

Curriculum Vita

Richard (Rick) N. Arnold, M.S.



Education

M.S., 1980, Entomology and Plant Pathology, Agricultural Extension Education, and Horticulture, New Mexico State University

B.S., 1975, Crop Science, New Mexico State University

Career interests

- My research activities fall into three categories: 1) weed control in crop and non-cropland, 2) insect control in agronomic or horticulture type crops, and 3) revegetation of disturbed lands with and without coal bed methane produced water for, stand establishment, and erosion control in the intermountain region of northwestern New Mexico.

Employment history

Superintendent New Mexico State University	2010-Present
College Professor New Mexico State University	2008-2010
College Associate Professor New Mexico State University	2007-2008
College Assistant Professor New Mexico State University	2002-2007
Pest Management Specialist New Mexico State University	1986-2002
Assistant Professor New Mexico State University	1984-1986
Instructor New Mexico State University	1980-1984
Research Assistant New Mexico State University	1979-1980
Consultant AGCO Chemical and Seed Company in Mesquite, New Mexico	1979-1979
Assistant Technical Service Director Navajo Agricultural Products Industry, Farmington New Mexico	1976-1979

Pertinent projects

Broadleaf Weed Control of Agronomic and Horticulture Type Crops in Northwestern New Mexico.....1980-2013

Richard N. Arnold (PI)
Pesticide Companies

Effects of MAT 28 Applied Alone or in Combination for Rangeland Grass Establishment.....2010

Richard N. Arnold (PI)
DuPont Agricultural Company

Application Timings of Milestone for Rangeland Grass Establishment.....2009

Richard N. Arnold (PI) and others
Dow AgroSciences

Desalination Technology for coal-Bed Natural Gas Produced Water, Treatment, Riparian/Rangeland Rehabilitation.....2008

Sandia National Laboratory (PI), Bureau of Land Management, ConocoPhillips, Richard Arnold and others

Using Coal-Bed Methane Produced Water for Establishment of Native and Non-Native Grasses in the Oil and Gas Producing Basin of Northwest New Mexico.....2005

Richard N. Arnold (PI), Bureau of Land Management, ConocoPhillips, Sandia National Laboratories and others

Revegetation of Pipeline Right-of-Way and or Well Sites with Selected Cool and Warm Season Cultivar's and Forbes for Palatability, Stand Establishment, and Erosion control in the Intermountain Region of Northwestern New Mexico.....2002

Richard N. Arnold (PI), Bureau of Land Management, ConocoPhillips and others

Professional Affiliations

Western Society of Weed Science-Award Committee Chairman 2013.
 Western Society of Weed Science-Award Committee Member 2012.
 Western Society of Weed Science-Student Contest Judge-2002.
 Western Society of Weed Science-Member-at-Large-1998.
 Western Society of Weed Science-Education and Regulatory-Chair. 1997.
 Western Society of Weed Science-Sustaining Membership-Chair-1996.
 Western Society of Weed Science-Weeds in Horticulture Crops-Chair. 1994.
 Western Society of Weed Science-Weeds in Agronomic Crops-Chair. 1992.
 Western Society of Weed Science-Member of Weed Ad Hoc Committee for the
 Weed Management Short Course-1992.
 Weed Science Society of America-Member of Weed Alert Committee-1988-
 1992.
 Western Society of Weed Science-Finance Committee-1988-1991.
 New Mexico Agricultural Chemical and Plant Foods Association-Member of
 Scholarship Committee-1992-1995.
 New Mexico Academy of Science-President-1989.
 New Mexico Academy of Science-Vice-President 1988.
 New Mexico Academy of Science-Member-1987-1990.
 Weed Science Society of America-Member-1986-present.
 Western Society of Weed Science-Member-1986-present.
 Certified Crop Adviser- 1995-present

Awards and Recognitions

Distinguished Educator Award, 2012-60th Annual Conference of the Rocky
 Mountain Agribusiness Association-2011, Denver, Colorado.
Fellow- 2010-63rd Annual meeting of the Western Society of Weed Science,
 Waikoloa, Hawaii.
Outstanding Weed Scientist for the Public Sector-2006- 59th Annual Meeting
 of the Western Society of Weed Science, Reno, Nevada.
Leadership Award (well seeding/ produced water studies) 2004-Presented by
 the Bureau of Land Management (BLM/FFO) at the 4-Corners oil and gas
 conference.
NMSU Staff Appreciation Award-2004-Recognized for outstanding team work
 with the oil/gas industry, cattle producers, and BLM/FFO collectively for the
 amelioration of rangelands.
30 year Service Award -2010-received from New Mexico State University.
Outstanding Young Agriculturist -1980-presented by the Farmington Chamber
 of Commerce.
Future Farmers of America -1992-Honorary Chapter Member - presented by
 the Kirtland Chapter of the Future Farmers of America.
Outstanding Young Farmer-1980-presented by the New Mexico Jaycees Fall
 Board, Las Vegas, NM.

Publications-selected journal articles and/or reports since 2007

- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal and Kevin Lombard. 2013. Pest control in crops grown in northwestern New Mexico, 2010. NMSU Annual Data Report 100-2012.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal and Kevin Lombard. 2013. Pest control in crops grown in northwestern New Mexico, 2010. NMSU Annual Data Report 100-2011.
- Arnold, Richard N., Daniel Smeal, Kevin Lombard, Michael K. O'Neill, Samuel Allen, Margret West, and Roselyn Yazzie. 2012. Broadleaf weed control in dry beans (*Phaseolus vulgaris*) with preemergence applications of Valor alone or in combination from 2004-2008. NMSU Bulletin 804.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal and Kevin Lombard. 2012. Pest control in crops grown in northwestern New Mexico, 2010. NMSU Annual Data Report 100-2010.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2012. Pest control in crops grown in northwestern New Mexico, 2009. NMSU Annual Data Report 100-2009.
- Arnold, Richard N. Michael K. O'Neill and Kevin Lombard. 2012. Broadleaf weed control in field corn with preemergence followed by sequential postemergence herbicides. Western society of Weed Science. No. 120.
- Arnold, Richard N. Michael K. O'Neill and Kevin Lombard. 2012. Broadleaf weed control in field corn with preemergence followed by sequential postemergence herbicides. Proceedings of the Western society of Weed Science. No. 120. ISSN:0091-4487.
- Arnold, Richard N., Michael K. O'Neill, and Samuel Allen. 2012. Broadleaf weed control in grain sorghum. Western Society of Weed Science Research Report. p.57. ISSN:0090-8142.
- Arnold, Richard N., Kevin Lombard, and Samuel Allen. 2012. Broadleaf weed control in field corn with preemergence herbicides. Western Society of Weed Science Research Report. p.58. ISSN:0090-8142.
- Arnold, Richard N., Kevin Lombard, and Samuel Allen. 2012. Broadleaf weed control in field corn with preemergence followed by sequential postemergence herbicides. Western Society of Weed Science Research Report. p.59. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2011. Pest control in crops grown in northwestern New Mexico, 2003. NMSU Annual Data Report 100-2003.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2011. Pest control in crops grown in northwestern New Mexico, 2004. NMSU Annual Data Report 100-2004.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2011. Pest control in crops grown in northwestern New Mexico, 2005. NMSU Annual Data Report 100-2005.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2011. Pest control in crops grown in northwestern New Mexico, 2006. NMSU Annual Data Report 100-2006.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2011. Pest control in crops grown in northwestern New Mexico, 2007. NMSU Annual Data Report 100-2007.

- Arnold, Richard N. Michael K. O'Neill and Kevin Lombard. 2011. Broadleaf weed control in field corn with preemergence followed by sequential postemergence herbicides. Western society of Weed Science, No.155.
- Smeal, Daniel, Kevin Lombard, Michael O'Neill and Rick Arnold. 2011. Microirrigation on the Colorado Plateau: Research at the NMSU Agricultural Science Center, Farmington, NM. 11th Biennial conference of Research on the Colorado Plateau. p.121-122.
- O'Neill, Michael, Rob Heyduck, Sam Allen, Kevin Lombard, Dan Smeal, and Rick Arnold. 2011. Hybrid poplar for the Colorado Plateau: NMSU poplar research at the NMSU Agricultural Science Center Farmington, NM. 11th Biennial conference of Research on the Colorado Plateau. p106-107
- Arnold, Richard N., Michael K. O'Neill and Kevin Lombard. 2011. Broadleaf weed control in field corn with preemergence herbicides. Western Society of Weed Science Research Report. p70. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Kevin Lombard. 2011. Broadleaf weed control in field corn with postemergence herbicides. Western Society of Weed Science Research Report. p71. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Kevin Lombard. 2011. Broadleaf weed control in grain sorghum. 2011. Western Society of Weed Science Research Report. p75. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Kevin Lombard. 2011. Tumble mustard control in winter wheat. Western Society of Weed Science Research Report. p96. ISSN:0090-8142.
- O'Neill, M.K. C.C. Shock, K.A. Lombard, R.F. Heyduk, E.B.G. Feibert, D. Smeal, and R.N. Arnold. 2010. Hybrid poplar (*Populus* spp.) selections for arid and semi-arid intermountain regions of the western United States. *Agroforestry Systems*, 79:409-418 ISSN:0167-4366.
- Arnold, R.N., Daniel Smeal, Michael K. O'Neill, Kevin Lombard, Robert Heyduck, Steve Henke, Dale Wirth, Dave Mankiewicz, Robert Wirtanen, Stergie Katirgis, Mark Lepich, Frank McDonald, Allan Sattler, and Monica Johnson. 2010. Using coal bed methane produced water from well sites for native and non-native grass stand establishment. NMSU Agricultural Experiment Station Research Report 771.
- Smeal, D., K. A. Lombard, M.K. O'Neill, and R.N. Arnold. 2010. Scheduling irrigations on drip-irrigated vegetable crops using climate-based coefficients and canopy measurements. *Annual Conference of the American Society of Horticultural Science*. 45(8)216.
- Smeal, D., K. A. Lombard, M.K. O'Neill, and R.N. Arnold. 2010. Climate-based coefficients for scheduling irrigations in urban xeriscapes. 5th National Decennial Irrigation Conference.
- Smeal, D., K. Lombard, M. O'Neill, and R. Arnold. 2010. Chile pepper production in Northwestern New Mexico. p31.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2010. Pest control in crops grown in northwestern New Mexico, 1999. NMSU Annual Data Report 100-1999.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2010. Pest control in crops grown in northwestern New Mexico, 2000. NMSU Annual Data Report 100-2000.

- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2010. Pest control in crops grown in northwestern New Mexico, 2001. NMSU Annual Data Report 100-2001.
- Arnold, Richard N., Michael K. O'Neill and Daniel Smeal. 2010. Pest control in crops grown in northwestern New Mexico, 2002. NMSU Annual Data Report 100-2002.
- O'Neill M.K., R.N. Arnold, R. Heyduck, K.A. Lombard, and D. Smeal. 2010. Hybrid poplar in arid regions: the case for versatile clone, OP-367. Fifth International Poplar Symposium, International Union of Forest Research Organizations (IFURO).
- Arnold, Richard N., Michael K. O'Neill, and Kevin Lombard. 2010. Broadleaf weed control in field corn with preemergence followed by sequential postemergence herbicides. Proceeding Western Society of Weed Science Vol: 63 p79. ISSN:0091-4487.
- Smeal, Dan., Richard N. Arnold, and Michael K. O'Neill. 2010. Tumble mustard control in Jagaline winter wheat. Proceeding Western Society of Weed Science Vol:63 p82. ISSN:0091-4487.
- Arnold, Richard N., Michael K. O'Neill, and Kevin Lombard. 2010. Broadleaf weed control in field corn with postemergence applications of topramezone and diflufenzopyr plus dicamba applied alone or in combination with glyphosate. Western Society of Weed Science Research Report. p.81. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill, and Kevin Lombard. 2010. Broadleaf weed control in field corn with preemergence herbicides. Western Society of Weed Science Research Report. p.82. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill, and Kevin Lombard. 2010. Broadleaf weed control in field corn with early and late applied postemergence herbicides. Western Society of Weed Science Research Report. p.83. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill, and Kevin Lombard. 2010. Broadleaf weed control in spring wheat. Western Society of Weed Science Research Report. p.98. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill, and Kevin Lombard. 2010. Tumble mustard control in winter wheat. Western Society of Weed Science Research Report. p.114. ISSN:0090-8142.
- O'Neill, M.K., C.C. Shock, K.A. Lombard, R.F. Heyduck, E.B.G. Feibert, D. Smeal, and R.N. Arnold. 2010. Hybrid poplar (*Populus* spp.) selections for arid and semi-arid intermountain regions of the western United States. Agroforestry Systems,
- O'Neill, M.K. and M.M. West (eds.) 2010. Forty-third Annual Progress Report: 2009 Cropping Season. With contributions from R.N. Arnold, D. Smeal, R.F. Heyduck, C.K. Owen, K.D. Kohler, K.A. Lombard. NMSU Agricultural Science Center at Farmington. Agricultural Experiment Station and Cooperative Extension Service. New Mexico State University. Las Cruces, NM.
- Arnold, Richard N., Daniel Smeal, Michael K. O'Neill, Kevin Lombard, Robert Heyduck, Steve Henke, Dale Wirth, John Zent, Robert Wirtanen, Dale Craddock, Stergie Katirgis, and Mark Lepich. 2009. Revegetation of disturbed well sites with selected cool season native and non-native grasses for stand establishment in the intermountain region of northwest New Mexico. NMSU Agricultural Experiment Station Research Report 768.

- Arnold, R.N., M.K. O'Neill, D. Smeal, and K.A. Lombard. 2009. 2008 Weeds Industry Report. Agricultural Experiment Station Variety Test Reports. New Mexico State University. Las Cruces, NM. On line publication.
- Arnold, Richard N., Michael K. O'Neill and Dan Smeal. 2009. Broadleaf weed control in tribenuron tolerant sunflower with preemergence followed by sequential postemergence herbicides. Proceedings Western Society of Weed Science, Vol: 62 p63. ISSN:0091-4487.
- Arnold, Richard N., Michael K. O'Neill and Kevin A. Lombard. 2009. Control of downy brome in dryland intermediate wheatgrass. Western Society of Weed Science Research Progress Report, p.1. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Kevin A. Lombard. 2009. Control of Canada thistle with aminocyclopyrachlor in irrigated intermediate wheatgrass. Western Society of Weed Science Research Progress Report, p.34. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Kevin A. Lombard. 2009. Stand establishment of one non-native and four native grasses from the application of soil applied herbicides. Western Society of Weed Science Research Progress Report, p.69. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Kevin A. Lombard. 2009. Broadleaf weed control in dry beans with preemergence followed by sequential postemergence herbicides. Western Society of Weed Science Research Progress Report, p.84. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Kevin A. Lombard. 2009. Broadleaf weed control in tribenuron tolerant sunflower with preemergence followed by sequential postemergence herbicides. Western Society of Weed Science Research Progress Report, p.108. ISSN:0090-8142.
- O'Neill, M.K., R.F. Heyduck, K.A. Lombard, D. Smeal, R.N. Arnold, and C. Owen. 2008. Bioenergy crop production in the Four Corner region. New Mexico Journal of Science 45:41-51.
- O'Neill, M.K. and M.W. West (eds) 2008. Forty-first Progress Report: 2007 Cropping Season. With contribution from R.N. Arnold, D. Smeal, R.F. Heyduck, C.K. Owens, K.D. Kohler, K.A. Lombard. NMSU Agricultural Science Center at Farmington. Agricultural Experiment Station and Cooperative Extension Service. New Mexico State University. Las Cruces, NM.
- Arnold, Richard N., Michael K. O'Neill and Dan Smeal. 2008. Control of kochia in hybrid poplar. Western Society of Weed Science Research Progress Report, p.5. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Dan Smeal. 2008. Broadleaf weed control in field corn with tembotrione alone or in combination. Western Society of Weed Science Research Progress Report, p.77. ISSN:0090-8142.
- Arnold, Richard N., Michael K. O'Neill and Dan Smeal. 2008. Broadleaf weed control in field corn with preemergence followed by sequential postemergence herbicides. Western Society of Weed Science Research Progress Report, p.78. ISSN:0090-8142.
- Smeal, D., M.K. O'Neill, M.M. West, and R.N. Arnold. 2007. A differentially-irrigated, xeric plant demonstration garden in northwestern New Mexico. Proc. Irrig. Assoc. 28th Ann. Inter. Irrig. Show and Tech. Conf. Dec. 6-7, 2007. San Diego, CA.

- Smeal, D., M.M. West, Z.F. Williams, M.K. O'Neill, K.A. Lombard, and R.N. Arnold. 2007. Efficient irrigation of small plots using a simple, inexpensive micro-irrigation system. Proceedings: ICASALS 2006 Conference: Water in Arid and Semiarid Lands: Innovative Approaches and Informed Decision-Making. Nov. 15-17, 2006. Lubbock, TX.
- Arnold, Richard N., Mick K. O'Neill and Dan Smeal. 2007. Broadleaf weed control in roundup ready alfalfa. Proc. of the Western Society of Weed Science, Vol. 60. p.70, ISSN:0091-4487.
- Arnold, Richard N. Daniel Smeal, Michael K. O'Neill and Margaret M. West. 2007 Broadleaf weed control in spring-seeded alfalfa, 1999-2003 New Mexico State University Agricultural Experiment Station Bulletin-795.
- Smeal, D., M.K. O'Neill, M.W. West and R. N. Arnold. 2007. A differentially-irrigated zeric plant demonstration garden in northwestern New Mexico. Proc. Irrig. Assoc. 28th Ann. Inter. Irrigation Show and Tech Conference. Smeal, Dan., M.W. West, Z.F. Williams, M.K. O'Neill, K.A. Lombard and R.N. Arnold. 2007. Efficient irrigation of small plots using a simple inexpensive micro-irrigation system. Proc. ICASALS Conf. Water in Arid and Semiarid Lands :Innovative Approaches and Informed Decision Making.