

THE UNIVERSITY OF ARIZONA  
Maricopa Agricultural Center

1. Name and Academic Rank:  
Robert L. Roth, Professor Agricultural and Biosystems Engineering  
Resident Director of Maricopa & Citrus Agricultural Centers
  
2. Degrees with Fields, Institutions and Dates:

Ph.D.	Civil Engineering	University of Arizona	1983
M.S.	Agricultural Engineering	University of Arizona	1971
B.S.	Agricultural Engineering	Montana State University	1967
  
3. Number of years service on this faculty, including date of original appointment and dates of advancement in rank:

Total Years - 22 years  
Original Appointment Date - August 1983  
Titles and dates of Advancement - Resident Director 1997, Professor 1997
  
4. Other related experience - teaching, industrial, etc.

Superintendent of the Research Farm, Maricopa Agricultural Center, College of Agriculture, University of Arizona, Maricopa, Arizona, March 19, 1994 - April 1997

Assistant Research Scientist in Agricultural Engineering; Assistant Specialist, Agricultural Engineering in the Cooperative Extension Service, College of Agriculture, University of Arizona, Yuma Agricultural Centers, Yuma, Arizona, September 1987 - October 1989

Assistant Research Scientist in Agricultural Engineering, University of Arizona Agricultural Experiment Station, Yuma, Arizona, August 1983 - September 1987.

Research Associate in Agricultural Engineering, University of Arizona Agricultural Experiment Station, Yuma, Arizona, February 1973 - August 1983 & Tucson, Arizona, July 1971 - February 1973

Graduate Assistant in Agricultural Engineering, University of Arizona Agricultural Experiment Station, Tucson, Arizona, September 1968 - July 1971

Product Analyst, Tractor Division of Ford Motor Company, Birmingham, Michigan, June 1967 - Sept. 1968
  
5. Consulting, Patents, etc.

Spenser Fruit Company, Caborca, Mex. - Present water & nitrogen management recommendations and evaluate asparagus fields and recommend management changes to improve asparagus production.. June 9-10, 1997.

Asociacion Local del Productores de Uva de Mesa, Hortalizas y otros Fruitales de la Region de Caborca, Mexico - Present water and nitrogen management recommendations and evaluate asparagus fields and recommend management changes to improve asparagus production. Two days, April 1994.

Steven A. Ehlich (attorney) - Subpoenaed deposition on Desert Sun Inc. vs. Bio-Huma-Netics. March 3, 1987.

Desert Sun Inc. Blythe, CA. - Subpoenaed to appear in U.S. Bankruptcy Court, San Bernardino, CA. As expert witness on asparagus production. One day, April, 1986.

Campbell Soup Co. San Francisco, CA. - Evaluate asparagus fields and recommend mngmnt changes to improve prod. and est. possible yield potential. Two days, June, 1986
  
6. States in which registered

None
  
7. Principal publications of last five years

Refereed Journal Articles:  
Sanchez, C.A., **R.L. Roth** and B.R. Gardner. 1994. Irrigation and nitrogen management for sprinkler irrigated

cabbage on sand. J Amer Soc Hort Sci. 119(3):427-433.

**Roth, R.L.**, C.A. Sanchez and B.R. Gardner. 1995. Growth and yield of mature 'Valencia' oranges converted to pressurized irrigation systems. ASAE Applied Engr. in Agric. 11(1):101-105.

Ottman, M.J., B.R. Tickes and **R.L. Roth**. 1996. Alfalfa yield and stand response to irrigation termination in an arid environment. Agron J. 88:44-48.

Sanchez, C.A., **R. L. Roth**, B.R. Gardner, and Harry Ayer. 1996. Economic Responses of Broccoli and Cauliflower to Water and Nitrogen in the Desert. HortScience: 31(2):201-205.

8. Scientific and professional societies of which a member:

American Society of Agricultural Engineers

Member 1968-present, Secretary-Treasurer Arizona Section 1973-74,

Vice Chairman Arizona Section 1974-75, Chairman Arizona Section 1975-76,

Member ASAE Engineering Practice-The Design, Installation, and Performance of Subsurface and Drip Irrigation Systems Committee SW-244, 1975-1979, Member ASAE Engineering Practice-Subsurface and trickle irrigation Committee EP406, 1979-1981, Secretary-Treasurer Arizona Section 1990-93, Chairman Arizona Section 1993-94, Treasurer Arizona Section 1994-1997

American Society of Civil Engineers, Associate Member

Irrigation Association, Member

Association for Advancement of Industrial Crops, Member

9. Honors and Awards

Sigma Xi - The Scientific Res. Society of North America, 1973

Outstanding ASAE Soil and Water Journal Paper for 1974: **Roth, R.L.**, D.W. Fonken, D.D. Fangmeier and K.T. Atchison. 1974. Data for border irrigation models. ASAE Trans. 17(1):157-161.

Outstanding ASAE Soil and Water Journal Paper for 1989: **Roth, R.L.**, and B.R. Gardner. 1989. Modified self-moving irrigation system for water-nitrogen crop prod. studies. ASAE Applied Engr.. In Agric. 5(2):175-179.

1995 Engineer of the Year. Arizona Section. American Society of Agricultural Engineers.

10. Institutional and professional service in the last five years:

Maricopa Agricultural Center Field Day Committee, 2004-to date

College of Agriculture Cotton Field Day Committee, 1990-2003.

Boyce Thompson SW Arboretum Advisory Comm., Member, Mar. 1993 - to date

College of Agriculture University Awards for Citizens Comm., Member, 1997-2005

Agriculture & BioSystems Eng. Search & Screen Comm. Chair for the Yuma Academic Prog. Coord., 1998

Agriculture & BioSystems Eng. Search & Screen Comm. Chair for the Yuma Water Qual. Position, 1998

Mentoring Graduate Students:

Imran Waheed, M.S. - Design Criteria for Low Head Bubbler Irrigation Systems. 1990.

Nurul Alam Akharnd, Ph.D. - A Canal Irrigation Water Allocation Model. 1992.

Mohamed Fida Hussein Abdel Hussein, M.S. - Design Criteria for Bubbler Irrigation Systems on Steep Slopes. 1992.

A. Daniel Flota, M.S. - A Mobile Weighing Lysimeter System for Water Use Measurements of Shallow Rooted Crops. 1996.

11. Professional development activities in the last five years:

None