

**Norman L. Klocke, Ph.D., P.E.**

Water Resources Engineer  
NLK Engineering  
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**Education:**

| Institution and Location                           | Degree | Year Conferred | Field of Study              |
|--|--------|----------------|-----------------------------|
| Colorado State University<br>Ft. Collins, Colorado | Ph.D.  | 1983           | Irrigation Engineering      |
| University of Kansas<br>Lawrence, Kansas           | M.S.   | 1976           | Water Resources Engineering |
| University of Illinois<br>Urbana, Illinois         | B.S.   | 1971           | Agricultural Engineering    |

**Professional Experience:**

Professor & Research Irrigation Engineer, Southwest Research-Extension Center, Kansas State University, 2001-present.

President & Chief Engineer, NLK Engineering, Inc. 1997-present.

Professor Emeritus, Biological Systems Engineering Dept., Univ. of Nebraska, 1997-present.

Professor, Biological Systems Engineering Dept., Univ. of Nebraska, 1993-1997.

Associate Professor, Biological Systems Engineering Dept., Univ. of Nebraska, 1985-1993.

Assistant Professor, Agricultural Engineering Dept., Univ. of Nebraska, 1976-1985.

Agricultural Engineer, US Environmental Protection Agency, Kansas City, MO, 1971-1976.

Design Engineer, FMC Corporation, Hoopeston, Illinois, 1969.

**Honors and Awards:**

*Epsilon Sigma Phi, Extension Honorary Fraternity, 1984*

*Sigma Xi, Research Honorary Fraternity, 1984*

*ASAE Award for an Outstanding Entry in the Educational Aids Competition, 1989*

*IANR Team Award, WCREC Cropping Systems Team, 1990*

*ASA Certificate of Excellence for Agronomic Education Material, 1992*

*Excellence in Team Programming, Cooperative Extension, 1992, 1996*

*Selected for National Extension Leadership Development-North Central Region 1994-95.*

*National Guard and Reserve Patriot Award, 1997.*

*Bureau of Reclamation-Commissioner's Conservation Award, 2004*

*KSU Research and Extension Team Award, Irrigation and Water Resources, 2006*

**Professional Affiliations:**

*American Society of Agricultural and Biological Engineers  
Licensed Professional Engineer in Kansas*

Refereed Research Publications (1985-2011):

Klocke, N.L., R.S. Currie, D.J. Tomsicek, and J. Koehn. 2011. Corn yield response to deficit irrigation. *Trans. of the ASABE*. 54(3):931-940.

Heeren, D.M., T.P. Trooien, H.D. Werner, and N.L. Klocke. 2011. Development of deficit irrigation strategies for corn using a yield ratio model. *J. of App. Eng. In Agric*. 27(4):605-614.

Stone, L.R., N.L. Klocke, D. Tomsicek, A. Schlegel. 2010. Equations for drainage component of the field water balance. *J. of App. Eng. In Agric*. 27(3):345-350.

Klocke, N.L., L.R. Stone, S. Briggeman, D.A. Bolton. 2010. Scheduling deficit irrigation—crop yield predictor. *J. of App. Eng. in Agric*. 26(3):413-418.

Klocke, N.L., R.S. Currie, L.R. Stone, and D.A. Bolton. 2010. Planning for deficit irrigation. *J. of App. Eng. In Agric*. 26(3):405-412.

Blanco-Canqui, H, N.L. Klocke., A.L. Schlegel, L.R. Stone, and C.W. Rice. 2010. Impacts of deficit irrigation on carbon sequestration and physical properties in no-till soils. *SSSAJ*. 74(4):1301-1309.

Davis, H.N., R.S. Currie, N.L. Klocke, and L.L. Buschman. 2010. Winter annual cover crop has only minor effects on major corn arthropod pests. *J. of Economic Entomology*. 103:348-355

Klocke, N.L., L.R. Stone, T.J. Dumler, S. Briggeman. 2010. Crop Yield Predictor (CYP): KSU Mobile Irrigation Lab. Available at: [www.oznet.ksu.edu/mil](http://www.oznet.ksu.edu/mil) Accessed 25 Nov. 2005.

Currie, R.S., N.L. Klocke, H.N., Davis, and L.L. Buschman. 2009. Multiple season reductions in herbicide, downy brome (*Bromus tectorum*), and irrigation in corn. 2009. *Weed Tech*. 23:(371-378).

Klocke, N.L., R.S. Currie, R.M. Aiken. 2009. Soil water evaporation and crop residues. *Trans. of the ASABE*. 52(1):103-110.

Stone, L.R, F.R. Lamm, A.J. Schlegel, N.L. Klocke. 2008. Storage efficiency of off-season irrigation. *Agron J*. 100(4):1185-1192

Klocke, N.L., R.S. Currie, and R.M. Aiken. 2008. Soil water evaporation and crop residues. *Trans. ASABE*. 52(1):103-110.

Currie, R. S. and N. L. Klocke. 2008. Impact of irrigation and hail on Palmer Amaranth (*Amaranthus palmeri*) in Corn (*Zea mays*). *Weed Technol*. 22(3): 448-552.

Klocke, N.L., J.O. Payero, and J.P. Schneekloth. 2007. Long-term response of corn to limited irrigation. *Trans. of the ASABE*. 50(6):2117-2124

Stone, L.R., A.J. Schlegel, A.H. Kahn, N.L. Klocke, and R.M. Aiken. 2006. Water supply: yield relationships developed for study of water management. *Journal of Natural Resources and Life Sciences Education*. 35:161-173.

Klocke, N.L., L. R. Stone, G. A. Clark, T. J. Dumler, S. Briggeman. 2006. Water allocation model for limited irrigation. *J. of App. Eng. In Agric.* 22:3:381-389.

Schneekloth, J.P., N.L. Klocke, D.R. Davison, J.O. Payero. 2006. Furrow irrigation management with limited water. *J. of App. Eng. Vol.* 22:3:391-398.

Payero, Jose O., N.L. Klocke, J.P. Schneekloth. 2006. Comparison of irrigation strategies for surface-irrigated corn in west central Nebraska. *Irr. Sci.* 24:4:257-265. (Kansas State Experiment Station Contribution No. 05-241-J)

Currie, R. and N.L. Klocke. 2005. Impact of a Terminated Wheat Cover Crop in Irrigated Corn on Atrazine Rates and Water Use Efficiency. *Weed Sci.* 53:709-716

Klocke, N.L., J.P. Schneekloth, S.R. Melvin, R.T. Clark, J.O. Payero. 2004. Field scale limited irrigation scenarios for water policy strategies. *J. of App. Eng. in Agric.* 20(5):623-631.

Klocke, N.L., L.R. Stone, T.J. Dumler, G.A. Clark, S. Briggeman. 2004. Crop Water Allocator (CWA): KSU Mobile Irrigation Lab. Available at: [www.oznet.ksu.edu/mil](http://www.oznet.ksu.edu/mil) Accessed 25 April 2005.

Todd, R.W., S.R. Evett, T.A. Howell, and N.L. Klocke. 2000. Soil temperature and water evaporation of small steel and plastic lysimeters replaced daily. *Soil Sci.* 165:11:890-895.

Klocke, N.L., D.W. Watts, J.P. Schneekloth, D.R. Davison, R.W. Todd, A.M. Parkhurst. 1999. Nitrate leaching in irrigated corn and soybean in a semi-arid climate. *TRANS of the ASAE.* 42:6:1621-1630.

Klocke, N.L., R.W. Todd, and J.P. Schneekloth. 1996. Soil water evaporation in irrigated corn. *App. Eng. In Agric.* 12:3:301-306.

Klocke, N.L., J.P. Schneekloth, and D.G. Watts. 1996. Leaching potential from crop rotations and water management. *J. Soil & Water Cons.* 51:1:84-90.

Schneekloth, J.P., R.T. Clark, S.A. Coady, N.L. Klocke, and G.W. Hergert. 1995. Influence of wheat-feed grain programs on riskiness of crop rotations under alternate irrigation levels. *J. Prod. Agric.* 8:3:321-322 & 415-423.

Coady, S.A., R.T. Clark, J.P. Schneekloth, N.L. Klocke, and G.W. Hergert. 1995. Single and multi-year irrigation allotments under government commodity programs. Selected paper to 1993 Annual Meeting American Agricultural Economics Association Meetings. August 1-4, Orlando, Fl. Published in *Am. J. Agricultural Econ.* 75:5:1295.

Hergert, G.W., N.L. Klocke, J.L. Peterson, P.T. Nordquist, R.T. Clark, and G.A. Wicks. 1993. Cropping systems for stretching limited water supplies in the central Great Plains. *J. Prod. Agric.* 6:4:520-529.

Klocke, N.L., R.W. Todd, G.W. Hergert, D.G. Watts, A.M. Parkhurst. 1993. Design, installation, and performance of percolation lysimeters for water quality sampling. *Tans. of the ASAE.* 36:2:429-435.

Cahoon, J.E., W.L. Kranz, N.L. Klocke. 1993. Irrigators response to system type, in-season precipitation and geography. *Agric. Water Mgt.* 23:41-49.

Schneekloth, J.P., N.L. Klocke, G.W. Hergert, D.L. Martin, R.T. Clark. 1991. Crop rotations with full and limited irrigation and dryland management. *Trans. of the ASAE.* 34:6:2372-2380.

Todd, R.W., N.L. Klocke, G.W. Hergert and A.M. Parkhurst. 1991. Evaporation from soil influenced by crop shading, crop residue and wetting regime. *Trans. of the ASAE.* 34:2:461-466.

Ferguson, R.B., C.A. Shapiro, G.W. Hergert, W.L. Kranz, N.L. Klocke, and D.H. Krull. 1991. Nitrogen and irrigation management practices to minimize nitrate leaching from irrigated corn. *J. Prod. Agric.* 4:186-192.

Klocke, N.L., D.L. Martin, R.W. Todd, D.L. DeHaan, A.D. Polymenopoulos. 1990. Evaporation measurements and predictions from soils under crop canopies. *Trans. of the ASAE.* 33:5:1590-96.

Specht, J.E., R.W. Elmore, D.E. Eisenhauer and N.L. Klocke. 1989. Growth stage scheduling criteria for sprinkler irrigated soybeans. *Irr. Sci.* 10:99-111.

Klocke, N.L., J.T. Nichols, P.H. Grabouski, R. Todd. 1989. Intercropping corn in perennial cool-season grass on irrigated sandy soil. *J. Prod. Agric.* 2:1:42-46.

Klocke, N.L., D.E. Eisenhauer, J.E. Specht, R.W. Elmore, and G.W. Hergert. 1989. Irrigation soybeans by growth stages in Nebraska. *App. Eng. in Agric.* 5:3:361-366.

Todd, R., N.L. Klocke, E.C. Dickey, and D. Bauer. 1988. Surface cover from corn residue on sandy soils. *App. Eng. in Agric.* 4:3:234-236.

Klocke, N.L., D.F. Heermann, and H.R. Duke. 1985. Measurement of evaporation and transpiration with lysimeters. *Trans. of the ASAE.* 28:1:183-189 & 192.

*Symposium or Workshop Proceedings (2002-2010)*

Blanco-Canqui, H. and N.L. Klocke, A.J. Schlegel, and L.R. Stone. 2010. Deficit irrigation and carbon concentration in no-till soils, *Agronomy Experiment Field Reports*, pp. 59-64, Jan 2010.

Klocke, N.L. and R.S. Currie. 2010. Potential for water conservation when using stripper combine heads to harvest dryland in irrigated wheat in a no-till management system. *Agricultural Experiment Station and Cooperative Extension Service Report of Progress.* 1034:25-28.

Klocke, N.L., J. Holman, and R.S. Currie. 2010. Alfalfa production with limited irrigation. . *Agricultural Experiment Station and Cooperative Extension Service Report of Progress.* 1034:29-32.

Klocke, N.L. and R.S. Currie. 2010. Soil water gain and use in deficit-irrigated corn. . *Agricultural Experiment Station and Cooperative Extension Service Report of Progress.* 1034:33-34.

Klocke, N.L., R.S. Currie. 2009. Corn and grain sorghum production with limited irrigation. *Agricultural Experiment Station and Cooperative Extension Service Report of Progress.* 1014:34-38.

Klocke, N.L., L.R. Stone, T.J. Dumler and S. Briggeman. 2009. Crop selections and water allocations for limited irrigation. In Central Plains Irrigation Conference & Exposition Proceedings. Colby, KS. Feb. 24-25, 2009. p. 61-65.

Klocke, N.L., R.S. Currie, and T.J. Dumler. 2009. Water savings from crop residue management. In Central Plains Irrigation Conference & Exposition Proceedings. Colby, KS. Feb. 24-25, 2009. p. 66-73.

Klocke, N.L., R.S. Currie, A. Schlegel, and M. Brouk. 2008. Grain and forage production with limited irrigation cropping systems. Agricultural Experiment Station and Cooperative Extension Service Report of Progress. 997:26-29.

Currie, R.S. and N.L. Klocke. 2008. Effects of hail injury of Palmer Amaranth and irrigated corn at different corn population and levels of irrigation. Agricultural Experiment Station and Cooperative Extension Service Report of Progress. 997:37-39.

Klocke, N.L., R.S. Currie, L.R. Stone. 2008. Deficit irrigation of corn in a no-till environment. In Proceedings. World Environmental & Water Resources Congress. Honolulu, HI, May, 2008.

Klocke, N.L., J.O. Payero, and J.P. Schneekloth. 2008. Response of corn to deficit irrigation and crop rotations. In Central Plains Irrigation Conference & Exposition Proceedings. Feb. 19-20, 2008. Greeley, CO. p. 20-27.

Klocke, N.L., R.S. Currie, and T.J. Dumler. 2008. Water savings from crop residue management. In Central Plains Irrigation Conference & Exposition Proceedings. Feb. 19-20, 2008. Greeley, CO. p. 71-79.

Klocke, N.L., R.S. Currie, and T.J. Dumler. 2008. Water savings from crop residue management. In Cover Your Acres Winter Conference Proceedings. Jan. 22-23, 2008. Oberlin, KS. p. 50-54.

Currie, R.S., N.L. Klocke and J.M. Lee. 2007. The impact of Multiple-Season Reductions in Herbicide and Irrigation Inputs on Corn Yield and Water use Efficiency. Agricultural Experiment Station and Cooperative Extension Service Report of Progress. 980:51-43

Holman, J., N. Klocke, A. Schlegel, D. Tomsicek, G. Miller, and S. Maxwell. 2007. Annual forage crop production in rotation with winter wheat. Agricultural Experiment Station and Cooperative Extension Service Report of Progress. 980:23-25.

Klocke, N.L., R.S. Currie, M. Brouk, and L.R. Stone. 2007. Cropping systems for limited irrigation. In Report of Progress 980. Kansas State University, AES and CES, Aug. 30, 2007, Garden City, KS. p. 32-33.

Klocke, N.L., R. Aiken, L.R. Stone, and R.S. Currie. 2007. Soil water evaporation as influenced by crop residue management. In Report of Progress 980. Kansas State University, AES and CES, Aug. 30, 2007, Garden City, KS. p. 34-35.

Klocke, N.L., T.J. Dumler, L.R. Stone, and J. Peterson. 2007. Trends in income from limited irrigation using the crop water Allocator. In Report of Progress 980. Kansas State University, AES and CES, Aug. 30, 2007, Garden City, KS. p. 36-37.

Klocke, N.L., R.S. Currie, and Troy J. Dumler. 2007. Water savings from crop residue management. In Central Plains Irrigation Conference & Exposition Proceedings. Feb. 27-28, 2006. Kearney, NE. p. 20-27.

Currie, R.S., N.L. Klocke. 2006. Is downy brome (*Bromus Tectorum L.*) a noxious weed or valued cover crop in irrigated corn? In Report of Progress 961. Kansas State University, AES and CES, Aug. 31, 2006, Garden City, KS. p. 39-40.

Klocke, N.L., R. Aiken, R.S. Currie and L.R. Stone. 2006. Soil water evaporation as influenced by crop-residue management in sprinkler irrigation. In Report of Progress 961. Kansas State University, AES and CES, Aug. 31, 2006, Garden City, KS. p. 25-28.

Klocke, N.L., L.R. Stone, T.J. Dumler and G. Clark. 2006. Optimization of water among crops for limited irrigation. In Report of Progress 961. Kansas State University, AES and CES, Aug. 31, 2006, Garden City, KS. p. 29-31.

Klocke, N.L. and R.S. Currie. 2006. Limited irrigation cropping systems. In Report of Progress 961. Kansas State University, AES and CES, Aug. 31, 2006, Garden City, KS. p. 32-33.

Klocke N.L., R.S. Currie, and T.J. Dumler. 2006. Effect of crop residue on sprinkler irrigation management. In Central Plains Irrigation Conference & Exposition Proceedings. Feb. 21-22, 2006. Colby, KS. p. 115-121.

Klocke N.L., L.R. Stone, T.J. Dumler, G.A Clark, and S. Briggeman. 2006. Crop selections and water allocations for limited irrigation. In Central Plains Irrigation Conference & Exposition Proceedings. Feb. 21-22, 2006. Colby, KS. p. 157-161.

Klocke, N.L., R. Aiken, and L.R. Stone. 2005. Soil water evaporation as influenced by crop residue management and plant transpiration in sprinkler irrigation systems. In Report of Progress 945. Kansas State University, AES and CES, Aug. 25, 2005, Garden City, KS.

Klocke, N.L., G.A. Clark, L.R. Stone, T.J. Dumler, and S. Briggeman. 2005. Water allocation among crops for limited irrigation decisions. In Report of Progress 945. Kansas State University, AES and CES, Aug. 25, 2005, Garden City, KS.

Klocke, N.L., R.S. Currie, and M. Brouk. 2005 Cropping systems for limited irrigation management. In Report of Progress 945. Kansas State University, AES and CES, Aug. 25, 2005, Garden City, KS.

Klocke N. L. 2005. Crop residue and soil water evaporation. In Central Plains Irrigation Conference & Exposition Proceedings. Feb. 16-17, 2005. Sterling, CO. pp 22-28.

Melvin, S., J. Payero, N. Klocke, and J. Schneekloth. 2004. Irrigation management strategies for corn to conserve water. In Central Plains Irrigation Conference & Exposition Proceedings. Feb. 16-17, 2005. Kearney, NE. pp 76-83.

Klocke, N.L., G. A. Clark, S. Briggeman, L.R. Stone, and T.J. Dumler. 2004. Crop water allocator for limited irrigation. In Proc. High Plains Groundwater Conference. Lubbock, TX. Dec. 7-9, 2004. 196-206.

Klocke, N.L. and T.J. Dumler. 2004. Water savings from crop residues in irrigated soybeans. In Report of Progress 927. Kansas State University, AES and CES, Aug. 26, 2004, Garden City,

KS. pp. 37-40.

Klocke N. L. 2004. Water savings from crop residue in irrigated corn. In Central Plains Irrigation Short Course & Exposition Proceedings. Feb. 17-18, 2004. Kearney, NE. pp133-141. (Kansas Experiment Station Contribution No. 04-360-A).

Melvin, S., J. Payero, N. Klocke, and J. Schneekloth. 2004. Irrigation management strategies for corn to conserve water. In Central Plains Irrigation Short Course & Exposition Proceedings. Feb. 17-18, 2004. Kearney, NE. pp 37-44.

Klocke N. L. 2003. Water savings from crop residue in irrigated corn. In Central Plains Irrigation Short Course & Exposition Proceedings. Feb. 4-5, 2003. Colby, KS. pp 134-137.

Klocke, N.L. Soybean and grain sorghum irrigation—Summer 2002. 2003. In Report of Progress 910. Kansas State University, AES and CES, Aug. 28, 2003, Garden City, KS. pp. 11-15.

#### Published Abstracts and Technical Papers (2003-2010)

Klocke, N.L., L.R. Stone, A. Schlegel, T. Dumler. 2010. Crop yield and economic impacts of non-growing season precipitation capture and management with crop residues. Annual Report for Ogallala Aquifer Project.

Klocke, N.L., L.R. Stone, and R.S. Currie. 2010. Testing the Kansas Water Budget for No-till Crop Management. Final Report for Ogallala Aquifer Project.

Klocke, N.L., D. Rogers, T. Dumler, L.R. Stone, N. Kenny, and D. Portor. 2010. Training, user feedback, testing, economic impact, and revisions of the Crop Water Allocator and Crop Yield Predictor models. Annual Report for Ogallala Aquifer Project.

Stone, L.R. and N.L. Klocke. 2010. Expansion of Kansas Water Budget Model to include coarse-textured soils. Final Report for Ogallala Aquifer Project.

Klocke, N.L., L.R. Stone, A. Schlegel, and T. Dumler. 2010. Crop yield and economic impacts of non-growing season precipitation capture and management with crop residues. Annual Report for Ogallala Aquifer Project.

Kenny, N., D. Porter, N.L. Klocke, L.R. Stone, and P. Colaizzi. 2010. Adaptation of Crop Water Allocator and Crop Yield Predictor modeling tools to the Texas High Plains. Annual Report for Ogallala Aquifer Project.

Klocke, N.L. and L.R. Stone. 2010. Deficit irrigation management decision tools. In Proceedings of the ASABE 5<sup>th</sup> National Decennial Irrigation Conference. Phoenix, AZ. Dec. 5-8, 2010.

Aiken, R. and N.L. Klocke. 2010. Operational characteristics of sap flow heat gauges to quantify transpiration flux in corn. In Proceedings of the ASABE 5<sup>th</sup> National Decennial Irrigation Conference. Phoenix, AZ. Dec. 5-8, 2010.

Porter, D., D. Rogers, T. Marek, F. Lamm, T. Howell, N.L. Klocke, and M. Alam. 2010. Technology transfer: promoting best management practices. . In Proceedings of the ASABE 5<sup>th</sup> National Decennial Irrigation Conference. Phoenix, AZ. Dec. 5-8, 2010.

Klocke, N.L., L.R Stone, D.A. Bolton. 2009. Irrigation Scheduling for Deficit Irrigation. In

Proceedings: EWRI-ASCE Conference. Kansas City, MO. May 19-21.

Blanco, H., N.L. Klocke, A.J. Schlegel, L.R. Stone. 2009. Changes in soil carbon concentration and structural properties with deficit irrigation. E-Update. K-State Extension Agronomy. Number 223. December 18, 2009

Klocke, N.L., L.R. Stone, S. Briggeman. 2009. Crop yield predictor for deficit irrigation scheduling. In Proceedings 2009 Innovations in Irrigation Conference. San Antonio, TX. Dec. 2-4, 2009.

Blanco, H., N.L. Klocke, A.J. Schlegel, and L.R. Stone. 2009. Carbon sequestration in no-till soils managed under different levels of sprinkler irrigation in the Central Great Plains. *In* 2009 Agronomy Abstracts. ASA-SSSA-CSA, Annual Meetings, Pittsburgh, PA.

Klocke, N.L. 2009. Value of crop residues for evaporation suppression and deficit irrigation. In Proceedings 21<sup>st</sup> High Plains No-till Conference. Greeley, CO. Feb. 3-4. p. 27.

Klocke, N.L. and R.S. Currie. 2009. Corn and grain sorghum production with limited irrigation. In Proceedings Sustainability Management Conference. Denver, CO. Feb. 11-13, 2009.

Klocke, N.L. L.R. Stone, T.J. Dumler and S. Briggeman. 2009. Crop selections and water allocations for limited irrigation. In Proceedings Sustainability Management Conference. Denver, CO. Feb. 11-13, 2009.

Stone, L.R., F. Lamm, A. Schlegel, N.L. Klocke. Storage efficiency of off-season irrigation. 2008. Water and the Future of Kansas Conference. Topeka, KS, March 25, 2008.

Aiken, R. and N.L. Klocke. 2008. Transpiration quantified by sap flow heat gauges and the Penman-Monteith equation. Proc. ASA. Houston, TX

Currie, R.S., and N.L. Klocke. 2007. The Impact of Multiple Season Reductions in herbicide and Irrigation Inputs on Corn Yield. Proc. WSWS. 60:71.

Currie, R. S. and N.L. Klocke. 2007. Impact of Corn Population, Irrigation, and hail injury on Palmer Amaranth. Proc. NCWSS. 62:156

Klocke, N.L., L.R. Stone, T.J. Dumler, and S. Briggeman. 2007. Risk income return from limited irrigation using the Crop Water Allocator. In Proc. 28<sup>th</sup> Annual Irrigation Association Technical Conference. San Diego, CA, Dec. 12, 2007.

Klocke, N.L., L.R. Stone, T.J. Dumler, and G.A. Clark. 2007. Optimizing irrigation water use with limited irrigation. Abstracts of: Water and the future of Kansas Conference. Topeka, KS, March 15, 2007. 1 p.

Klocke, N.L., J.O. Payero, and J.P. Schneekloth. 2007. Long-term response of corn to limited irrigation and crop rotations. ASAE Paper No. 072282. June 17-20, 2007. Minneapolis, MN. 14 pp.

Klocke, N.L. 2006. Water conservation from crop residue management in sprinkler irrigation. Abstracts of No-till on the Plains winter conference. Salina, KS. Jan. 30-31, 2006. p. 91-94.

Klocke, N.L. 2006. Water conservation from crop residues in sprinkler irrigation. Abstracts of F.A.C.T. conference. Liberal, KS. Jan. 10-11, 2006. 4 pp.

Klocke, N.L., L.R. Stone, and T.J. Dumler. 2006. Optimizing water use for irrigation under limited supplies. Abstracts of: Water and the future of Kansas Conference. Topeka, KS, March 16, 2006. 1 p.

Currie, R.S., N.L. Klocke, P. Sloderbeck, H. Davis and L. Buschman. 2006. Is downy brome (*Bromus Tectorum L.*) a noxious weed or valued cover crop in irrigated corn? Proc. West. Soc. Weed Sci. 59:80.

Klocke, N.L., R.S. Currie, T.J. Dumler. 2006. Soil water evaporation and residue management in sprinkler irrigation. Proc. 27<sup>th</sup> Annual Irrigation Association Tech. Conf. Nov. 5-7, 2006. San Antonio, TX. 9 pp.

Klocke, N.L., L.R. Stone, G.A. Clark, T.J. Dumler, S. Briggeman. 2005. Optimizing water allocations and crop selections for limited irrigation. 26<sup>th</sup> Annual Irrigation Association Tech. Conf. Nov. 6-8, 2005. Phoenix, AZ. 4 pp.

Klocke, N.L., L.R. Stone, G.A. Clark, T.J. Dumler, S. Briggeman. 2005. Crop water allocator for limited ground water. ASAE Paper No. 052187. July 17-20, 2005. Tampa, FL. 11 pp.

Currie, R.S., N.L. Klocke, and C.R. Thompson. 2005. Impact of glyphosate application time on stored soil moisture. Western Weed Control Conf. Vancouver, B.C., Canada. March, 2005.

Currie, R.S., N.L. Klocke, and C.R. Thompson. 2004. Impact of Glyphosphate control of volunteer wheat on stored soil water. NCWSS Annual Meeting. Columbus, OH. Dec. 13-16, 2004.

Klocke, N.L., J.P. Schneekloth, S.R. Melvin, R.T. Clark, J.O. Payero. 2004. Field scale comparison of limited irrigation strategies. ASAE Paper No. 042280. Aug. 2004, Ottawa, Ontario, Canada. 13 pp.

Schneekloth, J.P., N.L. Klocke, D.R. Davison, J.O. Payero. 2004. Furrow irrigation management with limited water. ASAE Paper No. 042403. Aug. 2004, Ottawa, Ontario, Canada. 10 pp.

Willson, T.C., N.L. Klocke, A.J. Schlegel, and M. Alam 2004. Water quality issues associated with irrigated alfalfa production in southwest Kansas. Abstracts of: 21<sup>st</sup> Annual Water and the Future of Kansas Conference. March 11, 2004. Lawrence, KS.

Klocke, N.L., G.A. Clark, S. Briggeman, T.J. Dumler, and L.R. Stone. 2004. Crop water allocation program. Abstracts of: 21<sup>st</sup> Annual Water and the Future of Kansas Conference. March 11, 2004. Lawrence, KS.

Klocke, N.L., C. Hunter, Jr., M. Alam, 2003. Application of a linear move sprinkler system for limited irrigation research. 2003. ASAE Paper NO. 032012. July, 2003, Las Vegas, NV, 13 pp.

Willson, T.C., N.L. Klocke, M. Alam, and A.J. Schlegel. 2003. Rapid removal of soil nitrate with irrigated and dryland alfalfa. Agronomy Abstracts: 2003 Annual Meetings, American Society of Agronomy.