. Jan. 26, 2018.

Evetts, S. R. 2018. **Emerging Technologies for Water Management and Conservation: Fusing the Internet-Of-Things with Irrigation Decision Support Systems**. ILSI North America Annual Meeting Southampton, Bermuda, January 21-24, 2018.

Lamm, F.R. and D. M. O'Brien. 2018. Poster presentation of **Efficient Irrigation Technologies for Corn – A Comparison** at Kansas Corn Commission Research Poster Symposium, Manhattan, Kansas, January 25, 2018.

Bordovsky, J.P. 2017. Oral presentation of **Deficit irrigation research**. High Plains Underground Water Conservation District Board of Directors meeting. Lubbock, TX. October 10, 2017.

Porter, D., Bordovsky, J., Marek, T., Hillyer, C., Jordan, S., Marek, G., Heflin, K., Moorhead, J. 2017. Oral presentation of **Promoting sensor based technology to improve land and water resources conservation**. USDA-NRCS-CIG Annual Review. Goodwell, OK. Nov. 14, 2017.

Bordovsky, J.P. 2017. Oral presentation of **Leveraging rainfall with limited irrigation in non-traditional cotton rotations**. Cotton Incorporated, Texas State Support Committee annual review. Lubbock, TX. Nov. 29-30, 2017.

Evetts, S.R. 2017. **Precision Agriculture Perspectives: Sensing, IOT and Decision Support for Agricultural Management**, oral presentation at TETRAPARTITE 2017, Luton Hoo, UK, October 15-18, 2017.

Evetts, S.R. 2017. **Crop thermal data – Tool for mapping crop water stress, it's variability & soil water status**, presented at The Subterranean Macrocope: Sensor Networks for Understanding, Modeling and Managing Soil Processes, an NSF-USDA sponsored workshop, November 1-2, 2017, Gleacher Centre, University of Chicago, Illinois.

Evetts, S.R. 2017. **Natural resource management decision support systems: Satellite Remote Sensing, and Decision Support for Water Management**, Congressional Briefing, National Agriculture Library, Beltsville, Maryland, August 25, 2017.

Evetts, S.R. 2017. **Water resource management and water saving agriculture**, oral presentation to delegation from China Agricultural University, August 3, 2017.

Rogers, D.H. 2017. Oral Presentation: **Review of Kansas Water Law and Changes in Irrigation Systems and Management** (included discussion of center pivot irrigation systems). Guest Speaker for ATM 661 Course, Watershed Assessment and Management, Manhattan, KS. November 30, 2017.

Rogers, D.H. 2017. Oral Presentation: **Review of Kansas Water Law and Changes in Irrigation Systems and Management** (included discussion of center pivot irrigation systems). Presentation at the WinField United Winter Conference, Manhattan, KS. December 12, 2017.

Porter, D. 2017. **Irrigation Management and Crop Water Management**. Guest Lecture in course, Crop Stress Management. Texas A&M University Department of Soil and Crop Sciences. October 3, 2017.

Porter, D. 2017. **Irrigation Water Quality and Salinity Management**. Guest Lecture in course, Crop Stress Management. (recorded presentation). Texas A&M University Department of Soil and Crop Sciences. October 5, 2017.

Porter, D. 2017. Dashboard for Irrigation Efficiency Management (DIEM) training for county agent beta testers. Lubbock, TX. February 23, 2017.

Porter, D. 2017. **Crop Water Use. Irrigation and Water Management**, training for county agent professional development. Lubbock, TX. March 30, 2017.

Porter, D. 2017. **Irrigation Management for Dairies**. Dairy Outreach Program Area workshop and field day. Dublin, TX. April 6, 2017.

Porter, D. 2017. **Irrigation Management for Cotton Production**. Texas A&M AgriLife Cotton Agent training. Lubbock, TX. July 26, 2017.

Porter, D. 2017. **Irrigation System Capabilities and Management**. Texas A&M AgriLife Research Corn Breeders Tour. Lubbock and Halfway, TX. August 16-17, 2017.

Porter, D. 2017. **Irrigation Water Quality and Irrigation Technologies.** Irrigation Training Program for Lower Rio Grande Valley. Weslaco, TX. September 12, 2017.

Porter, D. 2017. **Water Quality Issues in Irrigation.** Maverick County Agricultural Irrigation Field Day. Eagle Pass, TX. September 13, 2017.

Aguilar, J.P. 2017. Oral Presentation: **The Center Pivot Irrigation: Hands-on for Beginners.** Presentation at the IA Agriculture Faculty Academy, Grand Island, NE. June 8, 2017

Aguilar, J.P. 2017. Oral Presentation: **The Mobile Drip Irrigation.** Presentation at the IA Agriculture Faculty Academy, Grand Island, NE. June 9, 2017

Aguilar, J.P. 2017. Oral Presentation: **Irrigation Technologies: The Now and the Near Future.** Presentation for Kearney-Finney LEMA Informational Meeting, Deerfield, KS. June 6, 2017.

Aguilar, J.P. 2017. Oral Presentation: **Water Quantity and Irrigation Technology.** Presentation at the KARA Summer Field Diagnostic School, Manhattan, KS. July 11 and 13, 2017

Aguilar, J.P. 2017. Oral Presentation: **A Virtual Tour on Roth Water Technology Farm.** Presentation at the Kansas Water Congress. Garden City, KS. July 28, 2017.

Aguilar, J.P. 2017. Oral Presentation: **Center Pivot Irrigation System Demonstration.** Presentation at the Circle C Water Technology Farms Field Day, near Healy, KS. Aug. 11, 2017.

Aguilar, J.P. 2017. Oral Presentation: **Center Pivot Irrigation System Demonstration.** Presentation at the Hatcher Water Technology Farms Field Day, near Liberal, KS. Aug. 11, 2017.

Aguilar, J.P. 2017. Oral Presentation: **Center Pivot Irrigation System Demonstration.** Presentation at the T&O Water Technology Farms Field Day, near Garden City, KS. Aug. 15, 2017.

Aguilar, J.P. 2017. Oral Presentation: **Irrigation Highlights: From Research Plots to Water Technology Farms.** Presentation at the Liberal Rotary Club, Liberal, KS. Aug. 22, 2017.

Aguilar, J.P. 2017. Oral Presentation: **Center Pivot Irrigation System Demonstration.** Presentation at the ILS Water Technology Farms Field Day near Larned, KS. Aug. 23, 2017.

Bordovsky, J.P. Host tour for Nuffield Visiting Scholars, New South Wales, Australia. Toured irrigation research facilities and ongoing projects at Texas A&M AgriLife Research, Halfway, TX. June 23, 2017.

Bordovsky, J.P. 2017. **Irrigation research activities in the Southern High Plains.** Oral presentation and field tour. 4-H Water Ambassadors. Halfway, TX. July 14, 2017.

Bordovsky, J.P. 2017. **Deficit irrigation research and strategies.** Oral presentation. West Central Research and Extension Center Water and Crops Field Day. North Platte, NE. Aug. 24, 2017.

Bordovsky, J.P. 2017. **Deficit irrigation research.** Oral presentation. 12th Annual Texas Alliance for Water Conservation Field Day. Edmonson, TX. Sept 6, 2017.

O'Shaughnessy, S.A. 2017. **The Importance of Center Pivot Irrigation for Crop Production in the Texas High Plains Region.** Oral presentation and field tour for group of Australian visitors. Bushland, Texas. June 9, 2017.

O'Shaughnessy, S.A. 2017. **On-going Research with Variable Rate Irrigation Technology.** Oral presentation and field visit for the USDA-FAS China Delegation. Bushland, Texas, August 4, 2017.

O'Shaughnessy, S.A. 2017. **Sensor-based irrigation Management.** Oral presentation in: IFDC- Technology advances in agricultural production water and nutrient management workshop. Muscle Shoals, AL, August 21, 2017.

Rogers, D.H. 2017. Oral Presentation: **Center pivot Irrigation System Performance and Management.** Presentation for the Farm National Coop Tour at the ILS Water Technology Demonstration Farm, Larned, KS. July 11, 2017.

Rogers, D.H. 2017. Oral Presentation: **Kansas Irrigation Trends and Impacts** (included discussion of center pivot irrigation systems). Presentation at the Kansas Youth Advocate Water Conference, Manhattan, KS. July 12, 2017.

Rogers, D.H. 2017. Oral Presentation: **Center pivot Irrigation System Performance and Management** at the Circle C Water Technology Demonstration Farm, Healy, KS. August 11, 2017.

Rogers, D.H. 2017. Oral Presentation: **Center pivot Irrigation System Performance and Management** at the Hatcher Water Technology Demonstration Farm, Liberal, KS. August 11, 2017.

Lamm, F. R. Discussion and brief tour of sprinkler irrigation technology with two producers from Iowa, July 29, 2017.

Center Pivot Irrigation Retreat, **Brainstorming and Brainstretching Event**, March 28-29, 2017, Amarillo, Texas.

Lamm, F. R. 2017. Summarization of all center pivot irrigation papers 1989 to 2017 from the Central Plains Irrigation Conference. Complete papers in Adobe PDF and MS-Excel file to access and search by author, year, title, and/or keyword.

Evelt, S. R. 2017. Summarization of all center pivot irrigation papers from USDA-ARS-CPRL Soil and Water Management Research Unit (SWMRU) from 1983-2017. All papers in Adobe PDF files can be accessed chronologically by year.

Aguilar, J.P. 2017. Oral Presentation of **The High Plains Aquifer: The Lifeblood of Western Kansas**. Garden City High School Technology Team, Garden City, KS., January 23, 2017.

Aguilar, J.P. 2017. Oral Presentation of **Updates: Water Technology Farms and Irrigation Technology Research**. Water Talk Series / GMD 4 Annual Meeting, Goodland, KS., February 1, 2017.

Aguilar, J.P. 2017. Panelist and Oral Presentation of **Updates: Water Technology Farms and Irrigation Technology Research**. Water Talk Series / GMD 1 Annual Meeting, Sharon Springs, KS., February 2, 2017.

Aguilar, J.P. 2017. Oral Presentation of **Updates: Water Technology Farms and Irrigation Technology Research**. Water Talk Series / WaterPACK Annual Meeting, St. John, KS., February 13, 2017.

Aguilar, J.P. 2017. Panelist and Oral Presentation of **Irrigation Technology Research and Water Technology Farms**. Water Talk Series / Upper Arkansas Regional Advisory Committee Meeting, Garden City, KS., February 14, 2017.

Aguilar, J.P. 2017. Oral Presentation of **Updates: Water Technology Farms and Irrigation Technology Research**. Water Talk Series / SW Irrigators Association Annual Meeting, Ulysses, KS., February 21, 2017.

Aguilar, J.P. 2017. Oral Presentation of **Irrigation Technologies**. Area 2 2017 State Conservation Commission Spring Workshops, Garden City, KS., March 8, 2017.

Aguilar, J.P. 2017. Oral Presentation of **Irrigation Scheduling and Soil Moisture Probes**. Wichita County Water Conservation Area Meeting, Leoti, KS., March 9, 2017.

Bordovsky, J.P. 2017. **LESA / LEPA water application systems**. Oral presentation. South Texas Irrigation Conferences, 2017 Center Pivot Workshop. Pleasanton, TX. Feb 7-8, 2017.

Bordovsky, J.P. 2017. **Texas High Plains cotton irrigation research**. Oral presentation. 2017 Oklahoma Irrigation Conference. Altus, OK. Mar. 1, 2017.

Bordovsky, J.P. 2017. **Optimizing limited water**. Oral presentation. 2017 Lubbock / Hale County Precision Irrigation Workshop. Abernathy, TX. Mar. 23, 2017.

Lamm, F. R. 2017. Oral presentation of **Sprinkler irrigation management of modern corn hybrids under institutional constraints**. Area 1 2017 SCC Spring Workshop, Grainfield, KS., March 7.

Porter, D.O. and Bordovsky, J.P. 2017. DIEM training for county agent beta testers, Workshop presentations. Lubbock, TX. Feb. 23, 2017.

Rogers, D.H. 2017. Oral Presentation of **Center Pivot Systems Sprinkler Package Options and Performance Evaluation and Review of Mobile Drip Irrigation Option for Center Pivot Systems**. Kaw Valley Irrigation Association Annual Meeting. Topeka, KS., February 9, 2017.

Rogers, D.H. 2017. Oral Presentation of **Review of Center Pivot Systems Sprinkler Package Options and Irrigation Efficiency**. Water PACK Irrigation Association Annual Meeting. St John, KS., February 13, 2017.

All project participants, miscellaneous producer and media contacts, 2017.