

KATHRYN L. FARRELL-POE
CURRICULUM VITA

EDUCATION

- Ph.D. - Civil Engineering, Purdue University, May 1990, Dissertation Title: Complexing of Heavy Metals with Phosphates
- M.S.- Agricultural Engineering, Purdue University, 1984, Thesis Title: Concrete Encapsulation of Pesticide Contaminated Sludge
- B.S. - Agricultural Engineering, University of Nebraska-Lincoln, 1979

EMPLOYMENT HISTORY

- Water Quality Specialist & Professor** - Agricultural & Biosystems Engineering Dept., Univ. of Arizona, Tucson, AZ. July 2005-present. Appointment: 65% Extension, 10% Research, 25% Teaching
- Associate Professor** - Agricultural & Biosystems Engineering Dept., Univ. of Arizona, Tucson, AZ. July 1998-2005. Appointment: 55% Extension, 15% Research, 30% Teaching
- Associate Professor** - Agricultural Systems Technology & Ed. Dept., Utah State Univ., Logan, UT. July 1997-July 1998. Appointment: 50% Extension, 25% Research, 25% Teaching
- Assistant Professor** - Agricultural Systems Technology & Ed. Dept., Utah State Univ., Logan, UT. March 1991-June 1997. Appointment: 50% Extension, 25% Research, 25% Teaching
- Environmental Engineering Specialist** - Civil & Environmental Engineering Dept., Utah State Univ., Logan, UT. Jan. 1989-March 1991. Appointment: 50% Extension
- Lab Technician** - The Farm Clinic, West Lafayette, IN. April 1985 - June 1986
- Engineering Specialist** - Ag. Eng. Dept., Univ. of Nebraska-Lincoln and USDA, 1980-82

RESEARCH EXPERIENCE

Refereed Publications

- Zerihun, D., C.A. Sanchez, K.L. Farrell-Poe, F.J. Adamsen, and D.J. Hunsaker. 2003. Performance indices for surface N fertigation. *J. Irrigation and Drainage Engineering*, 129(3): 173-183. May/June.
- Zerihun, D., C.A. Sanchez, and K.L. Farrell-Poe. 2001. Analysis and design of furrow irrigation systems. *J. Irrigation and Drainage Engineering*, 127(3): 161-169. May/June.
- Beard, F.R., S. E. Poe, K.L. Farrell-Poe, and H.M. Deer. 2000. Handling waste rinsate associated with commercial pesticide application equipment. *J. Agricultural Systems, Technology, and Management*. [online journal] <http://www.aste.usu.edu/JASTM/jastm.htm>. Vol. 13, November.
- Miller, B.E., K.L. Farrell-Poe, and J. Egelund. 1998. The dairy dilemma: a decision case for water quality. *J. Natural Resources and Life Sciences Education*. [On-line serial] 27:42-48.
- Farrell-Poe, K.L., A.Y. Ranjha, and S. Ramalingam. 1997. Bacterial contributions by rural municipalities in agricultural watersheds. *Transactions of the ASAE*. 40(1):97-101.
- Kitamura, Y., T. Maekawa, A. Tagawa, H. Hayashi, and K.L. Farrell-Poe. 1996. Treatment of strong organic, nitrogenous wastewater by an anaerobic contact process incorporating ultrafiltration. *Applied Engineering in Agriculture of the ASAE*. 12(6):709-714.
- Farrell-Poe, K.L., S. Ramalingam, and S.E. Poe. 1995. Municipal contributions to an agricultural problem: nonpoint source pollution. In *Proceedings of the Fourteenth Annual Western Region Agricultural Education Research Meeting*. 14(1):153-164. Phoenix, AZ, 20-21 April.
- Bullock, D.K., S.E. Poe, K.L. Farrell-Poe, and B.E. Miller. 1995. WMCE: An animal waste management cost estimation computer model. *Journal of Natural Resources and Life Sciences Education*. 24(2):161-163.
- Pace, M.G., B.E. Miller, and K.L. Farrell-Poe. 1995. Management of on-farm compost operations in a cold, arid climate. *Journal of Agricultural Mechanization*. 9(1):19-29.
- Farrell-Poe, K.L. and S.E. Poe. 1994. Nonpoint source pollution curriculum and activities for agricultural systems. In *Proceedings of the Thirteenth Annual National Agricultural Mechanics Professional Development Seminar*, sect. 9, pp 1-9. Kansas City, MO, 11 Nov.

- Poe, S.E., K.L. Farrell-Poe, and H.M. Deer. 1994. Pesticide storage facility management plan. *Journal of Agricultural Mechanization*. Vol. 8, pp 1-6. June.
- Farrell-Poe, K.L. and J.E. Etzel. 1991. Phosphate complexing of heavy metals. *American Foundrymen's Society Transactions*. 91-88, pp 133-138.
- Stetson, L.E., G.L. Stark, and K.L. Farrell-Poe. 1988. Electrical demand characteristics of Nebraska farmsteads. *Transactions of the ASAE*. 31(1):247-256.
- Stetson, L.E., K.L. Farrell, and H. Shull. 1982. A distribution line study designed to analyze electrical farmstead and irrigation demands. *Transactions of the ASAE*. 25(4):1091-1094 & 1098.

Non-Refereed Publications

- Field, Jason P., James L. Walworth, and Kathryn L. Farrell-Poe. 2003. Comparative effectiveness of trenches and seepage pits for microbial treatment of septic tank effluent in Arizona. Presented at 2003 NOWRA 12th Annual Conference and Exhibit, 3-5 November, Franklin, TN.
- Farrell-Poe, K.L. 2002. Arizona regulator survey of training needs. Presented at NOWRA's 11th Annual Conference and Exposition, September 18-21, Kansas City, MO.
- Farrell-Poe, K.L. 2002. Onsite online update. Presented at NOWRA's 11th Annual Conference and Exposition, September 18-21, Kansas City, MO.
- Farrell-Poe, K.L. and P.D. Trotta. 2002. Developing and conducting an Internet onsite wastewater design course. Presented at Southwest Onsite Management Conference, March 6-7, Laughlin, NV.
- Field, J.P., K.L. Farrell-Poe, and J.L. Walworth. 2002. Seepage pit effectiveness for treatment of septic-tank effluent in Arizona. Presented at NOWRA's 11th Annual Conference and Exposition, September 18-21, Kansas City, MO.
- Zerihun, D., C.A. Sanchez, and K.L. Farrell-Poe. 2002. Analysis and design of border irrigation system. ASAE Paper No. 022177. St. Joseph, MI: ASAE.
- Farrell-Poe, K. and P. Trotta. 2001. Onsite online – developing a web-based onsite basics course. *In* Proceedings of NOWRA 2001 10th Annual Conference and Exhibit, October 10-13, Virginia Beach, VA.
- Zerihun, D., C.A. Sanchez, and K.L. Farrell-Poe. 2000. Maximization of application efficiency of furrow irrigation: simplified analysis. ASAE Paper No. 002210. St. Joseph, MI: ASAE.
- Zerihun, D., C.A. Sanchez, and K.L. Farrell-Poe. 2000. Optimal design of furrow irrigation system using an enumeration algorithm. ASAE Paper No. 002024. St. Joseph, MI: ASAE.
- Bishop, C. and K.L. Farrell-Poe. 1999. Using the small business plan model for onsite wastewater training centers or programs: how to address long-term program and financial viability. Presented at NOWRA 8th Annual Conference, Jekyll Island, GA, November 3-6.
- Beard, F.R., S.E. Poe, K.L. Farrell-Poe, and H.M. Deer. 1997. Handling waste rinsate associated with commercial pesticide application equipment. ASAE Paper No. 97-5063. St. Joseph, MI: ASAE.
- Farrell-Poe, K.L., D. Anderson, and S. Ramalingam. 1996. Modification of a tabletop composter for automatic data acquisition. ASAE Paper No. 96-4077. St. Joseph, MI: ASAE.
- Ramalingam, S. and K.L. Farrell-Poe. 1995. Predicting rural municipal nonpoint source pollution using GIS and AGNPS. ASAE Paper No. 95-3241. St. Joseph, MI: ASAE.
- Thayne, T.R., S.E. Poe, and K.L. Farrell-Poe. 1995. Barriers that Native Americans encounter with acquiring and storing winter livestock feed in the Navajo Nation. ASAE Paper No.95-2396. St. Joseph, MI: ASAE.
- Farrell-Poe, K.L. and S. Ramalingam. 1994. Rural municipalities and their contribution to nonpoint source pollution. ASAE Paper No. PNW 94-104. St. Joseph, MI: ASAE.
- Miller, B.E., K.L. Farrell-Poe, M.G. Pace, and R.L. Miller. 1994. Management of on-farm composting in the Intermountain West. ASAE Paper No. 94-4065. St. Joseph, MI: ASAE.
- Bullock, D.K., S.E. Poe, B.E. Miller, and K.L. Farrell-Poe. 1994. Waste management strategies & compliance cost in a hydrologic unit. ASAE Paper No. 94-4052. St. Joseph, MI: ASAE.
- Miller, B.E., K.L. Farrell-Poe, and J.L. Egelund. 1993. Generations of tradition: A decision case for water

- quality. ASAE Paper No. 93-2099. St. Joseph, MI: ASAE.
- Farrell-Poe, K.L. and J.E. Etzel. 1992. Comparison of phosphate complexing of heavy metals through qualitative analysis. In *Proceedings of the 47th Annual Purdue Industrial Waste Conference*. West Lafayette, IN: Purdue Univ.
- Farrell-Poe, K. and S.E. Poe. 1992. Nonpoint source pollution education in Utah. ASAE Paper No. 92-5530. St. Joseph, MI: ASAE.
- Poe, S.E., K.L. Farrell-Poe, and H.M. Deer. 1992. Pesticide storage facility design and management plan. ASAE Paper No. 92-1089. St. Joseph, MI: ASAE.
- Farrell-Poe, K.L. and J.E. Etzel. 1991. Complexing of heavy metals with phosphates. In *Proceedings of the 46th Annual Purdue Industrial Waste Conf*, 329-337. West Lafayette, IN: Purdue Univ.
- Farrell-Poe, K.L. 1991. Nonpoint source pollution education. Utah NPS Conference. Park City, UT. September 26-27.
- Farrell-Poe, K., S. Poe, and L.K. Hawks. 1990. A Utah water quality education program - extension safe drinking water workshops. ASAE Paper No. 90-5005, St. Joseph, MI: ASAE.
- Farrell, K.L. and J.C. Nye. 1984. Concrete encapsulation of pesticide contaminated sludge. ASAE Paper No. 84-4574, St. Joseph, MI: ASAE.
- Stetson, L.E. and K.L. Farrell. 1981. Relationships of farmstead size and equipment to electrical demands. ASAE Paper No. 81-3507, St. Joseph, MI: ASAE.

Grants Awarded - (Comprehensive List; \$2.6M Total)

- | | |
|-------------|--|
| \$575,000 | USDA-Cooperative States Research, Extension, and Education Service; <i>Region 9 Water Quality Coordination</i> ; 2004; P.I. (\$141,731 to Arizona) |
| \$10,000 | Arizona Cooperative Extension; <i>Water Quality Statewide Initiative</i> ; 2003; P.I. |
| \$9,983 | Arizona Department of Environmental Quality; <i>Arizona Groundwater Protection through Onsite Wastewater Treatment Education for Practioners: Installer Workshops</i> ; 2002; P.I. |
| \$1,283,000 | USDA-Cooperative States Research, Extension, and Education Service; <i>Region IX Water Quality Coordination</i> ; 2002; P.I. (\$445,900 to Arizona) |
| \$5,000 | Arizona Cooperative Extension; <i>Water Quality Education Resources and Training</i> ; 2002; P.I. |
| \$72,870 | National Decentralized Water Resources Capacity Development Project; <i>Student Design Competition for Decentralized Wastewater Treatment</i> ; 2001; P.I. |
| \$6,150 | Arizona Cooperative Extension; <i>Water Quality Education Models and Training</i> ; 2001; P.I. |
| \$29,943 | EPA Region 9; <i>EPA Region IX Arizona Groundwater Protection Through Onsite Wastewater Treatment Education for Regulators</i> ; 2001; co-P.I. |
| \$5,000 | Arizona Cooperative Extension; <i>Water Quality Education Resource Acquisition and Training</i> ; 2000; P.I. |
| \$82,558 | Arizona Department of Environmental Quality; <i>Comparison of Drainfields and Seepage Pits for Treatment of Septic Tank Effluent in Arizona</i> ; 2000; co-P.I. |
| \$20,000 | Arizona Iceberg Lettuce Research Council; <i>Comparison of Mircrobial Concentration of Organic and Conventionally Grown Iceberg Lettuce</i> ; 2000; co-P.I. |
| \$6,900 | UA College of Engineering and Mines; <i>Onsite Decentralized Wastewater Treatment and Recycling Web-Based Curriculum Development</i> ; 2000; co-P.I. |
| \$25,000 | Bureau of Reclamation; <i>Mobile Water Conservation Kiosks and Displays</i> ; 1999; Co-P.I. |
| \$54,100 | USDA-CSREES; <i>Expanded Water Quality Ed. for Under-Served AZ Communities</i> ; 1999; P.I. |
-

- \$64,838 USDA-CSREES, Water Quality Initiative Grant, FY 98; *Water Quality Education for Under-Served Arizona Communities*; P.I.
- \$45,715 Western Regional Sustainable Agriculture Research and Education; Professional Development Grant program, FY 97; Composting Education and Information for Western Agriculture; 1997; Co-P.I. (total grant \$167,950).
- \$29,900 Utah Dept. of Ag.; EPA 319 grant program, FY 96; USU Extension Statewide NPS Education Program; 1997; P.I.
- \$15,000 Utah Dept. of Ag.; Computer Software Development FY-95; 1996; Co.-P.I.
- \$840 Cytozyme Laboratories, Inc.; Feasibility of Using an Enzymatic Compound to Enhance Degradation of Organic Matter in an Anaerobic Lagoon; 1996; Co.-P.I.
- \$13,900 Utah Dept. of Ag., EPA 319 grant program, FY 94; USU Extension Statewide NPS Education Program; 1995; P.I.
- \$11,500 USU Ag. Exp. Station; Composting of Livestock Carcasses; 1995; P.I.
- \$28,400 Utah Dept. of Ag., EPA 319 grant program, FY 95; USU Extension Statewide NPS Education Program; 1995; P.I.
- \$12,750 USU Ag. Exp. Station; Developing a Methodology for Determining the Kinetic Coefficients of Composting Agricultural Wastes; 1994; P.I.
- \$9,432 E.A. Miller, Inc.; Determining the Characteristics of the Organic Residue Waste Streams for the Purpose of Composting; 1994; P.I.
- \$11,500 Utah Dept. of Ag., EPA 319 grant program, FY 93; Activities for Statewide Information & Education Nonpoint Source Pollution Program; 1994; P.I.
- \$20,500 Utah Dept. of Ag., EPA 319 grant program, FY 93; Animal Waste Management Educational Program; 1994; Co.-P.I.
- \$12,000 Utah Dept. of Ag.; Feasibility of on-farm composting of dairy waste; 1993; Co.-P.I.
- \$19,000 Utah Dept. of Ag., EPA 319 grant program, FY 92; Animal waste management systems analysis; 1993; Co.-P.I.
- \$3,000 USDA-ES Water Quality Initiative Grants; Dissemination of surface water models and tabletop booth displays development; 1993; P.I.
- \$14,700 USU Ag. Exp. Station; Rural municipalities and their contribution to agricultural nonpoint source pollution; 1992; P.I.
- \$6,000 USU Office of the Provost, Academic Program Enhancement Program; Development of decision cases for undergraduate course improvement in agriculture and natural resources; 1992; Co.-P.I.
- \$15,000 USU New Faculty Research grant program; Rural municipalities and their contribution to NPS pollution; 1992; P.I.
- \$8,000 USDA-ES Water Quality Initiative Grants; Production of NPS activities video for water quality education; 1992; P.I.
- \$9,000 USDA-ES Water Quality Initiative Grants; Development and training of computer assisted instruction for water quality education; 1992; Co.-P.I.
- \$3,000 USU Farm Safety Committee; Toxics in the home and farmstead; 1991; Co.-P.I.
- \$40,000 Utah Dept. of Ag., EPA 319 grant program, FY 91; Nonpoint source pollution education; 1991; P.I.
- \$17,000 Utah Dept. of Ag.; Nonpoint source pollution ed. for youth and adults; 1990; P.I.
- \$7,000 USDA-ES; Safe drinking water education for youth and adults; 1989; P.I.

\$2,603,479 Total
 \$2,250,342 Arizona (Academic year 1998 - present)

EXTENSION EXPERIENCE

Areas of Expertise

Composting: On-Farm, Backyard, Municipal
 Groundwater
 Hazardous Chemicals in the Home - Use, Storage, Disposal
 Nonpoint Source Pollution
 Onsite Wastewater/Septic Systems
 Recycling, Precycling
 Safe Drinking Water

Program Descriptions

Onsite Wastewater Education - Developed in 1998, this reaches owners of onsite wastewater treatment and dispersal systems, county and state regulators, and the onsite wastewater industry in Arizona. The program has two objectives: 1) To raise septic system owners' awareness of onsite operation and maintenance and 2) To train the Arizona onsite wastewater treatment community. In addition in 2002, a training facility, the Onsite Wastewater Training Facility, was established at the Maricopa Agricultural Center. To date, over 300 regulators and practitioners in Arizona in the surrounding states have received training on installing and inspecting systems, conducting soil and site evaluation, and performing maintenance.

Fact Sheets

Farrell-Poe, K. 2001. Antibacterial products in septic systems. UA Extension fact sheet, AZ 1258. Tucson, AZ: UA.

Farrell-Poe, K. and R. Radden. 2001. RV holding-tank treatments & deodorizers in septic systems. UA Extension fact sheet, AZ 1233. Tucson, AZ: UA.

Farrell-Poe, K. 2000. Operation and maintenance tips for your septic system. UA Extension fact sheet, AZ 1175. Tucson, AZ: UA.

Farrell-Poe, K. and E. Hassinger. 2000. Managing your household septic system. UA Extension fact sheet, AZ 1161. Tucson, AZ: UA.

Farrell-Poe, K. and E. Hassinger. 2000. Inspecting your household septic system. UA Extension fact sheet, AZ 1159. Tucson, AZ: UA.

Hassinger, E. and K. Farrell-Poe. 2000. Maintaining your septic tank. UA Extension fact sheet, AZ 1160. Tucson, AZ: UA.

Hassinger, E. and K. Farrell-Poe. 2000. Understanding your household septic system. UA Extension fact sheet, AZ 1158. Tucson, AZ: UA.

Bagley, C.V., J.H. Kirk, and K.L. Farrell-Poe. 1999. Cow mortality disposal. USU Extension fact sheet, AG-507. Logan, UT: USU.

Poe, S.E., H. Deer, and K.L. Farrell-Poe. 1999. Pesticide storage facility design and management plan. USU Extension fact sheet (revised), AG/Pesticides/04. Logan, UT: USU.

Farrell-Poe, K. and R. Koenig. 1997. Backyard composting in Utah. USU Extension fact sheet, HG-Compost-01. Logan, UT: USU.

Farrell-Poe, K., J. Barnhill, R. Koenig, and B. Miller. 1997. Using compost in Utah gardens. USU Extension fact sheet, HG-Compost-02. Logan, UT: USU.

Farrell-Poe, K., R. Koenig, B. Miller, and J. Barnhill. 1997. Using compost in Utah turf applications. USU Extension fact sheet, HG-Compost-03. Logan, UT: USU.

Koenig, R., K. Farrell-Poe, and B. Miller. 1997. Using mulches in Utah landscapes and gardens. USU Extension fact sheet, HG-Compost-04. Logan, UT: USU.

- Farrell-Poe, K. 1995. Household hazardous waste. USU Extension fact sheet, NR-WM 01. Logan, UT: USU.
- Farrell-Poe, K. 1995. Nonpoint source pollution. USU Extension fact sheet, AG/WQ-01. Logan, UT: USU.
- Bagley, C.V., J. Kotuby-Amacher, and K. Farrell-Poe. 1995. Analysis of water quality for livestock. Cattle Producer's Library, CL609. Cooperative Extension System.
- Pace, M.G., B.E. Miller, and K.L. Farrell-Poe. 1995. The composting process. USU Extension fact sheet, AG-WM 01. Logan, UT: USU.
- Poe, S.E., R.L. Boman, K.L. Farrell-Poe, and B.E. Miller. 1994. Livestock manure management - definitions and regulations. USU Extension fact sheet. Logan, UT: USU.
- Poe, S.E., K.L. Farrell-Poe, R.L. Boman, and B.E. Miller. 1994. Livestock manure management - best management practices. USU Extension fact sheet. Logan, UT: USU.
- James, D.W., S.E. Poe, and K.L. Farrell-Poe. 1994. Livestock manure management - sewage lagoon treatment of animal wastes. USU Extension fact sheet. Logan, UT: USU.
- Bagley, C.V., J. Kotuby-Amacher, and K. Farrell-Poe. 1993. Analysis of water quality for livestock. USU Extension fact sheet AG 280. Logan, UT: USU.
- Poe, S.E., R. Boman, K.L. Farrell-Poe, and B.E. Miller. 1993. Laws and regulations of livestock waste management. USU Extension fact sheet. Logan, UT: USU.
- Poe, S.E., R. Boman, K.L. Farrell-Poe, and B.E. Miller. 1993. Best management practices of livestock waste management. USU Extension fact sheet. Logan, UT: USU.
- Rupp, L.A., S.E. Poe, and K.L. Farrell-Poe. 1993. The effect of salt on landscapes and structures. USU Extension fact sheet. Logan, UT: USU.

Newspaper & Magazine Articles

- Farrell-Poe, K.L. 2003. Arizona regulator survey of training needs. *Onsite Journal*, 12(3): 25-27. June-July. NOWRA: Edgewater, MD.
- Farrell-Poe, K.L., B.E. Miller, and S.E. Poe. 1995. When land is tight, composting makes good sense. *In Touch* a special insert of *Farm Bureau News*, 47(10). July.
- James, D.W., S.E. Poe, and K.L. Farrell-Poe. 1995. Lagoons offer important alternative to direct manure disposal. *In Touch* special insert of *Farm Bureau News*, 47(10). July.
- Koenig, R., S.E. Poe, and K.L. Farrell-Poe. 1995. Turning manure into money. *In Touch* a special insert of *Farm Bureau News*, 47(10). July.
- Bagley, C., J. Kotuby-Amacher, and K. Farrell-Poe. 1994. Analyzing stock water quality. *Western Beef*. October 2. pp 18-19.
- Farrell-Poe, K.L. 1994. Did you hear the one about the traveling water salesman. *In Touch* a special insert of *Farm Bureau News*, Issue 7, pp 7-8. May.
- Farrell-Poe, K.L. 1994. Should you have your water tested. *In Touch* a special insert of *Farm Bureau News*, Issue 7, p 8. May.
- Farrell-Poe, K.L. 1994. Guidelines for doing your own water testing. *In Touch* a special insert of *Farm Bureau News*, Issue 7, p 9. May.
- Miller, B.E. and K.L. Farrell-Poe. 1994. Composting gaining in popularity. *Utah Watershed Review*. 2(2):7. March/April.
- Farrell-Poe, K.L., S.E. Poe, and R.W. Hill. 1993. Is your water system washing away your profits? *Utah Farmer-Stockman*. April.
- Poe, S.E. and K.L. Farrell-Poe. 1993. Properly ventilating farm buildings cuts energy consumption. *Utah Farmer-Stockman*. p 24. April.
- Poe, S.E., R. Boman, K.L. Farrell-Poe, and B.E. Miller. 1993. Certain permits required for livestock waste management. *Utah Farm Bureau News*. November.
- Poe, S.E., R. Boman, K.L. Farrell-Poe, and B.E. Miller. 1993. Manure is not a waste when used properly. *Utah Farm Bureau News*. November.
- Rupp, L., S. Poe, and K. Farrell-Poe. 1993. Deicing Western landscapes. *Great Western Landscape Plus*.

November/December.

Farrell-Poe, K.L. and S.E. Poe. 1992. Take oil change one step further. *Utah Farmer Stockman*. 112(9):22A-23A, November/December.

Farrell-Poe, K. 1991. Four classes of contaminants pose greatest threat to drinking water. *Utah Farmer-Stockman*, 111(10): 2-3, October.

Farrell-Poe, K. 1991. Nonpoint education effort reaches Utah students. *Your Water*, p 7. June.

Farrell-Poe, K. 1991. Nitrate contamination in your drinking water can be harmful. *Utah Farmer-Stockman*, 111(4): 23, 28, April.

Farrell-Poe, K., S.E. Poe, and L.K. Hawks. 1991. Private water systems need frequent testing. *Utah Farmer-Stockman*, 111(4):43. April.

Hawks L. and K.L. Farrell-Poe. 1991. More than 250,000 home products are potentially poisonous. *Utah Farmer-Stockman*, 111(4): 15, April.

Poe, S.E., K.L. Farrell-Poe, H. Deer. 1991. Separate pesticide storage areas make good safety sense. *Utah Farmer-Stockman*, 111(4): 25-26, April.

Innovative Materials Developed

Comic Book

The Homeowner's Guide to: Septic System Installation; written by Adrian Hanson, Ph.D., P.E., Craig Runyan, Bruce Lesikar, Ph.D., P.E., Kitt Farrell-Poe, Ph.D., and Luz Elena Mimbela. This publication was funded in part by USDA-CSREES Agreement number 00-51130-9752 through the Texas Agricultural Extension Service and the Frank M. Tejada Center. Available in both English and Spanish.

Videos

Nonpoint Source Pollution: The Solution Begins with You; written by K.L. Farrell-Poe, produced by Jack Wilbur of Utah Department of Agriculture; 1992

Computer Software Programs

Watershed, 1996, multi-media instructional and gaming program on watershed NPS pollution.

Utah Groundwater, 1993, hyper-text instructional program on groundwater concepts.

Utah Residential Water Conservation Techniques, 1993, graphical program on water conservation techniques in and around the home.

Tabletop Booth Displays

Water Conservation, 2000

Household Septic Systems, 1999

On-Farm Composting, 1995

Household Hazardous Waste, 1995

Groundwater, 1993, 1999

Safe Drinking Water, 1993, 1999

Surface Water, 1993, 1999

Booklets, Manuals, & Guides

Farrell-Poe, K.L. 2005. *Arizona Soil and Site Evaluation for the Design of Onsite Wastewater Treatment Systems*. University of Arizona: Tucson, AZ. (pp. 70).

Artiola, Janick F., Kathryn L. Farrell-Poe, and Jacqueline C. Moxley. 2004. *Arizona: Know Your Water, A Consumer's Guide to Water Sources, Quality, Regulations, and Home Water Treatment Options*. University of Arizona: Tucson, AZ. (pp. 101)

Farrell-Poe, K.L. 2004. *Onsite Wastewater Treatment Education Resources for Educating Clientele*. University of Arizona: Tucson, AZ. (pp. 8)

Septic System Owner's Guide. 2000. University of Arizona: Tucson, AZ.

Youth Education - Teacher Training Materials

Arizona Water Quality Education Activities for Grades 1-12 (pp. 24), 2002

Water Quality Educational Materials (pp. 30), 2002

Groundwater Flow Demonstration Model Activities for Grades 8-12 (four activities), 1992, revised 2001

Water Conservation and Nonpoint Source Pollution, teacher training workshop booklet, 1995

Utah State University Extension Nonpoint Source Pollution Educational Materials Directory (USU publication NR WQ 02), bibliography of nationally available materials, 1995

Utah Nonpoint Source Pollution Education Activities for Grades K-8 (five activities), 1991

Slide Sets:

Animal Mortality Composting (with script); January 1996

On-Farm Composting; September 1994

Backyard Composting; August 1994

Groundwater Flow Demonstration Model; Spring 1993

Municipal Composting; September 1993

Groundwater Pollution (with script); 1992

Backyard Composting: How and Why Municipalities Need to Encourage It; 1992

Household Hazardous Waste: Prevention & Disposal (with script); 1992

Toxic Chemicals in the Home (with script); 1991

Agricultural Nonpoint Source Pollution; 1991

Pesticide Storage Facility; 1991

Awards and Honors for Extension

2000 ASAE Educational Aids Competition, Blue Ribbon for "Household Septic System Education" tabletop booth display

1994 Overall Outstanding County Water Quality Program in Utah from Governor Leavitt as member of Cache County Water Quality Task Force

1994 Outstanding Non-Agricultural Nonpoint Source Pollution Program in Utah from Governor Leavitt as member of Cache County Water Quality Task Force

1993 Innovative Program Award from USU Extension Specialist Association

1993 Certificate of Appreciation from College of Agriculture for contributions during Agriculture Week

1990-1992 Certificate of Recognition for being a judge in the Utah Community Progress Awards program

TEACHING EXPERIENCE**Courses Taught**University of Arizona:

ASM 490, Case Studies for Agricultural Systems Management - 2 semesters

Builds upon concepts developed in ABE 195 and ABE 300. Students utilize knowledge and solve "real life" management problems using cases from agricultural systems settings. Prerequisites: ABE 195, ABE 300, and MATH 263 (statistics) or consent of instructor.

ABE 459/559, Design of Onsite Wastewater Treatment Systems - 2 semesters

Covers the design of onsite wastewater treatment and dispersal systems for engineers and issues and concepts relating to the design of domestic and small commercial onsite wastewater treatment and recycling systems.

ASM 404/504, Irrigation Principles and Management - 3 semesters

Principles of operating farm irrigation systems, evaluation of systems, selection of systems, basic irrigation scheduling, measurements of water flow, soil moisture, pump and system efficiencies.

Utah State University:

ASTE 309, Computers in Agriculture - 3 qtrs

Understanding computer applications in agriculture. Applications include DOS, windows, word processing, and spreadsheet applications, and use of agricultural software.

ASTE 520, A Systems Approach for Analyzing Agricultural Issues (team taught) - 4 qtrs

Capstone class using case studies of current controversial agricultural systems; controversy management and optional facilitator training.

ASTE 526, Impacts of Agricultural Practices on Water Quality - 4 qtrs

Studying the relationship between agricultural practices and water quality. Investigating the factors contributing to and controlling of agricultural nonpoint source pollution.

Thesis and Dissertation Direction

Iram Mondaca-Fernandez: Ph.D., Spectroscopy Techniques for Quantification of Microorganisms in Environmental Samples. ABE Dept. Committee member. 2002-present.

Jason Field: M.S., Comparative Effectiveness of Conventional Trenches and Seepage Pits for Treatment of Septic Tank Effluent. SWES Dept. Research Coordinator. 2003.

SathyaKumar Ramalingam: Ph.D., Development of an Automation Technique for Assessing Nonpoint Source Pollution from Rural Municipalities. BIE Dept. Chair. 1992-1998.

Dean Higley: M.S., Effect of Solids Separation on Sludge Accumulation in an Anaerobic Waste Lagoon, and Value of Separated Solids. ASTE Dept. Committee member. 1998.

Brian Reed: M.S., Survey of Utah Forage Production Systems. ASTE Dept. On committee. 1997.

Kerry VanDyke: M.S., A Qualitative Analysis of Municipal Yardwaste Composting Mixing Ratios. BIE Dept. Committee member. 1996.

Seokhwan Hwang: Ph.D., Bioprocess Model to Control the Production of Short Chain Organic Acids From Cheese Processing Wastewater. BIE Dept. Committee member. 1995.

Michael Pace: M.S., The Effects of Aeration and Moisture on Composted Dairy Wastes in Northern Utah. ASTE Dept. Committee member. 1995.

Muhammad Shafqat Ejaz: Ph.D., Simulation/Optimization Models for Surface Water Quality Management and Conjunctive Water Use. BIE Dept. Committee member. 1994.

CONSULTING

UNARCO, Paris, IL - summer 1987 - fall 1988

Allison Gas Turbine, Indianapolis, IN - spring 1987 - fall 1988

The Anderson company, Michigan City, IN - spring 1988

Ice Cream Specialties, West Lafayette, IN - spring 1988

White Farm Equipment, Des Moines, IA - fall 1986

COMMITTEE INVOLVEMENT**University Committees**University of Arizona

ABE Department Curriculum Committee, 1998-2001

ABE Department Forward Planning Committee, since 2001

ABE Department Promotions and Tenure Committee, 1998-2000

ABE Department Agricultural Systems Management Committee, since 1998

Utah State University

ASTE Department Curricula Committee, 1991-1998
ASTE Department Graduate Committee, 1994-1998
ASTE Department Safety Officer, 1993-1998
BIE Department Engineering State Participant, 1992-1998
Extension Food Safety Task Force, 1991-1998
Extension Water Quality Task Force, 1991-1998
Natural Resources Extension Specialists Committee, 1994-1998
Scholarly Publications Committee, 1996-1998
Utah State University Extension Specialist Association: secretary/treasurer 1991-1992
Women and Gender Research Institute Steering Committee, 1993-1996

Non-University Committees

American Society of Agricultural Engineers, 10th National Symposium on Individual and Small Community Sewage Systems Planning Committee, Publicity Chair, 2003-2004
Consortium of Institutes for Decentralized Wastewater Treatment, president elect 2004
Utah Solid and Hazardous Waste Control Board, 1995-1998; vice-chair 1997-1998
Utah Section of American Water Works Association Informal Education Committee: secretary, 94-96; chair, 96-98
Utah Society of Environmental Education: treasurer 1991; board member 1992-1993
Soil and Water Conservation Society: membership chair, since 1995
Cache County Pollution Prevention Council, since 1994
Cache County Solid Waste Advisory Board, 1991-1995
Cache County Water Quality Task Force, since 1991
Cache Recycling Coalition, 1991-1992

PROFESSIONAL SOCIETIES

American Society of Agricultural Engineers
Consortium of Institutes for Decentralized Wastewater Treatment, president-elect, 2003-present
National Onsite Wastewater Recycling Association

PROFESSIONAL REGISTRATION

Engineer-in-Training, Spring 1980
Certified Onsite Sewage Treatment System Inspector through the National Association of Waste Transporters, Spring 2001, updated 2003