

RESUME OF: JOHN G. MEXAL

Distinguished Professor of Horticulture, Plant and Environmental Sciences
New Mexico State University, Box 30003, Las Cruces, New Mexico 88003
Office: 575-646-3335; Fax: 575-646-6041; Email: jmexal@nmsu.edu

EDUCATION: B.S. 1969 University of New Mexico MAJORS: Biology and Chemistry
 M.S. 1971 University of New Mexico MAJOR: Biology
 Ph.D. 1974 Colorado State University MAJOR: Plant Physiology

Experience

Assistant Department Head and Professor, Department of Plant and Environmental Sciences, NMSU. Research (53%) on tree seedling establishment, restoration, wastewater reuse and mycorrhizal physiology. International work focuses on reforestation. Teaching (22%) of plant science, arboriculture, forestry and society, research orientation, nursery operations, and environmental physiology. Administrative duties (25% since 2003) include development, legislative liaison, alumni relations, and interim department head (Nov.'07- May'08; April '09 – Jan. '11) 07/89 - present.

Head, Department of Horticulture, New Mexico State University, Las Cruces, NM. Responsible for research and teaching programs. Faculty consists of 11 full-time professionals, one lecturer and 16 permanent staff. Curriculum includes horticulture, preforestry, and graduate program. Departmental research focuses on Christmas tree production, vegetable breeding, tissue culture and molecular genetics. 01/83 - 06/86.

Manager, Arkansas Forestry Research Station, Weyerhaeuser Co., Dierks, AR. Coordinating and conducting research and technology transfer in site preparation, regeneration and silviculture of intensively managed southern pine stands. 05/82 - 01/83.

Regeneration Specialist, Southern Forestry Research Center, Weyerhaeuser Company, Hot Springs, Arkansas. Responsible for research and development in pine seedling production for reforestation, including nursery and containerized seedlings. 10/74 - 05/82.

Professional Activities and Honors (last 6 years)

2012 Received Distinguished Achievement Professorship
2011 Fabian Garcia Founders Award from College of Agricultural, Consumer & Environmental Sciences
2007 Water Resources Team Award

Selected Publications (from over 180)

Herrera, E.A. and J.G. Mexal (eds). 1999. Ensuring Sustainable Development of Arid Lands through Time. New Mexico Academy of Science Journal 39.
Vallotton, A.D., J.G. Mexal, D.G. Vallotton, C. Erickson, L. Iglesias, B. Jessen, R. Nuñez, G. Picchioni, Z. Samani, and W.H. Zachritz II. 2000. Sustainable use of wastewater for small communities: A model system for short rotation woody crop production, p. 47-71. Westerhoff, P. (ed). The U.S.-Mexican border environment: Water issues along the U.S.-Mexican border. Southwest Center for Environmental Research and Policy Monograph Series No. 2. San Diego State University Press.
Aldrete, A., J.G. Mexal, R. Phillips, and A.D. Vallotton. 2002. Copper-coated polybags improve seedling morphology for two nursery-grown Mexican pine species. Forest Ecol. Mgt. 163(1-3):197-204.

- Al-Jamal, M.S., T.W. Sammis, J.G. Mexal, G.A. Picchioni and W.H. Zachritz. 2002. A growth -irrigation scheduling model (GISM) for wastewater use in forest production. *Agric. Water Mgt. J.* 56:57-79.
- Tena Vega, M., J. Mexal, G. Barragan, H.O. Rubio, and M. Sosa C. 2005. Wood production utilizing raw sewage in Ojinaga, Chihuahua, México, p. 593-599. IN A.G. Kungolos, C.A. Brebbia, and E. Beriatos (eds.) *Sustainable development and planning II*. Vol. 1. WIT Trans. Ecol. Environ. Vol. 84. WIT Press.
- Mexal, J.G., D.S. Rodriguez, T. Sammis, G. Picchioni, W. Zachritz II, C. Erickson, and Z. Samani. 2005. Land Application of Wastewater in Arid Lands: Theory and Case Studies, p. 632-635. IN: J.H. Lehr, J. Keeley, and J. Lehr (Eds) *Water Encyclopedia: Domestic, Municipal, and Industrial Water Supply and Waste Disposal*. John Wiley and Sons, NY. 952 p.
- Saucedo, D., T. W. Sammis, G. A. Picchioni and J.G. Mexal. 2006. Wastewater application and water use of *Larrea tridentata*. *Agric. Water Mgt. J.* 82:343-353.
- Ruiz, A., T.W. Sammis, G.A. Picchioni, J.G. Mexal, W.A. Mackay. 2006. An irrigation scheduling protocol for treated industrial effluent in the Chihuahuan Desert. *J. Amer. Water Works Assoc.* 98(2):122-133.
- Dominguez-Lerena, S., N. Herrero Sierra, I. Carrasco Manzano, L. Ocana Bueno, J. Penuelas Rubia and J.G. Mexal. 2006. Container characteristics influence *Pinus pinea* seedling development in the nursery and field. *For. Ecol. Mgt.* 221:63-71.
- Kallestad, J.C., T.W. Sammis, and J.G. Mexal. 2008. An evaluation of two sensors for measuring gas-phase oxygen in flood-irrigated pecan orchard soils. *Soil Sci. Soc. Amer. J.* 72(3):758-766.
- Kallestad, J.C., J.G. Mexal, T.W. Sammis, and R. Heerema. 2008. Development of a simple irrigation scheduling calendar for Mesilla Valley pecan growers. *HortTechnology* 18(4):714-725.
- Picchioni, G.A., J.G. Mexal, M.K. Shukla, A. Ruiz, M. Babcock, D.L. Daniel, and D.S. Rodriguez. 2012. Land application of treated industrial wastewater on a Chihuahuan desert shrubland: impacts on the natural vegetation. *Arid Land Research and Management.* 26(4):312-327.
- Picchioni, G.A., M.K. Shukla, J.G. Mexal, M. Babcock, A. Ruiz, and T.W. Sammis. 2012. Land application of treated industrial wastewater on a Chihuahuan desert shrubland: implications on water quality and mineral deposition. *Arid Land Research and Management* 26(3):211-226.

Synergic Activity

I have served as a research manager at a forestry research station and as department head. Additionally, I have led teams on wastewater reuse and reforestation in the US, Chile and Mexico.

Teaching Activity

I currently teach Introduction to Plant Science, Forestry and Society and the undergraduate Seminar class. I have also taught Environmental Plant Physiology, Nursery Management, Research Orientation and Perspectives, Graduate Seminar and a special topics class on symbiosis. Additionally, I have graduated 11 M.S. and Ph.D. students.

Service

- Chair, PES Department Promotion & Tenure Committee (9 yrs)
- Chair, PES Scholarship Committee
- President, NMSU Chapter of Gamma Sigma Delta
- President, Southern Section of SW Chapter of Society of American Foresters
- Member, University Research Council
- Interim Department Head (2 stints)

Research Funding (Total ~ \$2 M)

- Reforestation in Mexico and Chile
- Pecan water use
- Wastewater reuse in Mexico and the US