Technology Transfer from Subsurface Drip Irrigation Studies
KSU Northwest Research-Extension Center, March 1989 – March 4, 2019

BOOKS AND BOOK CHAPTERS


REFEREED JOURNAL ARTICLES


NATIONAL ASABE PAPERS


---

**NATIONAL & INTERNATIONAL CONFERENCES**


**KWRRI REPORTS**


**MID-CENTRAL REGIONAL ASAE PAPERS**


**CENTRAL PLAINS IRRIGATION CONFERENCE**


EXPERIMENT STATION PUBLICATIONS


COOPERATIVE EXTENSION PUBLICATIONS


DEPARTMENTAL STAFF PAPERS


MAGAZINE ARTICLES


Melgares, P. 2018. When the wells run dry. Seek (Research magazine for Kansas State University) 8(1):32-36.


Stalcup, L. 2013. Switch to Drip Irrigation -Subsurface drip irrigation systems reduce net irrigation needs by nearly 25% while maintaining yields. Corn and Soybean Digest, February 1, 2013. 3 pp.


**MISCELLANEOUS TECHNOLOGY TRANSFER**

Powerpoint presentation of Efficient irrigation technologies for corn to Kansas Corn Commission, Manhattan, Kansas Feb. 22, 2019

Powerpoint presentation of Frequently asked questions related to subsurface drip irrigation (SDI) at Southern Alabama Irrigation Workshop, Dothan, Alabama, Jan. 23, 2019.


Powerpoint presentation of Frequently asked questions related to subsurface drip irrigation (SDI) at Northern Alabama Irrigation Workshop, Decatur, Alabama, Jan. 22, 2019.


Powerpoint presentation of Research progress with subsurface drip irrigation and future research opportunities at Farmland Irrigation Research Institute, Xinxiang China, Oct. 27, 2018.

Powerpoint presentation of Benefits and challenges for nutrient management with subsurface drip irrigation (SDI) at Institute of Water and Hydraulic Resources, Beijing, China, Oct. 29, 2018.

Powerpoint presentation of Irrigation and nutrient management of corn under subsurface drip irrigation (SDI) at Curso Internacional maíz de Alto Rendimiento, Culiacan, Mexico, Sep. 21, 2018.

Discussion of SDI progress with Jason Scheibel and Jim Hunt from Netafim, November 6, 2018.


Discussion of SDI for Farm Bureau Masters Group, Sep 28, 2018.

Poster presentation of What is Subsurface Drip Irrigation to Chamber of Commerce “After Five” function at KSU-NWREC, Colby, Kansas, August, 2018.

Poster presentation of Efficient irrigation technologies for corn – A comparison at Center Pivot Technology Field Day at Roth Farm, Garden City, KS. Aug. 15, 2018.

Poster presentation of Efficient irrigation technologies for corn – A comparison at Center Pivot Technology Field Day at USDA-ARS CPRL, Bushland, TX, Aug. 9, 2018.

Powerpoint presentation of Benefits and challenges for nutrient management with subsurface drip irrigation (SDI) at annual international meeting of the ASABE, Detroit MI., July 29-Aug 4.

Discussion and field tour for five Netafim staff, May 26-27, 2018

Discussion and field tour of SDI and other irrigation research for Spanish visitor and Robert Schwartz, USDA-ARS CPRL, April 24, 2018.

Poster presentation of Optimizing Land/Water Allocations for Irrigated Corn Production at Ogallala Aquifer Program annual meeting, Lubbock, TX, March 28, 2018.

Poster presentation of Increasing Water Productivity with Advanced Irrigation Scheduling: Kansas State University at Ogallala Aquifer Program annual meeting, Lubbock, TX, March 28, 2018.

Discussion and tour of SDI for S. Kang, Chinese Agricultural University, Feb. 25-27, 2018.


Poster presentation of **Efficient irrigation technologies for corn – A comparison** at Kansas Corn symposium, Manhattan, KS., Jan. 25, 2018.

Discussion and field tour for three Netafim staff, December 20, 2017

Discussion of SDI at Leibniz University, Hannover, Germany December 1, 2017.

Discussion of SDI with Colby Community College students, November, 2017.

Discussion of SDI and tour of SDI Facilities for 10 irrigation dealers from Italy at KSU-NWREC, October 9, 2017.

Discussion of SDI for Farm Bureau Masters Group, October 6, 2017.

Discussion and field tour for two Netafim staff, June 20, 2017.

Discussion and field tour for two Netafim staff, May 24, 2017.


Poster presentation of **Corn management with SDI to save water resources** for Waterways exhibit at Prairie Museum, Colby, Kansas, Aug.-Sept., 2017.

Poster presentation of **Can we make it work and can we make it pay?** for Waterways exhibit at Prairie Museum, Colby, Kansas, Aug.-Sept., 2017.


Powerpoint presentation of **Subsurface Drip Irrigation: Here Today, Here to Stay** at Colorado River Water Users Association conference, December 14, 2016, Las Vegas, NV.

Powerpoint presentation of **A new sowing method for improving spring corn germination and yield under SDI** at Irrigation Association Technical Conference, Dec. 6-8, Las Vegas, NV. Presentation made for Dr. G. Li, Chinese Agricultural University, Beijing, China.

Powerpoint presentation of **W-3128: Scaling Microirrigation Technologies to Address the Global Water Challenge -Kansas 2016 Report** to USDA-NIFA multistate project W-3128, November 6, 2016, Phoenix, AZ.

Powerpoint presentation of **Advancing SDI for lower value crops - Opportunities and Challenges** at Big 12 Water Conference, September 25, 2016, Waco TX.

Moderator for technical session, Progress with Subsurface Drip Irrigation for Commodity Crops at ASABE annual international meeting, July, 2016 in Orlando Florida.

Poster presentation and discussion of **Irrigated Water Management at K-State for Western Kansas** as part of K-State Research Showcase, March 22, 2016 in Manhattan, Kansas.


Powerpoint presentation of **Frequently asked questions about subsurface drip irrigation** in Netafim Irrigation session at Commodity Classic, New Orleans, Louisiana, March 5, 2016.
Powerpoint presentation of **Frequently and not-so-frequently asked questions about subsurface drip irrigation** at the Oklahoma Irrigation Conference, Woodward Oklahoma, March, 8, 2016.

Tour and discussion of SDI efforts at NWREC with Ami Gips and Tim Wolf, Netafim Irrigation, June 14, 2016.

Tour and extended discussion (1/2 day) of irrigation projects and facilities at NWREC with three CSU faculty members, September 7, 2016.

Tour of station and SDI facilities and discussion for Kansas Farm Bureau Masters Group, September 30, 2016.

Youtube video concerning KSRE efforts with microirrigation in China [https://www.youtube.com/watch?v=udxo7rlDZx4](https://www.youtube.com/watch?v=udxo7rlDZx4)

K-State Research and Extension news release concerning microirrigation cooperative efforts in China, December 17, 2015.


General microirrigation discussions with Chinese colleagues in China, October 10-22, 2015.

Powerpoint presentation of **Advancing SDI for lower value crops - opportunities and challenges** at Northwestern A&F University, Yangling, China, October 15, 2015.

Powerpoint presentation of **Frequently and Not-So-Frequently Asked Questions about SDI** at International Academic Exchange and Training Workshop on Microirrigation, Chifeng, China, October 13, 2015.

Powerpoint presentation of **Advancing SDI for lower value crops - opportunities and challenges** at Irrigation in Action conference at Chinese Agricultural University, Beijing, China, October 11, 2015.

Planning and international coordination of technical exchange with Chinese Agricultural University, Beijing, China including inviting the international guests to Irrigation in Action conference. Summer, 2015.

Tour of station and SDI facilities and discussion for Kansas Farm Bureau Masters Group, October 6, 2015.

Discussion and tour of SDI facilities as part of an exchange with students from Quinter, Kansas High School, September 28, 2015

Powerpoint presentations, discussion of SDI, and tour of SDI facilities for 6 individuals from Pakistan as part of K-State-USAID On-Farm Management Training, August 26, 2015, Colby Kansas.

Tour of SDI facilities and nutrient managements studies for 2 staff from Netafim USA, July 14, 2015.

Powerpoint presentations, discussion of SDI, and tour of SDI facilities for 8 individuals from Pakistan as part of K-State-USAID On-Farm Management Training, May, 13, 2015, Colby Kansas.

Powerpoint presentation of **The nexus between precision data and advanced irrigation system & management technologies (Lite Version)** for approximately 30 staff from IBM Watson Research Facility, April 29, 2015 at Yorktown Heights, New York.

Powerpoint presentation of **The status of SDI in the central and southern Great Plains** at annual meeting of the Ogallala Aquifer Program, March 12, 2015 at Manhattan, Kansas.

Poster presentation of **Strategies to Improve Crop Germination When Using SDI** at annual meeting of the Ogallala Aquifer Program, March 13, 2015 at Manhattan, Kansas.

Poster presentation of **SDI Pros and Cons** at annual meeting of the Ogallala Aquifer Program, March 13, 2015 at Manhattan, Kansas.

Powerpoint presentation of **The nexus between precision data and advanced irrigation system & management technologies** (Discussion of SDI and other irrigation technologies) for staff from IBM and COA administrators, March 9, 2015 at Manhattan, Kansas.

Poster presentation of **SDI Pros and Cons** at 27th annual Central Plains Irrigation Conference, Colby Kansas, February 17-18, 2015.

Poster presentation of **The Ogallala and the potential for SDI** at 27th annual Central Plains Irrigation Conference, Colby Kansas, February 17-18, 2015.

Distribution of SDI and the Great Plains CDs at Central Plains Irrigation Conference, February 17-18, 2015, Colby, Kansas.


Oral discussion of progress with MIWaterQuality software to USDA-NIFA multistate project W-3128, October 22-24, 2014, Nashville, TN.

Interview for Argentina television station, October 15, 2014

Interview for Argentina newspaper with photos, October 15, 2014

Brief video entitled **Subsurface Drip Irrigation** featured in State of the University Address, September 29, 2014.

Tour and discussion for Quinter High School FFA and Biology classes, September 29, 2014.

Tour of station and SDI facilities and discussion for Kansas Farm Bureau Masters Group, October 7, 2014.

Poster presentation of **The Ogallala and the potential for SDI** at 100th anniversary field day, Colby, Kansas, September 6, 2014.

Poster presentation of **Water and Nitrogen management for corn using SDI** at 100th anniversary field day, Colby, Kansas, September 6, 2014.

SDI tour for Tony and Helen Sawyers, visitors from Boort, Victoria, Australia, August 21, 2014.

SDI Tour and discussion of sprinkler irrigation with Haijun Yan, Chinese Agricultural University, August 14, 2014.

SDI tour for Alejandro A. Pannunzio and Roy Dardo Fontanella, visitors from Argentina, August 4-7, 2014.

SDI Tour and discussions with 4 visitors from China, July 29 – August 7, 2014.

Interview for K-Stater alumni magazine, August 25 2014.

SDI tour for Tony and Helen Sawyers, visitors from Boort, Victoria, Australia, August 21, 2014.

Discussion of subsurface drip irrigation and water management with University of Connecticut summer class touring USA, Colby, Kansas, May 22, 2014.


Poster presentation of **Application of Biological Effluent with SDI** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **Effect of Emitter Spacing on Corn Production** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **Filtration for SDI Systems** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **Corn Management with SDI to Save Water Resources** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **Comparison of SDI and simulated LEPA sprinkler Irrigation for corn** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **Minimal System Requirements for SDI** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **The Ogallala and the potential for SDI** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **How can I use records of pressure and flow measurements to diagnose SDI system problems?** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **SDI Pros and Cons** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **Slope Considerations for SDI** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **Spacing of Driplines for Corn** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **Steps to a Successful SDI System** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **SDI with Temperature-Time Threshold (TTT)** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **What is SDI?** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **KSU bed management system for SDI** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of **Can we make it work and can we make it pay?** at SDI Technology Field Day, Colby, Kansas, August 6, 2014.
Poster presentation of Chemical injector considerations for SDI at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of Installation depth considerations for SDI at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of Strategies to improve crop germination when using SDI at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of Water and Nitrogen management for corn using SDI???? at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of Comparison of SDI and alternative irrigation systems for cotton, grain sorghum, and soybean at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of Water quality considerations for SDI at SDI Technology Field Day, Colby, Kansas, August 6, 2014.

Poster presentation of Alfalfa Production with SDI at SDI Technology Field Day, Colby, Kansas, August 6, 2014.


Oral presentation of Subsurface drip irrigation for corn production: Improved water use and nutrient management at launch meeting of “High Efficient Water Use in Agriculture” project (111 plan), Beijing China, June 1-7, 2014.

Poster presentation of What is SDI? at Making the Most of Limited Water meeting at Hoxie, Kansas, March 11, 2014.

Poster presentation of Steps to a successful SDI system at Making the Most of Limited Water meeting at Hoxie, Kansas, March 11, 2014.

Poster presentation of Application of biological effluent with SDI at Making the Most of Limited Water meeting at Hoxie, Kansas, March 11, 2014.


Oral presentation of Successful SDI - Addressing the essential issues at Clearwater Supply grower meeting, Ontario, Oregon, February 5, 2014.

Oral presentation of SDI for corn production - A brief review of 25 years of KSU research at Clearwater Supply grower meeting, Ontario, Oregon, February 5, 2014.

Discussion of microirrigation projects and technologies at annual W-2128 meeting, Denver, Colorado, November 14-16, 2013

Oral presentation of SDI, the basics of successful systems to the North Carolina Irrigation Society, Raleigh, North Carolina, November 12, 2013.


Discussion of SDI with Rodney Ruskin, GeoFlow and Dov Avital and Shmuel Schupak from Metzerplas, November 4, 2013, Austin, Texas.

Discussion and tour of SDI facilities for Rodney Ruskin, GeoFlow and Ahmet Attaroglu, Agplastik, October 30, 2013, Colby, Kansas.

Oral presentation of SDI for Crop Production in the Great Plains - Approaching the 25th Anniversary of K-State’s Research and Extension Efforts to the Governor’s Water Conference, Manhattan, Kansas, October 25, 2013.

Tour of station and SDI facilities and discussion for Kansas Farm Bureau Masters Group, October 1, 2013.

Tour of station and SDI facilities and discussion for Iryne McDonald and agronomy class from Colby Community College, September 26, 2013.

Discussion and tour of SDI with local farmer, September 13, 2013
One hour webinar entitled Subsurface Drip Irrigation (SDI) for Grain Crop Production – Challenges and Opportunities for Grange Network, September 12, 2013. [http://www3.grangenetwork.com](http://www3.grangenetwork.com)

Discussion of SDI facilities at Tear Down the Walls meeting, Colby, Kansas, August 14, 2013.

Tour and discussion of SDI for 20 visitors from Australia arranged by Jan Windscheffel and Sam Burrell, Netafim Irrigation, August 12, 2013.

Tour and discussion of SDI for 4 visitors from Colorado State University, August 1, 2013.

TV interview on water and irrigation for Smoky Hills Public Television by Rodrigo Lopez, June 6, 2013.


Discussion of SDI with staff from Ventria Biosciences, Junction City, Kansas, March 27, 2013.

Kansas Water Office conference call and discussion of SDI within the newly formed Sheridan HPA#6 LEMA., March 21, 2013.

Kansas Water Office discussion of SDI within the newly formed Sheridan HPA#6 LEMA., February, 5, 2013.

TV Interview on irrigation by Hays Public Access Channel, January 10, 2013.


Lamm, F. R. Oral powerpoint presentation of SDI Irrigation Capacity x N Fertigation Study of Corn, at annual W-2128 meeting, Orlando, Florida, November 1-3, 2012

Oral powerpoint presentation of The potential for conserving water with SDI for corn production at the Governor’s Water Conference, Manhattan, Kansas, October 30-31, 2012.

Poster presentation of Application of biological effluent with SDI at the Governor’s Water Conference, Manhattan, Kansas, October 30-31, 2012.

Poster presentation of Post-Anthesis Irrigation Management for Corn at the Governor’s Water Conference, Manhattan, Kansas, October 30-31, 2012.

Tour of station and SDI facilities and discussion for Iryne McDonald and agronomy class from Colby Community College, October 3, 2012.

Tour of SDI facilities and discussion for Monsanto TDR group, September 19, 2012.

Tour of SDI facilities and discussion for Dow group (Al Green and Cecelia Topher, August 14, 2012.

Tour of SDI facilities and discussion for David Mack and Ami Gips, Netafim Irrigation, February 23, 2012.


Lamm, F.R. 2012. Presentation to Colby Community College Agricultural Seminar class, January 31, 2012 at KSU-NWREC. Topic was agricultural research centers and SDI. 1 hour presentation.


Lamm, F. R. 2012. **Longevity of subsurface drip irrigation systems in Kansas.** In: A Summary of Water-Related Research in Kansas. Kansas State Univ. AES and CES, Manhattan, Kansas. pp 34.

Lamm, F. R. 2012. Oral powerpoint presentation of **Use of multiple performance parameters to evaluate SDI systems,** at annual W-2128 meeting, Las Cruces, New Mexico, November 15-18, 2011

Discussion of agricultural research and SDI technology with Farm Bureau Master’s program, October 6, 2011 at KSU-NWREC, Colby Kansas.

Tour of SDI and Lateral-Move sprinkler facilities and area sunflower producer for 5 individuals from Argentina, July 25-26, 2011


Oral powerpoint presentation of **Twenty-Two Years of Progress with SDI in Kansas** at Sino-US Workshop on Microirrigation, Beijing China, April 23, 2011.

Oral powerpoint presentation of **Unique Challenges with Subsurface Drip Irrigation** at Sino-US Workshop on Microirrigation, Beijing China, April 23, 2011

Oral powerpoint presentation of **Some Design and Management Thoughts for SDI Systems** to Inner Mongolia Jin Tu Di Water-Saving Engineering Equipment Company near Wengniute, Chifeng, China, April 26, 2011

Lamm, F. R., Approximately 15 hours of seminars/teaching to MS and PhD level engineering students at China Agricultural University, Beijing, China, April 16-20, 2011. Topics were microirrigation, sprinkler irrigation, water management, experimental design, creative thinking, and philosophies of technical writing in US journals.


Lamm, F. R. 2010. Twenty-One Years of SDI Research in Kansas. Presentation at the California Irrigation Institute annual conference, February 1-2, Sacramento, California.


Lamm, F. R. Discussion of SDI technology and participation in annual W-2128 meeting, Des Moines, Iowa, November 17-19, 2010

Lamm, F. R. Discussion of SDI technology with Farm Bureau Master’s program, September 30, 2010 at KSU-NWREC, Colby Kansas.

Lamm, F. R. Discussion of SDI research with Bobby Bassi, Syngenta Chemical, August 2, 2010 at KSU-NWREC, Colby Kansas.


Presentation of Corn irrigation macromanagement at the seasonal boundaries – Initiating and terminating the irrigation season, at the Monsanto Sustainability Conference, Denver February 11-13, 2009, Denver.


Arbat, G., F. R. Lamm, and A. A. Abou Kheira. 2009. Poster presentation of *Effect of emitter spacing on corn* at K-State Research and Extension Annual Conference, Manhattan, Kansas, October 20, 2009.


Lamm, F. R. and D. M. O’Brien. 2009. Computer and poster presentation of **Can We Make it Work and Can We Make it Pay?** at K-State Research and Extension Annual Conference, Manhattan, Kansas, October 20, 2009.


Lamm, F.R. 2009. Discussion of SDI and tour of facilities for Dean and Associate Deans of KSU College of Agriculture, October 6, 2009 at Colby Kansas.

Lamm, F.R. 2009. Discussion of SDI and tour of facilities for Farm Bureau’s Master Program, October 9, 2009 at Colby Kansas.


Discussion of SDI research with USDA RRF Regional Project W1128, Portland, Oregon, October 22-24, 2008.

Presentation of historical aspects of KSU-NWREC and agriculture plus tour of SDI facilities to Farm Bureau Masters Tour, Colby Kansas, Oct. 8, 2008.

Tour and discussion of SDI facilities with Michael Dowgert, Netafim USA, August 20, 2008.

Tour and discussion of SDI facilities and other irrigation topics for KSU Agricultural Economics faculty, June 17, 2008.

Poster presentation of Alfalfa production with subsurface drip irrigation (SDI) at the KSU-NWREC spring field day, June 5, 2008.

Tour and discussion of SDI facilities and other irrigation topics for KSU Biological and Agricultural Engineering Department Chair, Gary Clark, May 13, 2008.

News release, Pioneer, KSU research recommends irrigating through grain filling stage, Pioneer Hi-Bred Crop Insights, April, 2008. Pioneer Hi-Bred Crop Insights, April, 2008.

News release, Safely delaying the first irrigation of corn, Pioneer Hi-Bred Crop Insights, April, 2008.


Poster presentation of Livestock Wastewater use through SDI – A Pilot Project at Central Plains Irrigation Conference, February 19-20, 2008, Greeley, Colorado.


Poster presentation of Software for Planning Corn Production with SDI at Central Plains Irrigation Conference, February 19-20, 2008, Greeley, Colorado.

Presentation of Progress with SDI research at Kansas State University to Victory Electrical Coop annual irrigation meeting, Dodge City, Kansas, February 8, 2008.

Poster presentation of SDI in the Great Plains to Victory Electrical Coop annual irrigation meeting, Dodge City, Kansas, February 8, 2008.

Poster presentation of Livestock Wastewater use through SDI – A Pilot Project to Victory Electrical Coop annual irrigation meeting, Dodge City, Kansas, February 8, 2008.

Poster presentation of Economics of SDI for Corn to Victory Electrical Coop annual irrigation meeting, Dodge City, Kansas, February 8, 2008.


Presentation of Progress with SDI research at Kansas State University to Farmland Coop Employees, Sterling Colorado, February 7, 2008.

Presentation of Subsurface drip irrigation (SDI) in Kansas to key universities in India, Delhi, India, January 5, 2008.

Presentation of Subsurface drip irrigation (SDI) in Kansas, A. N.G. Ranga Agricultural University, Hyderabad, India, January 2, 2008.

Discussion of SDI research with USDA RRF Regional Project W1128, Honolulu, Hawaii, October 9-11, 2007.

SDI facilities tour and discussion for class from Sacred Heart Grade School, Colby, Kansas, October, 2007.

Presentation of historical aspects of KSU-NWREC and agriculture plus tour of SDI facilities to Farm Bureau Masters Tour, Colby Kansas, Oct. 4, 2007.


SDI facilities tour and discussion for one producer, two USDA-ARS Scientists and three KSU staff, August 29, 2007.
Hosted G. Li, China Agricultural University, Beijing, China, July 12, 2007 for discussions and facility tours concerning SDI.

SDI facilities tour and irrigation discussion for Ag In the Classroom group, July 12, 2007


Poster presentation of Livestock Wastewater use through SDI – A Pilot Project at Central Plains Irrigation Conference, February 27-28, 2007, Kearney, Nebraska.


Poster presentation of Economics of SDI for Corn at Central Plains Irrigation Conference, February 27-28, 2007, Kearney, Nebraska.

Poster presentation of Software for Planning Corn Production with SDI at Central Plains Irrigation Conference, February 27-28, 2007, Kearney, Nebraska.


Discussion of SDI and other water related topics with Tom Elliot, Boston Massachusetts at Colby, Kansas, November 17, 2006.

Presentation of historical aspects of KSU-NWREC and agriculture plus tour of SDI facilities to Farm Bureau Masters Tour, Colby Kansas, Oct. 6, 2006.

Discussion with J. Bordovsky, TAMU at Plainview Texas of SDI and other water-related projects, September 6, 2006.

Discussion with T. Howell, P. Colaizzi, and S. Evett, USDA-ARS, Bushland Texas of SDI and other water-related projects, September 6, 2006.

Discussion with Nicholas Farms staff, Big Bow, Kansas about SDI progress and problems, September, 4, 2006.

Presentation of There ain’t no such thing as a free supper and general discussion of SDI and other irrigation technologies to Leadership Kansas Class of 2006, Hays, Kansas, August 25, 2006.


Demonstration to U. S. Congressional Aides of COpt_SDI.xls, an MS Excel template to determine optimum planned corn area and plant population for SDI, at Manhattan, Kansas, August 17, 2006.

Discussion with Mike Bartolo, CSU, Rocky Ford, Colorado of microirrigation projects in the Ark Valley, August 9, 2006.

Tour of SDI facilities and discussion of SDI projects at NWREC, Colby Kansas with Naftali Lazarovitch, from the Ben-Gurion University of the Negev, Israel, August 7-9, 2006.

Presented SDI facilities and information as a portion of a NWREC tour for Kansas Black Farmers Assoc. and USDA-NRCS staff, Colby, Kansas, July 26, 2006.

Presentation of Current irrigation technologies and their role in efficient use of water at the Water and Future of Kansas conference, Topeka, Kansas, March 16, 2006.
Ogallala Aquifer Program written report, **Effect of dripline depth on corn, sunflower and soybean**, F.R. Lamm, Amarillo, Texas, March 7-9, 2006.


Ogallala Aquifer Program written report, **Comparison of LEPA and SDI for corn, sunflower and soybean**, F.R. Lamm, Amarillo, Texas, March 7-9, 2006.

Ogallala Aquifer Program written report, **Software to compare SDI and CP sprinkler economics**, F.R. Lamm and L. Almas, Amarillo, Texas, March 7-9, 2006.

Ogallala Aquifer Program written report, **Strategies for improved crop germination with SDI in Kansas and Texas**, F.R. Lamm, Amarillo, Texas, March 7-9, 2006.

Discussion of SDI and other water-related topics with Kansas agency and farm-related groups, Manhattan, Kansas, March 17, 2006.

CD of SDI website distributed to participants of Central Plains Irrigation Conference, February 21-22, 2006, Colby, Kansas.


Poster presentation of **Livestock wastewater use through SDI – A Pilot project** at the Western Irrigation SDI Management and Maintenance meeting, Garden City, Kansas, February 14, 2006.

Poster presentation of **Optimum fertigation for corn using SDI** at the Western Irrigation SDI Management and Maintenance meeting, Garden City, Kansas, February 14, 2006.

Discussion of SDI and other water related topics with KSU COA and COE administrators, Manhattan, Kansas, February 10, 2006.

Presentation of **Progress with SDI research at Kansas State University** at annual KARA meeting, January 18, 2006, Salina, Kansas.

Discussion and tour of SDI at KSU-NWREC, Colby, Kansas with Li Guangyong, China Agricultural University, November 11, 2005

Presentation of SDI research results to USDA-RRF W1128 regional project concerning microirrigation, Phoenix, Arizona, November 2-4, 2005.

Discussion of SDI and irrigation efficiency with USDA-NRCS Kansas staff at Manhattan, Kansas, October 13, 2005.

Discussion and tour of SDI and other topics with regional Farm Bureau group at Colby, Kansas, October 6, 2005.

Discussion and tour of SDI with representative of Netafim Irrigation at Colby Kansas, September 2005.

Discussion of SDI and other irrigation topics with area representatives of Pioneer Hi-Bred International, August 22, 2005.

Discussion of SDI and Water Conservation research with US Congressional Aides, Hays Kansas, August 17, 2005.

Tour and discussion of SDI and other irrigation topics with scientist Graham Harris from Victoria, Australia, August 10-11, 2005.

Tour and discussion of SDI with farmer Garry Morrison from Victoria, Australia, August 7, 2005.

Discussion of SDI and other irrigation topics for Kuska family reunion, July 30, 2005.

Hosted Visiting Scientist, Gerard Arbat, University of Girona, Spain from June 29 to October 1, 2005.

Tour and discussion of SDI research with Tom Doerge, Pioneer Hi-Bred International, July 5, 2005.
Field Tour of SDI research installation at KSU-NWREC, June 22, 2005 for UAP representatives. Approximately 25 in attendance.

Poster presentation of Minimum System Requirements with SDI at KSU Sedgewick County SDI Field Day, Wichita, Kansas, June 1, 2005.

Poster presentation of Improved irrigation water management with SDI at KSU Sedgewick County SDI Field Day, Wichita, Kansas, June 1, 2005.

Poster presentation of What is SDI? at KSU Sedgewick County SDI Field Day, Wichita, Kansas, June 1, 2005.

Poster presentation of SDI, Pros and Cons at KSU Sedgewick County SDI Field Day, Wichita, Kansas, June 1, 2005.

Poster presentation of Nutrient Management with SDI at KSU Sedgewick County SDI Field Day, Wichita, Kansas, June 1, 2005.

Oral presentation of Ogallala Aquifer Programs that included SDI, Garden City, Kansas, March 8-10, 2005.


Ogallala Aquifer Program written report, Installation effects on SDI flowrates and uniformity, February, 2005.


Presentation of Design and management considerations for SDI at SDI meeting, Sublette, Kansas, March 3, 2005.

Presentation of SDI research for corn production in Kansas, 16 years of progress at SDI meeting, Sublette, Kansas, March 3, 2005.

Presentation of Center pivot sprinkler and SDI economic comparisons at SDI meeting, Sublette, Kansas, March 3, 2005.

Poster presentation of SDI in the Great Plains at SDI meeting at Sublette, Kansas, March 3, 2005.

Poster presentation of Using livestock wastewater with SDI at SDI meeting at Sublette, Kansas, March 3, 2005.

Poster presentation of Nitrogen fertilization for corn production using SDI at SDI meeting at Sublette, Kansas, March 3, 2005.

Presentation of SDI research for corn production in Kansas, 16 years of progress at NICCA annual meeting, Kearney, Nebraska, Feb. 21, 2005.

Economic comparison of SDI and center pivot sprinklers at Arkansas Valley Farm and Ranch Symposium, January 6, 2005.

Oral presentation of SDI research results in Kansas at University of Missouri Crop Management School, Columbia, Missouri, Dec. 16-17, 2004.

Poster presentation of SDI in the Great Plains at University of Missouri Crop Management School, Columbia, Missouri, December 16-17, 2004.

Poster presentation of Using livestock wastewater with SDI at University of Missouri Crop Management School, Columbia, Missouri, December 16-17, 2004.

Presentation of SDI research results to USDA-RRF W1128 regional project concerning microirrigation, Tampa, FL, November 17-19, 2004.


Oral presentation of “Steps to a successful SDI system” at KSU Scandia Experimental Field, August 24, 2004.

Oral presentation of “Minimum system requirements with SDI” at KSU Scandia Experimental Field, August 24, 2004.

Poster presentation of “Can we make SDI pay”? at KSU Scandia Experimental Field, August 24, 2004.

Poster presentation of “What is SDI”? at KSU Scandia Experimental Field, August 24, 2004.

Poster presentation of “Improved irrigation water management with SDI” at KSU Scandia Experimental Field, August 24, 2004.

Discussion of SDI with Governor’s Subcabinet on Water, Manhattan, Kansas, August 23, 2004.
Poster presentation of Improved irrigation water management with SDI at SDI Technology Field Day, at NWREC, August 10, 2004.
Poster presentation of Minimum system requirements with SDI at SDI Technology Field Day, at NWREC, August 10, 2004.
Poster presentation of Steps to a successful SDI system at SDI Technology Field Day, at NWREC, August 10, 2004.
Poster presentation of The Ogallala and the potential for SDI at SDI Technology Field Day, at NWREC, August 10, 2004.
Poster presentation of SDI, Pros and Cons at SDI Technology Field Day, at NWREC, August 10, 2004.
Poster presentation of Optimal plant populations for corn using SDI with limited well capacities at SDI Technology Field Day, at NWREC, August 10, 2004.
Poster presentation of Spacing of driplines for corn production at SDI Technology Field Day, at NWREC, August 10, 2004.
Poster presentation of K-State’s permanent bed system for SDI at SDI Technology Field Day, at NWREC, August 10, 2004.
Poster presentation of Slope considerations for SDI at SDI Technology Field Day, at NWREC, August 10, 2004.
SDI tour and discussion for Kansas Farm Appraisers Assn. at NWREC, July 15, 2004.
Discussion and tour of SDI research with Tom Doerge, July 6, 2004.
Hosted Dr. Jaume Puig, University of Girona (Spain) from May 16-September 3, 2004 to conduct SDI research on dripline flushing velocity.
Discussion with 6 Pioneer HiBred Inc. personnel about SDI and other irrigation technologies, March 19, 2004.
CD of SDI website distributed to participants of Western Irrigation Operation and Maintenance Workshop, Feb 24, 2004, Garden City, Kansas.
Poster presentation of SDI in the Great Plains at Western Irrigation Operation and Maintenance Workshop, Feb 24, 2004, Garden City, Kansas.
Poster presentation of Using livestock wastewater with SDI at Western Irrigation Operation and Maintenance Workshop, Feb 24, 2004, Garden City, Kansas.
Poster presentation of Nitrogen fertilization for corn production using SDI at Western Irrigation Operation and Maintenance Workshop, Feb 24, 2004, Garden City, Kansas.


Presentation of **SDI in the Great Plains region with a few glances elsewhere** at Powell Agricultural and Irrigation Technologies meeting, Powell, Wyoming, Feb. 6, 2004.

Presentation of **Design and management considerations for SDI** at Powell Agricultural and Irrigation Technologies meeting, Powell, Wyoming, Feb. 6, 2004.

Presentation of **Filtration and maintenance considerations for SDI** at Powell Agricultural and Irrigation Technologies meeting, Powell, Wyoming, Feb. 6, 2004.

Presentation of **Center pivot sprinkler and SDI economic comparisons** at Powell Agricultural and Irrigation Technologies meeting, Powell, Wyoming, Feb. 6, 2004.


Poster presentation of **Nitrogen fertilization for corn production using SDI** at Powell Agricultural and Irrigation Technologies meeting, Powell, Wyoming, Feb. 6, 2004.

Presentation of second year’s research results for SDI Frequency study to Corn Commission, January 22, 2004. Presentation by Rob Aiken.

Presentation of **SDI in the Great Plains region with a few glances elsewhere** at Victory Electric Irrigation meeting, Dodge City, Kansas, January 22, 2004.

Poster presentation of **SDI in the Great Plains** at Victory Electric Irrigation meeting, Dodge City, Kansas, January 22, 2004.

Poster presentation of **Using livestock wastewater with SDI** at Victory Electric Irrigation meeting, Dodge City, Kansas, January 22, 2004.


Presentation of **Design and management considerations for SDI** at SDI meeting, Dodge City, Kansas, December 10, 2003.

Presentation of **SDI Research for Corn Production in Kansas, 14 Years of Progress** at SDI meeting, Dodge City, Kansas, December 10, 2003.

Presentation of **Using beef lagoon wastewater with SDI** at SDI meeting, Dodge City, Kansas, December 10, 2003.

Presentation of **Center pivot sprinkler and SDI economic comparisons** at SDI meeting, Dodge City, Kansas, December 10, 2003.

Poster presentation of **SDI in the Great Plains** at SDI meeting, Dodge City, Kansas, December 10, 2003.

Poster presentation of **Using livestock wastewater with SDI** at SDI meeting, Dodge City, Kansas, December 10, 2003.

Poster presentation of **Nitrogen fertilization for corn production using SDI** at SDI meeting, Dodge City, Kansas, December 10, 2003.

Presentation of **Design and management considerations for SDI** at SDI meeting, Abilene, Kansas, December 9, 2003.

Presentation of **SDI Research for corn production in Kansas, 14 years of progress** at SDI meeting, Abilene, Kansas, December 9, 2003.

Presentation of **Using beef lagoon wastewater with SDI** at SDI meeting, Abilene, Kansas, December 9, 2003.
Presentation of **Center pivot sprinkler and SDI economic comparisons** at SDI meeting, Abilene, Kansas, December 9, 2003.

Poster presentation of **SDI in the Great Plains** at SDI meeting, Abilene, Kansas, December 9, 2003.

Poster presentation of **Using livestock wastewater with SDI** at SDI meeting, Abilene, Kansas, December 9, 2003.

Poster presentation of **Nitrogen fertilization for corn production using SDI** at SDI meeting, Abilene, Kansas, December 9, 2003.

Presentation and discussion of SDI results to USDA-RRF W-128 Microirrigation Committee, Davis, California, October 22-24, 2003.


Presentation to US Congressional Aides Tour of **Improved irrigation water management with SDI**, Manhattan, Kansas, August 6, 2003.

Presentation of **SDI in the Great Plains** at the SDI and Sweet Corn Production Tour, Ulysses Kansas, July 9, 2003.


Participant and resource person for Western Irrigation SDI Operation and Maintenance meeting, Feb. 20, 2003.

CD of SDI website distributed to participants of Western Irrigation SDI Operation and Maintenance meeting, Feb. 20, 2003.

Poster presentation of **SDI in the Great Plains** at Western Irrigation Operation and Maintenance Workshop, Feb 20, 2003, Garden City, KS.

Poster presentation of **Using livestock wastewater with SDI** at Western Irrigation Operation and Maintenance Workshop, Feb 20, 2003, Garden City, Kansas.

Poster presentation of **Nitrogen fertilization for corn production using SDI** at Western Irrigation Operation and Maintenance Workshop, Feb 20, 2003, Garden City, Kansas.


Research application summary (Economically optimal corn plant population at various capacities using SDI) and Excel spreadsheet (Copt_SDI.xls) for Pioneer HiBred Intl., January, 24, 2003.

Presentation of first year’s research results for SDI Frequency study to Corn Commission, January 10, 2003.

Poster presentation of **SDI in the Great Plains** at Victory Electric Irrigation meeting, Dodge City, KS, 1-6-03.

Poster presentation of **Using livestock wastewater with SDI** at Victory Electric Irrigation meeting, Dodge City, KS, 1-6-03.

Poster presentation of **Nitrogen fertilization for corn production using SDI** at Victory Electric Irrigation meeting, Dodge City, KS, 1-6-03.

Presentation of **SDI for corn production in Kansas** at SDI meeting in Belleville, Kansas, December 18, 2002.

Presentation of **Design and management considerations for SDI** at SDI meeting in Belleville, Kansas, December 18, 2002.

Poster presentation of **SDI and the Great Plains** at SDI meeting in Belleville, Kansas, December 18, 2002.

Poster presentation of **Livestock wastewater use with SDI: A pilot project** at SDI meeting in Belleville, Kansas, December 18, 2002.

Poster presentation of **Nitrogen fertilization for corn production using SDI** at SDI meeting in Belleville, Kansas, December 18, 2002.


Presentation of **SDI for corn production in Kansas** at SDI meeting in Wichita, Kansas, December 17, 2002.
Presentation of Design and management considerations for SDI at SDI meeting in Wichita, Kansas, December 17, 2002.

Poster presentation of SDI and the Great Plains at SDI meeting in Wichita, Kansas, December 17, 2002.

Poster presentation of Livestock wastewater use with SDI: A pilot project at SDI meeting in Wichita, Kansas, December 17, 2002.

Poster presentation of Nitrogen fertilization for corn production using SDI at SDI meeting in Wichita, Kansas, December 17, 2002.


Presentation of SDI for corn production in Kansas to Groundwater Conservation for S.W. Kansas, Dodge City, KS, Nov. 20, 2002.

Discussion of SDI with Valmont Industries, Kearney, NE, Nov, 6, 2002.


Discussion of SDI with Colorado crop consultant at NWREC SDI site, October 17, 2002.

Tour and discussion of SDI facilities for NRCS, two Univ. of Nebraska personnel and 3 Nebraska producers, September 9, 2002.

Tour and discussion of SDI facilities for a Nebraska producer, August 21, 2002.

Tour and discussion of SDI facilities for four Colorado producers, August 13, 2002.

Tour and discussion of SDI facilities for two Univ. of Nebraska faculty, July 24, 2002.

Tour and discussion of SDI facilities for Dr. Tom Thompson, Univ. of Arizona and a Kansas producer, July 16, 2002.

Discussion of using beef lagoon wastewater through SDI systems for Mid-America State Depts. of Agriculture for Kansas Secretary of Agriculture Jamie Clover Adams near Sublette, Kansas, July 14, 2002.

Tour and discussion of SDI facilities for Kansas Water Authority (approximately 30 in attendance), July 10, 2002.

Tour and discussion of SDI facilities for NRCS and four producers from Colorado, July 10, 2002.

Discussion and tour of SDI research facility with engineering consultant from NE, March 23, 2002.

Poster presentation of SDI in the Great Plains at SDI meeting for producers, Courtland, KS, 3-21-02.

Poster presentation of Using livestock wastewater with SDI at SDI meeting for producers, Courtland, KS, 3-21-02.

Presentation of SDI Research for corn production for SDI at SDI meeting for producers, Courtland, KS, 3-21-02.

Presentation of Economic comparison of SDI & center pivot sprinklers for corn: Sensitivity to key factors at SDI meeting for producers, Courtland, KS, 3-21-02.

Poster presentation of SDI in the Great Plains at SDI in-service for UNL and NRCS personnel, Hastings, NE, 3-20-02.

Poster presentation of Using livestock wastewater with SDI at SDI in-service for UNL and NRCS personnel, Hastings, NE, 3-20-02.

Presentation of Design and management considerations for SDI at SDI in-service for UNL and NRCS personnel, Hastings, NE, 3-20-02.

Presentation of SDI Research for corn production for SDI at SDI in-service for UNL and NRCS personnel, Hastings, NE, 3-20-02.

Presentation of Economic comparison of SDI & center pivot sprinklers for corn: Sensitivity to key factors at SDI in-service for UNL and NRCS personnel, Hastings, NE, 3-20-2002.

Presentation of Minimum requirements for SDI systems at County agent update at KSU-SWREC, March 7, 2002.


Presentation of Design and management considerations for SDI at SDI meeting in Hugoton, Kansas, Feb 20, 2002.
Presentation of **Irrigation capacity and plant population effects on corn production** at SDI meeting in Hugoton, Kansas, Feb 20, 2002.

Poster presentation of **SDI and the Great Plains** at SDI meeting in Hugoton, Kansas, Feb 20, 2002.

Poster presentation of **Livestock wastewater use with SDI: A pilot project** at SDI meeting in Hugoton, Kansas, Feb 20, 2002.


Presentation of **Design and management considerations for SDI** at SDI meeting in Garden City, Kansas, Feb 19, 2002.

Presentation of **Irrigation capacity and plant population effects on corn production** at SDI meeting in Garden City, Kansas, Feb 19, 2002.

Poster presentation of **SDI and the Great Plains** at SDI meeting in Garden City, Kansas, Feb 19, 2002.

Poster presentation of **Livestock wastewater use with SDI: A pilot project** at SDI meeting in Garden City, Kansas, Feb 19, 2002.

Computer presentation of **Economic comparison of SDI & center pivot sprinklers for corn: Sensitivity to key factors** at SDI meeting in Garden City, Kansas, Feb 19, 2002.

Presentation of **Design and management considerations for SDI** at SDI meeting in Colby, Kansas, Feb 18, 2002.

Presentation of **Irrigation capacity and plant population effects on corn production** at SDI meeting in Colby, Kansas, Feb 18, 2002.

Poster presentation of **SDI and the Great Plains** at SDI meeting in Colby, Kansas, Feb 18, 2002.


Poster presentation of **Livestock wastewater use with SDI: A pilot project** at SDI meeting in North Platte NE, Feb 12, 2002.

Presentation of **Irrigation capacity and plant population effects on corn production** at SDI meeting in North Platte, NE, Feb 12, 2002.

Presentation of **Economic comparison of center pivot sprinklers and SDI for corn production** at SDI meeting in North Platte, NE, Feb 12, 2002.

Poster presentation of **SDI and the Great Plains** at SDI meeting in North Platte, NE, Feb 12, 2002.

Presentation of **Economic comparison of center pivot sprinklers and SDI for corn production** at SW Kansas Irrigators, Association meeting, Feb 1, 2002.

Presentation of **Irrigation capacity and plant population effects on corn production using SDI** at Western Kansas Irrigation Workshop, Goodland, KS, January 10, 2002.

Presentation of **SDI and the Great Plains** at SDI meeting in North Platte, NE, Feb 12, 2002.


Presentation of **Potential issues for Michiana seed corn producers considering SDI** at the Michiana Irrigation Association Annual Meeting, Shipshewana, IN, Dec.10, 2001.


Tour of SDI facilities for group of approximately 20 Farm Bureau members from Kansas, Sept. 27, 2001.

Tour of SDI facilities for group of 20 producers from Australia, August 28, 2001.

Presentation to Kansas Congressional Aides about USDA Special Grant Water conservation--Increased efficiency in usage, August 14, 2001.

Tour of SDI facilities for KSU 4-H Wheat Show meeting, August 8, 2001. Approximately 35 in attendance.


Poster presentation of **SDI Research and Extension efforts at K-State -- 12 years and counting**, SDI Technology Field Day, August 7, 2001.

Poster presentation of **What is subsurface drip irrigation (SDI)?**, SDI Technology Field Day, August 7, 2001.


Mini-tour of SDI facilities for Ogallala Management Taskforce, July 26, 2001. 4 in attendance.


Interviewed by Carl Kistler, reporter from Furrow magazine about SDI and wastewater, June 18, 2001.


Poster presentation of **SDI in the Great Plains** at Crop Modeling Workshop, Univ. of Nebraska, Lincoln, NE, Dec. 4-7, 2000.

Poster presentation of **Economics of SDI for corn production** at Crop Modeling Workshop, Univ. of Nebraska, Lincoln, NE, Dec. 4-7, 2000.

Poster presentation of **Utilizing livestock wastewater with SDI** at Crop Modeling Workshop, Univ. of Nebraska, Lincoln, NE, Dec. 4-7, 2000.

Poster presentation of **Nitrogen fertilization for corn production using SDI** at Crop Modeling Workshop, Univ. of Nebraska, Lincoln, NE, Dec. 4-7, 2000.

Extensive 1.5 hour consultation with 3 UNL faculty in Agronomy Dept. about utilization of SDI for research, Dec 6, 2000.


Tour of NWREC SDI facilities and discussion of SDI with group from Netafim and Cascade Earth Sciences (4), Sep. 26, 2000.

Tour of NWREC SDI facilities and discussion of SDI with group from Kansas Farm bureau (13), Sep. 26, 2000.


Tour of NWREC SDI facilities and discussion of SDI with 4 faculty from University of Nebraska, Sep. 14, 2000.


Tour of NWREC SDI facilities and discussion of SDI with UNL tour group of 35 people, Aug. 26, 2000.


Tour of NWREC SDI facilities and discussion of SDI with UNL tour group led by Mark Golembolski, July 26, 2000.


Extensive phone call consultation with Dean Yonts, UNL-Scottsbluff on SDI design operation and management, May 4, 2000.

Tour and discussion of SDI facilities with Jim Phene, Netafim Irrigation, April 12, 2000.

Tour of NWREC SDI facilities and discussion of SDI with 2 faculty from Colorado State University, Apr. 3, 2000.
Tour of NWREC SDI facilities for Gerard Kluitenberg, Mar. 21, 2000.

Developed MIBook website to manage and coordinate revision of book Microirrigation for crop production, design operation and management, 2000.


Lamm, F.R. 2000. Executive summary to Congressmen, Jerry Moran and Jim Ryan of USDA Special Grant **Water conservation -- Increased efficiency in usage.** Jan. 24, 2000, Manhattan, KS.


Poster presentation of **Economics of SDI for corn production** at county meeting, Pratt, KS, Jan. 20, 2000.

Poster presentation of **Nitrogen fertigation of corn with SDI** at county meeting, Pratt, KS, Jan. 20, 2000.


Poster presentation of **Economics of SDI for corn production** at county meeting, Colby, KS, Jan. 19, 2000.


Tour of NWREC SDI facilities for Toro-Ag representatives (2), Dec. 1, 1999.


KS Legislative Aides Tour, 40 in attendance, Midwest Feeders, Ingalls, KS, Oct. 27, 1999.


Presentation of **Research results with corn and SDI** at Irrigation County Agent Update, Garden City, KS, Nov. 10, 1998.
Presentation of Design and management considerations for subsurface drip irrigation systems at Irrigation County Agent Update, Garden City, KS, Nov. 10, 1998.


Presentation of Research with SDI and corn at the USDA RRF W-128 regional project meeting, San Diego, CA, Oct. 29-31, 1998.

Presentation of Research with SDI and corn to legislative aides, Manhattan, KS, Aug. 1998.


Discussion of SDI and field tour of NWREC SDI research site for Nelson Irrigation, Sept. 21, 1998.


Invited speaker for written presentation of SDI and the Great Plains, at the 60th annual Bushland Field Day, USDA-ARS, Bushland, TX, Aug. 12, 1998.

Tour of NWREC SDI research site, Colby, KS and SDI wastewater site, Ingalls, KS for Netafim Irrigation, June 1998.


Presentation of Livestock wastewater utilization with SDI: A pilot project, for the K-State President's Tour at Ingalls, KS, June 30, 1998.

Two radio interviews by Brandon Jaap, KFRM 550 AM on SDI, March 31, 1998.


Presentation of Design and management considerations for SDI systems at county meeting, Rush Center, KS, Jan. 29, 1998.


Presentation of KSU’s SDI research on corn to the Western Regional RRF Project W-128, Nov. 6-7, 1997, Fresno, CA.


Numerous e-mail requests for SDI research information, apparently in response to participation in Trickle-L, an e-mail discussion group on microirrigation, 1997-2003.

Guided tour of subsurface drip irrigation facilities and discussion of research for Colby Middle School Advanced Science Class, Oct. 16, 1997.

Guided tour of subsurface drip irrigation facilities and discussion of research for Lindsay and Helen Ward, visitors from Australia, Oct. 6, 1997.


Guided tour of subsurface drip irrigation facilities and discussion of research for Kansas Water Office Director, Aug. 6, 1997.

Guided tour of subsurface drip irrigation facilities and discussion of research for University of Nebraska faculty and staff, Feb. 5, 1997.

Presentation of SDI for corn production at 4-States Irrigation Council annual meeting, Jan. 8, 1997, Ft. Collins, CO.

Presentation of Economics of SDI for corn production at 14th annual Water and the Future of KS. Conference, March 4-5, 1997, Manhattan, KS.

Presentation of Design and management considerations for subsurface drip irrigation systems at NW County Agent Update, Dec. 19, 1996, Hoxie, KS.

Presentation of Design and management considerations for subsurface drip irrigation systems at SDI meeting, Dec. 12, 1996, Hugoton, KS.

Presentation of KSU’s SDI research on corn to the Western Regional RRF Project W-128, Nov. 1-2, 1996, San Antonio, TX.

Presentation of Subsurface drip irrigation for corn to the Innovations in Agriculture, Sustainable Agriculture in the 21st Century Tour, Sept. 18, 1996, Colby, KS.

Coordination and presentations at the Irrigation Technology Field Day, Aug. 20, 1996, Colby, KS.

Coordination of the SDI Technology Session following the 13th Annual Water and the Future of Kansas Conference, March 6, 1996, Colby, KS.

Presentation of Design and management considerations for subsurface drip irrigation systems at SDI Technology Session following the 13th Annual Water and the Future of KS. Conference, March 6, 1996, Colby, KS.

Presentation of Subsurface drip irrigation research for corn at SDI Technology Session following the 13th Annual Water and the Future of Kansas Conference, March 6, 1996, Colby, KS.

Presentation of KSU’s permanent bed system for corn production using SDI at SDI Technology Session following the 13th Annual Water and the Future of Kansas Conference, March 6, 1996, Colby, KS.

Presentation of Subsurface drip irrigation research for corn at SDI Technology Session following the 13th Annual Water and the Future of Kansas Conference, March 6, 1996, Colby, KS.

Presentation of Subsurface drip irrigation research for corn at Central Nebraska Irrigation Short Course, Feb. 15, 1996, Holdrege, NE.

Presentation of Design and management considerations for subsurface drip irrigation systems at Central Nebraska Irrigation Short Course, Feb. 15, 1996, Holdrege, NE.

Presentation of Subsurface drip irrigation research for corn at Central Nebraska Irrigation Short Course, Feb. 15, 1996, Holdrege, NE.

Presentation of Subsurface drip irrigation research for corn at Northwest Kansas Corn Growers meeting, Jan. 30, 1996, Colby, KS.

Presentation of Subsurface drip irrigation research for corn at Central Nebraska Irrigation Short Course, Feb. 15, 1996, Holdrege, NE.


Guided tour of subsurface drip irrigation facilities and discussion of research for the Kansas Production Credit Bankers Council, June 1995.

Guided tour of subsurface drip irrigation facilities and discussion of research for a group of crop nutrition scientists, Aug. 1995.

Guided tour of subsurface drip irrigation facilities and discussion of research for the Kansas Section ASAE, Oct. 1995.
Presentation of KSU's SDI research on corn to the Western Regional RRF Project W-128, Oct. 25-27, 1994, Kona, HI.

Guided tour of subsurface drip irrigation facilities and discussion of research for the Kansas water agencies, Aug. 1994.

Guided tour of subsurface drip irrigation facilities and discussion of research for the Kansas Department of Environment, Aug. 1994.


Presentation of KSU's SDI research on corn to the Western Regional RRF Project W-128, Oct. 28-30, 1993, San Diego, CA.

Presentation of drip irrigation research at the 1993 KSU NWREC Fall Field Day, Aug. 25, 1993.

Guided tour of subsurface drip irrigation facilities and discussion of research for the Four States Irrigation Council, Aug. 18, 1993.

Presentation of KSU's SDI research on corn to the Western Regional RRF Project W-128, April 28-30, 1993, Bradenton, FL.

Presentation of Using drip irrigation for a nontraditional crop -- evaluating the practice for irrigated corn at the Southwest Kansas Irrigators Assn. annual meeting, Ulysses, KS, Jan. 31, 1993.

Presentation of Drip irrigation studies at Colby to Kansas Agriculture Rural Leadership (KARL) groups, Colby, KS, Feb. 21, 1992 (1st class) and Jan. 15, 1992 (2nd class).

Presentation of Drip irrigation studies at Colby to NRCS staff and farmers from Nebraska, Dec. 6, 1992.

Presentation of Managing subsurface drip irrigation systems for corn at the 1992 KSU SWREC Fall Field Day.

Presentation of Drip irrigated corn studies to the Kansas Water Office staff, Manhattan, KS, April 29, 1992.

Poster entitled Drip irrigation for corn production -- the research approach in western Kansas at the Annual Conference of KSU CES-AES, Manhattan, KS, April 1992.


Presentation of SDI at the 1991 KSU NWREC Fall Field Day.


Poster entitled Water requirements of drip-irrigated corn at the Central Plains Irrigation Short Course, North Platte, NE, Feb. 5-6, 1991.

Poster entitled Preliminary highlights from a dripline spacing study at the Central Plains Irrigation Short Course, North Platte, NE, Feb. 5-6, 1991.


Presentation of SDI at Colby, KS to the 1990 Nebraska Irrigation Tour sponsored by the University of Nebraska, Aug. 6, 1990.


Presentation of SDI research at 1989 Fall Field Day of the KSU Northwest Research-Extension Center.