

DONALD C. SLACK
CURRICULUM VITAE

EDUCATION:

B.S. University of Wyoming, Agricultural Engineering, 1965
M.S. University of Kentucky, Agricultural Engineering, 1969
Ph.D. University of Kentucky, Agricultural Engineering and Math Statistics, 1975

EMPLOYMENT:

1991 - present Professor and Head, Department of Agricultural and Biosystems Engineering, The University of Arizona, Tucson, AZ

1984 - 1991 Professor, Department of Agricultural Engineering, University of Arizona, Tucson, AZ

1975 - 1984 Assistant to Associate Professor (1980), Department of Agricultural Engineering, University of Minnesota, St. Paul, MN

1970 - 1973 Agricultural Engineering Advisor, Department of Agricultural Engineering, University of Kentucky, Lexington, KY (Duty post was in Khon Kaen, Thailand)

LICENSES:

Registered Professional Engineer (P.E.) – Arizona and Kentucky

RECENT RESEARCH PROJECTS:

Irrigation Technologies for Maximizing Water Use Efficiency of Field Crops under Drought and Salinity Conditions in Arid Zone Soils. With M. Yitayew, A.M. El-Gindy and A.M. El-Araby. May 15, 1997 - May 14, 2001. (A collaborative project with Ain Shams University, Cairo, Egypt) USDA-ICD-FAS-ATUT. \$178,591.

Southwestern Indian Water — Allocation and Use. P.I. June, 1999 - May, 2001. Cooperative States Research Education and Extension Service (USDA). \$85,000

Water Management Training for Turkish Scientist. P.I. Sept. - Oct., 1999. Winrock International. \$54,488.

Middle East and Mediterranean Desert Development Program. *Improving the Efficiency of Water Use in Arid Land Agriculture*. Principal U.S. Water Adviser. USAID through San Diego State University and the International Arid Lands Consortium. Phase I. March 1, 1998 - December 31, 1999. \$600,000

Electrokinetic Management of Nitrate Movement in **Drip Irrigated Soils**. Co-P.I. with Dennis Larson and James Walworth (Soils). November 15, 2000 to November 14, 2002. USDA-NRIGP. \$112,000

Evaluating the Irrigation Efficiencies and Turf/Landscape Practices on the Campus of Northern Arizona University. March 1, 2002 to February 28, 2003. Water Resources Res. Ctr. U of AZ. \$12,000.

Development of Human Resource Training Capabilities in Emerging Areas of Agricultural Production and Processing in Mexico. Oct. 1, 2002 – Sept. 30, 2005. Co-PI with Mauricio Carrillo of Chapingo University, USAID/Mexico through Association Liason Office (TIES Program), \$299,935

Urban Erosion Control and Storm Water Harvesting in Northern Mexico. May 1, 2004 – April 30, 2006. P.I. International Arid Lands Consortium. \$75,000.

KEY PUBLICATIONS (Past five years):

Eid, N., W. Elshorbagy, D. L. Larson and D.C. Slack. 2000. Electromigration of nitrate in sandy soil. J. Haz. Mater. 79(1-2): 133-149.

Eid, N., D.C. Slack and D.L. Larson. 2000. Nitrate Electromigration in Sandy Soil: Closed System Response. Journal of the Irrigation and Drainage Division of ASCE. 126(6): 389-397.

- Reynolds, C.A. ,M. Yitayew, D. C. Slack, C. F. Hutchinson, A. Huete and M. S. Petersen. 2000. Estimating crop yields and production by integrating the FAO Crop Specific Water Balance model with real-time satellite data and ground-based ancillary data. *International Journal of Remote Sensing*. 21(18): 3487-3508
- da Silva, Bernardo B., D.C. Slack, M.W. Kilby and A.K. Hla. 2000. Measurements of water requirements of table grapes in Arizona, USA., *Revista Brasileira de Agrometeorologia*, Santa Maria, 8(2): 175-183.
- Elshorbagy, W., K. Lansey and D.C. Slack. 2001. Optimal Sizing of Irrigation Delivery Systems Using a Two-Stage Stochastic Programming Approach. *Civil Engr. And Env. Syst.* Vol 18 pp 331-362.
- Slack, D.C. 2002. Engineering in a Shrinking World. *Commission Internationale du Genie Rural (CIGR). E-Journal*. Vol. IV. September 2002.(Invited Article).
- Rawahy, S., D.L. Larson, J. Walworth and D.C. Slack. 2003. Effect of an Electrical Input with Drip Irrigation on Nitrate Distribution in Soil. *Applied Engineering in Agriculture*. 19(1):55-58.
- Jia, X., E.C. Martin and D.C. Slack. 2004. Temperature Adjustment for the Reference Evapotranspiration Calculation in Central Arizona. *Journal of the Irrigation and Drainage Division of ASCE*. 130(5):384-390.
- Ojeda-Bustamente, W., E. Sifuentes-Ibarra, D.C. Slack and M. Carrillo. 2004. Generalization of Irrigation Scheduling Parameters Using the Growing Degree Days Concept: Application to a Potato Crop. *Irrigation and Drainage*. 53: 251-261.
- Oliveira, A.S. de, E.C. Martin, D.C. Slack, E.J. Pegelow and A.D. Folta. 2005. Water Use and Crop Coefficient of Subsurface Drip-irrigated Lettuce in Central Arizona. *Revista Brasileira de Engenharia Agricola e Ambiental*. 9(1): 37-44.
- Jia, X., D. Larson, D.C. Slack and J. Walworth. 2005. Electrokinetic Control of Nitrate Movement in Soil. *Engineering Geology*. 77(2005): 273-283

HONORS AND AWARDS:

- Elected to Fellow in American Society of Civil Engineers, 1990.
- Elected to Fellow in American Society of Agricultural Engineers, 1996.
- Outstanding Research Oriented Journal Paper of 1987. *Irrigation and Drainage Journal of the American Society of Civil Engineers*
- Outstanding Administrator - College of Agriculture and Life Sciences, University of Arizona – 2005.
- 1993 -- Engineer of the Year. Arizona Section, American Society of Agricultural Engineers
- Listed in Who's Who in the World, 1995-96, 2001,2002,2003,2004,2005
- Listed in Who's Who in the West, 1987-88, 1989-90, 1991-92, 1993-94, 1995-96,1998-99,2001-2002,2002-03, 2003-2004,2004-05
- Listed in Who's Who in America, 1988-89, 1990-91, 1992-93, 1996-97, 1999-2000, 2002,2003,2004,2005
- Listed in Who's Who in Science and Engineering, 1996-97, 2000-2001,2002-2003, 2003-2004, 2004-05, 2005-06
- Listed in Who's Who in American Education, 1992-93, 1996-97, 2004-05
- Listed in Who's Who in Finance and Industry, 1995-96, 1998-99,2001-2002, 2002-2003,2004-2005