

EILEEN J. KLADIVKO

Mailing Address: Department of Agronomy
Lilly Hall of Life Sciences
915 W. State St.
Purdue University
West Lafayette, IN 47907-2054

Telephone: (765) 494-6372 e-mail: kladivko@purdue.edu
FAX: (765) 496-2926

<u>Education:</u>	B.S.	Environmental Science	Purdue University	1975
	M.S.	Agronomy	Purdue University	1977
	Ph.D.	Soil Science	University of Wisconsin	1982

Professional Experience:

2003	Visiting Scientist, USDA-ARS National Soil Tilth Lab, Ames, Iowa
2003	Visiting Scientist, CSIRO Land and Water, Canberra, Australia
1995-1996	Visiting Scientist, Agricultural University of Krakow, Krakow, Poland; Warsaw Agricultural University, Warsaw, Poland; Agricultural University of Godollo, Godollo, Hungary; and Agricultural University of Poznan, Poznan, Poland.
1994-present	Professor, Agronomy Dept., Purdue University
1988-1994	Associate Professor, Agronomy Dept., Purdue University.
1988-1989	Visiting Scientist, Dept. of Soil and Environmental Sciences, Univ. of California-Riverside.
1982-1988	Assistant Professor, Agronomy Dept., Purdue University
1978-1982	Graduate Research Assistant, Soil Science Dept., University of Wisconsin-Madison.
1977-1978	Visiting Research Scientist, Institute for Soil Biochemistry, Braunschweig, Federal Republic of Germany (von Humboldt Scholar)
1977	Research Associate, Agronomy Dept., Purdue University
1975-1977	NSF Graduate Fellow, Agronomy Dept., Purdue University

Dr. Eileen J. Kladivko is Professor of Agronomy at Purdue University, where she teaches and does research in soil physics, soil biology, and soil management. Her overall research focus has been to identify soil management systems that improve environmental quality and promote agricultural sustainability. Specific research areas have included the impacts of tile drainage on crop yields and nitrate losses to surface waters; the interactions of earthworms, soil management, and soil physical properties; conservation tillage and cover crops for soil quality improvement; and preferential flow of chemicals through soils. Dr. Kladivko currently serves on the State Technical Committee for the Natural Resources Conservation Service (NRCS) in Indiana. She served on the organizing committee for the September 2005 workshop on Gulf Hypoxia and Local Water Quality Concerns, held in Ames, Iowa. She is an active participant in the new North-Central Regional Committee on Drainage and Water Quality (NCR-207), having co-authored the proposal to initiate the group. She is also an active member of the Agricultural Drainage Management Systems Task Force. She has served on a number of peer-review panels for national or regional grants programs. She has served as Chair of the Soil and Water Management Division of the Soil Science Society of America and is a member of numerous professional and honorary societies. She is a Fellow of the Soil Science Society of America.

Refereed Papers:

1. Kladvko, E. J., and D. W. Nelson. 1979. Changes in soil properties from application of anaerobic sludge. *J. Water Pollution Cont. Fed.* 51:325-332.
2. Kladvko, E. J., and D. W. Nelson. 1979. Surface runoff from sludge-amended soils. *J. Water Pollution Cont. Fed.* 51:100-110.
3. Haider, K., and E. J. Kladvko. 1980. Transformation of (14C) and (35S) labeled lignosulfonates during soil incubation. *Soil Biol. Biochem.* 12:275-279.
4. Kladvko, E. J., D. R. Griffith, and J. V. Mannering. 1983. Conservation tillage studies on a Clermont silt loam soil. *Ind. Acad. Sci.* 92:441-445.
5. Mackay, A. D., and E. J. Kladvko. 1985. Earthworms and rate of breakdown of soybean and maize residues in soil. *Soil Biol. Biochem.* 17:851-857.
6. Kladvko, E. J., A. D. Mackay, and J. M. Bradford. 1986. Earthworms as a factor in the reduction of soil crusting. *Soil Sci. Soc. Amer. J.* 50:191-196.
7. Kladvko, E. J., D. R. Griffith, and J. V. Mannering. 1986. Conservation tillage effects on soil properties and yield of corn and soybeans in Indiana. *Soil Tillage Res.* 8:277-287.
8. Mackay, A. D., E. J. Kladvko, S. A. Barber, and D. R. Griffith. 1987. Phosphorus and potassium uptake by corn in conservation tillage systems. *Soil Sci. Soc. Amer. J.* 51:970-974.
9. Monroe, C. D., and E. J. Kladvko. 1987. Aggregate stability of a silt loam soil as affected by roots of corn, soybeans and wheat. *Commun. in Soil Sci. Plant Anal.* 18:1077-1087.
10. Kladvko, E. J., and D. R. Keeney. 1987. Soil nitrogen mineralization as affected by water and temperature interactions. *Biol. Fertil. Soils.* 5:248-252.
11. Heard, J. R., E. J. Kladvko, and J. V. Mannering. 1988. Soil macroporosity, hydraulic conductivity and air permeability of silty soils under long-term conservation tillage in Indiana. *Soil Tillage Res.* 11:1-18
12. Griffith, D. R., E. J. Kladvko, J. V. Mannering, T. D. West, and S. D. Parsons. 1988. Long term tillage and rotation effects on corn growth and yield on high and low organic matter poorly-drained soils. *Agron. J.* 80:599-605.
13. Larney, F. J., E. J. Kladvko, and E. J. Monke. 1988. Subsurface drain spacing effects on soil moisture regime of Clermont silt loam. *Trans. Amer. Soc. Agric. Engin.* 31:1128-1134.
14. Dickey, J. B., and E. J. Kladvko. 1989. Evaluation of sample unit sizes and shapes for quantitative sampling of earthworm (*Lumbricus rubellus*) populations. *Soil Biol. Biochem.* 21:105-111.
15. Huffman, R. L., E. J. Kladvko, and E. J. Monke. 1989. Pulsed gas bubbler for water level monitoring. *Applied Engin. in Agric.* 5:69-72.

16. Larney, F. J., E. J. Kladvko, E. J. Monke, and J. V. Mannering. 1989. Corn growth and yield behavior with distance from subsurface drains in drier-than-normal growing seasons. *Trans. Amer. Soc. Agric. Engin.* 32:579-587.
17. Larney, F. J., R. L. Huffman, R. T. Schuler, D. R. Taylor, E. J. Kladvko, and B. Lowery. 1989. A portable, self-leveling, constant-rate cone penetrometer with computer-controlled data acquisition for tillage studies. *Soil Tillage Res.* 14:231-239.
18. Larney, F. J., and E. J. Kladvko. 1989. Soil strength properties under four tillage systems at three long-term study sites in Indiana. *Soil Sci. Soc. Amer. J.* 53:1539-1545.
19. Utermann, J., E. J. Kladvko, and W. A. Jury. 1990. Evaluating pesticide migration in tile-drained soils with a transfer function model. *J. Environ. Qual.* 19:707-714.
20. Kladvko, E. J., G. E. Van Scoyoc, E. J. Monke, K. M. Oates, and W. Pask. 1991. Pesticide and nutrient movement into subsurface tile drains on a silt loam soil in Indiana. *J. Environ. Qual.* 20:264-270.
21. Sichani, S. A., B. A. Engel, E. J. Monke, J. D. Eigel, and E. J. Kladvko. 1991. Validating GLEAMS with herbicide and insecticide field data on a Clermont silt loam soil. *Trans. Amer. Soc. Agric. Engin.* 34:1732-1737.
22. Kovar, J. L., S. A. Barber, E. J. Kladvko, and D. R. Griffith. 1992. Characterization of soil temperature, water content, and maize root distribution in two tillage systems. *Soil Tillage Res.* 24:11-27.
23. Grochulska, J. and E. J. Kladvko. 1994. A two-region model of preferential flow of chemicals using a transfer function approach. *J. Environ. Qual.* 23:498-507.
24. West, T.D., D.R. Griffith, G.C. Steinhardt, E.J. Kladvko, and S.D. Parsons. 1996. Effect of tillage and rotation on agronomic performance of corn and soybeans: Twenty-year study on dark silty clay loam soil. *J. Prod. Agric.* 9:241-248.
25. Kladvko, E.J., N.M. Akhouri, and G. Weesies. 1997. Earthworm populations and species distributions under no-till and conventional tillage in Indiana and Illinois. *Soil Biol. Biochem.* 29:613-615.
26. Akhouri, N.M., E.J. Kladvko, and R.F. Turco. 1997. Sorption and degradation of atrazine in middens formed by *Lumbricus terrestris*. *Soil Biol. Biochem.* 29:663-666.
27. Willoughby, G.L., E.J. Kladvko, and M.R. Savabi. 1997. Seasonal variations in infiltration rate under no-till and conventional (disk) tillage systems as affected by *Lumbricus terrestris* activity. *Soil Biol. Biochem.* 29:481-484.
28. Kladvko, E.J., J. Grochulska, R.F. Turco, G.E. VanScoyoc, and J.D. Eigel. 1999. Pesticide and nitrate transport into subsurface tile drains of different spacings. *J. Environ. Qual.* 28:997-1004.
29. Kung, K.-J.S., T.S. Steenhuis, E.J. Kladvko, T.J. Gish, G. Bubenzer, and C.S. Helling. 2000. Impact of preferential flow on the transport of adsorbing and non-adsorbing tracers. *Soil Sci. Soc. Am. J.* 64:1290-1296.

30. Kung, K.-J.S., E.J. Kladvko, T.J. Gish, T.S. Steenhuis, G. Bubenzer, and C.S. Helling. 2000. Quantifying preferential flow by breakthrough of sequentially-applied tracers: Silt loam soil. *Soil Sci. Soc. Am. J.* 64: 1296-1304.
31. Kladvko, E.J., L.C. Brown, and J.L. Baker. 2001. Pesticide transport to subsurface tile drains in humid regions of North America. *Crit. Rev. Environ. Sci. Tech.* 31:1-62.
32. Kladvko, E.J. 2001. Tillage systems and soil ecology. *Soil Tillage Res.* 61:61-76.
33. Willoughby, G.L., and E.J. Kladvko. 2002. Water infiltration rates following reintroduction of *Lumbricus terrestris* into no-till fields. *J. Soil Water Cons.* 57:82-88.
34. Wang, X., J. Frankenberger, and E.J. Kladvko. 2003. Water sampling frequency effects on estimates of nitrate-N losses from subsurface tile drains. *Trans. ASAE* 46:1033-1040.
35. Gish, T.J., K.-J.S. Kung, D.C. Perry, J. Posner, G. Bubenzer, C.S. Helling, E.J. Kladvko, and T.S. Steenhuis. 2004. Impact of preferential flow at varying irrigation rates by quantifying mass fluxes. *J. Environ. Qual.* 33:1033-1040.
36. Haws, N.W., B. Liu, C.W. Boast, P.S.C. Rao, E.J. Kladvko, and D.P. Franzmeier. 2004. Spatial variability and measurement scale of infiltration rate on an agricultural landscape. *Soil Sci. Soc. Amer. J.* 68:1818-1826.
37. Kladvko, E.J., J.R. Frankenberger, D.B. Jaynes, D.W. Meek, B.J. Jenkinson, and N.R. Fausey. 2004. Nitrate leaching to subsurface drains as affected by drain spacing and changes in crop production system. *J. Environ. Qual.* 33:1803-1813.
38. Kung, K.-J.S., M. Hanke, C.S. Helling, E.J. Kladvko, T.J. Gish, T.S. Steenhuis, and D.B. Jaynes. 2005. Quantifying pore-size spectrum of macropore-type preferential pathways. *Soil Sci. Soc. Amer. J.* 69:1196-1208.
39. Kladvko, E.J., G.L. Willoughby, and J.B. Santini. 2005. Corn growth and yield response to subsurface drain spacing on Clermont silt loam soil. *Agron. J.* 97:1419-1428.
40. Wang, X., C.T. Mosley, J.R. Frankenberger, and E.J. Kladvko. 2006. Subsurface drain flow and crop yield predictions for different drain spacings using DRAINMOD. *Agric. Water Mgmt.* 79:113-136.
41. Wang, X., J.R. Frankenberger, and E.J. Kladvko. 2006. Uncertainties in DRAINMOD predictions of subsurface drain flow for an Indiana silt loam using the GLUE methodology. *Hydrol. Process.* 20:3069-3084.
42. Kung, K.-J.S., E.J. Kladvko, C.S. Helling, T.J. Gish, T.S. Steenhuis, and D.B. Jaynes. 2006. Quantifying the pore size spectrum of macropore-type preferential pathways under transient flow. *Vadose Zone J.* 5:978-989.
43. Gal, A., T.J. Vyn, E. Michéli, E.J. Kladvko, and W.W. McFee. 2007. Soil carbon and nitrogen accumulation with long-term no-till versus moldboard plowing overestimated with tilled-zone sampling depths. *Soil Tillage Res.* (Accepted).

Book Chapters:

1. Kladvko, E. J., and H. J. Timmenga. 1991. Earthworms and agricultural management. pp. 192-216, In J. E. Box, Jr. and L. C. Hammond (eds.). Rhizosphere Dynamics. Westview Press, Boulder, CO.
2. Kladvko, E. J. 1994. Residue effects on soil physical properties. pp. 123-141, Chap. 7 in P. W. Unger (ed.) Managing Agricultural Residues. Lewis Pub., Boca Raton, FL.
3. McCoy, E. L., Boast, C. W., Stehouwer, R. C., and Kladvko, E. J. 1994. Macropore hydraulics: Taking a sledgehammer to classical theory. pp. 303-348 in R. Lal and B. A. Stewart (eds.). Soil Processes and Water Quality. Adv. Soil Sci. Lewis Pub., Boca Raton, FL.
4. Turco, R. F., and E. J. Kladvko. 1994. Studies on pesticide mobility: Laboratory vs. field. In R.C. Honeycutt and D.J. Schabacker (eds.) Mechanisms Pesticide Movement into Ground Water. Lewis Pub., Boca Raton, FL 208 pp.
5. Flury, M., W.A. Jury, and E.J. Kladvko. 1998. Field-scale solute transport in the vadose zone: Experimental observations and interpretation. pp. 349-369, In H.M. Selim and L. Ma (eds.) Physical Non-Equilibrium in Soils: Modeling and Application. Ann Arbor Press, Chelsea, MI.
6. Kladvko, E.J. 2002. Soil structure: Basic concepts. pp. 1253-1254 in R. Lal (ed.) Encyclopedia of Soil Science. Marcel Dekker, Inc. New York. (also a Web version of book)

Extension Publications:

1. Kladvko, E.J. 1993. Earthworms and crop management. Purdue Extension Publ. AY-279. <http://www.ces.purdue.edu/extmedia/AY/AY-279.html>
2. Franzmeier, D.P., E.J. Kladvko, and B.J. Jenkinson. 2001. Wet soils of Indiana. Purdue Extension Publ. AY-301. <http://www.ecn.purdue.edu/SafeWater/Drainage/publications>
3. Kladvko, E.J. 2004. Nitrate leaching into tile drains at SEPAC. Purdue Agronomy Extension Publ. AGRY-04-01. <http://www.agry.purdue.edu/ext/pubs/AY-04-01.pdf>
4. Brouder, S., B. Hofmann, E. Kladvko, R. Turco, A. Bongen, and J. Frankenberger. 2005. Interpreting nitrate concentration in tile drainage water. Purdue Extension Publ. AY-318-W. <http://www.ces.purdue.edu/extmedia/AY/AY-318-W.pdf>
5. Frankenberger, J., E. Kladvko, G. Sands, D. Jaynes, N. Fausey, M. Helmers, R. Cooke, J. Strock, K. Nelson, and L. Brown. 2006. Drainage Water Management for the Midwest: Questions and Answers About Drainage Water Management for the Midwest. Purdue Extension Publ. WQ-44. <http://www.ces.purdue.edu/extmedia/WQ/WQ-44.pdf>