

Kevin A. Lombard, Ph.D.

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PERSONAL STATEMENT

I am an Associate Professor of Horticulture in the Department of Plant and Environmental Sciences (PES) and Superintendent of the NMSU Agricultural Science Center (ASC) at Farmington. The ASC Farmington 250-acre farm is unique in that it resides on sovereign First Nations Land, the Navajo Nation. Our mission is to conduct research, demonstration, and educational programs that will best meet the needs of the agricultural community of San Juan County and the Navajo Nation in particular as well as the state of New Mexico, the Four Corners Region, and U.S. in general. My research evaluates specialty horticultural crops, arid-land farming and wise use of limited water resources including urban ornamental plant selection. I am the PI on studies evaluating adoption of gardening and the intersects of horticulture with public health. Significant interest in the 2006 paper *Diabetes on the Navajo Nation: What role can gardening and agriculture extension play to reduce it?* continues to motivate me. I have several specialty horticulture crop projects and also monitor agricultural lands after the Gold King Mine Spill of 2015. My research and outreach is collaborative in nature, draws upon public and private industry experiences and funding sources, and involves student mentorship.

EDUCATION

May, 1991 **BSc, Horticulture**, Texas Tech University (TTU)
August, 2000 **MSc, Horticulture**, Texas Tech University (TTU)
May, 2007 **PhD**, New Mexico State University (NMSU)

WORK EXPERIENCE

2015 Superintendent, NMSU Agricultural Science Center at Farmington.
2014 Associate Professor of Horticulture (Tenured), NMSU Dept. of Plant and Environmental Sciences/Agricultural Science Center at Farmington.
2007-2014 Assistant Professor of Horticulture, NMSU Dept. of Plant and Environmental Sciences/Agricultural Science Center at Farmington.
2007 U.S. Crisis Corps Volunteer, FAO project, Caprivi Region, Namibia.
2001-2007 Teaching/Research Assistant, NMSU Dept. of Plant and Environmental Sciences.
2003 Horticulture Production Advisor, ACDIVOCA project, Asmara Eritrea.
1998-2001 Teaching and Research Assistant, TTU Plant and Soil Science Department.
1995-1998 Horticulturist I, Filoli Center, National Trust for Historic Preservation, Woodside, CA.
1994-1995 Buildings and Grounds Foreman, Rollins Blue Cypress Ranch, Okeechobee, FL.
1991-1994 U.S. Peace Corps Volunteer, FAO Kagera Integrated Fisheries Project, Tanzania.
1989-1991 Intern: James W. Kent Horticultural Services, Ft. Worth, TX
1990 Intern: Planting Fields Arboretum, Oyster Bay, New York.
1990 Intern: George Elle "You-pick" orchard, Lubbock, Texas..
1981-1990 Self-employed: Lombard Horticultural Service, Ft. Worth, Texas.

SELECTED REFEREED PUBLICATIONS *indicates student working with us

Djaman K, M. O'Neill, L. Diop, A. Bodian, S. Allen, K. Koudahe, **K. Lombard**. 2018. Evaluation of the Penman-Monteith and other 34 Reference Evapotranspiration Equations under Limited Data in a Semiarid Dry Climate. Theoretical and Applied Climatology. DOI: 10.1007/s00704-018-2624-0. Online first: <https://link.springer.com/article/10.1007/s00704-018-2624-0>.
Djaman K., M. O'Neill, C. Owen, D. Smeal, M. West, D. Begay, S. Allen, K. Koudahe, S. Irmak, **K. Lombard**. 2018. Long-term winter wheat seasonal irrigation amount, evapotranspiration, yield, and water productivity under semiarid climate. *Agronomy* 2018, 8(6), 96; <https://doi.org/10.3390/agronomy8060096>
Djaman K., M. O'Neill, C. Owen, D. Smeal, M. West, D. Begay, S.V. Angadi, K. Koudahe, S. Allen, **K. Lombard**. 2018. Seed yield and water productivity of irrigated winter canola (*Brassica napus* L.) under semiarid climate and high elevation. *Agronomy* 8(6), 90; <https://doi.org/10.3390/agronomy8060090>

- Djaman K., M. O'Neill, C.K. Owen, K. Koudahe, M. West, D. Smeal, S. Allen, **K. Lombard**, S. Irmak. 2018. Crop evapotranspiration, irrigation water requirement and water productivity of maize from meteorological data under semiarid climate. *Water* 2018, 10, 405; doi:10.3390/w10040405.
- Ornelas I, Deschenie D, Bishop S, **Lombard K.A.**, Beresford SA. 2017. Yéego Gardening!: A Community Garden Intervention to Promote Health on the Navajo Nation. *Progress in Community Health Partnerships*. 11(4).
- Idowu, O. J., **K. A. Lombard**, D. Hyder and A. L. Ulery, 2015: Soil Quality of a Semi-Arid Pasture Irrigated with Reverse Osmosis Wastewater-A Case Study from Northern New Mexico. *Journal of Water Resource and Protection* 7, 1121-1130.
file:///C:/Users/klombard/Downloads/JWARP_2015092215223553.pdf
- Lombard, K.A.**, B. LaShell, F.J. Thomas, J. French, T. Bates. 2015. Hops virus testing: Significance and implications for establishing hop production in New Mexico and Southwest Colorado. *NMSU-AES Research Report 788*. July 2015.
<http://aces.nmsu.edu/pubs/research/horticulture/RR788.pdf>
- *Sutherin, S., **K.A. Lombard**, and R. St. Hilaire. 2014. Website? Video? Facebook? Mobile App? One Group's Experience Developing and Comparing Urban Landscape Water Conservation Digital Outreach Resources. *Journal of Extension* 53(1) Article #1FEA1
<http://www.joe.org/joe/2015february/a1.php>
- *Nelson, C.W., A. Unc, **K.A. Lombard**, M. Lucero, and S. Perkins. 2014. Impact of seed exposure to plant material on plant growth and development on remediated arid lands. *Journal of the American Society of Mining and Reclamation*. 3(1) 41-69.
- O'Neill, M.K., S.C. Allen, R.F. Heyduck, **K.A. Lombard**, D. Smeal, and R.N. Arnold. 2014. Hybrid poplar (*Populus* spp.) adaptation to a semi-arid region: results from Northwest New Mexico (2002–2011). *Agroforestry Systems*. 88(3) 387-396. DOI 10.1007/s10457-014-9694-5
<http://link.springer.com/article/10.1007%2Fs10457-014-9694-5#page-1>
- Lombard, K.A.**, S.A.A. Beresford, I. Ornelas, *C. Topaha, *T. Becenti, *D. Thomas, and *J.G. Vela. 2014. Healthy Gardens/Healthy Lives: Navajo perceptions of growing food locally to prevent diabetes and cancer. *Health Promotion Practice*. 15(2) 223-231. DOI: 10.1177/1524839913492328.
<http://hpp.sagepub.com/content/early/2013/07/09/1524839913492328.full.pdf+html>
- Lombard, K.A.**, C. Martin, and J. Greenfield. 2014 Risk Management Education in Southwest Medicinal Herb Production and Marketing in New Mexico: Assessing grower and potential grower outcomes after a two-day workshop. *Journal of Herbs, Spices & Medicinal Plants*. 20:31–44. DOI:10.1080/10496475.2013.819477
- Lombard, K.A.** B. Maier, F.J. Thomas, M.K. O'Neill, S. Allen, and R. Heyduck. 2013. Wine Grape Cultivar Performance in the Four Corners Region of New Mexico: 2010-2012. *HortTechnology*. 23(5) 699-709.
- *Sutherin, S., **Lombard, K.A.**, and R. St. Hilaire. 2013. Southwest Plant Selector: A mobile application for iPhone and iPad. *HortTechnology*. 23(5) 602-609.
- Lombard, K.A.**, S.C. Forster-Cox, K. Huttlinger, D. Smeal, S.A.A. Beresford and M. O'Neill. 2011. Gardens for Health: Development of a Model Diabetes Intervention Project among an Indigenous Tribe in Northwest New Mexico. *Acta Hort*. 911:311-316.
- Lombard, K.A.**, M. O'Neill, A. Ulery, J. Mexal, B. Onken, S. Forster-Cox, and Ted Sammis, 2011. Fly ash and composted biosolids as a source of Fe for hybrid poplar – a greenhouse study. Special Issue: Biosolids Soil Application: Agronomic and Environmental Implications. *Applied and Environmental Soil Science* vol. 2011, Article ID 475185, 11 pages. doi:10.1155/2011/475185.
<http://www.hindawi.com/journals/aess/2011/475185/>
- Lombard, K.A.**, Mick O'Neill, Robert Heyduck, Blake Onken, April Ulery, John Mexal, and Adrian Unc. 2010. Composted biosolids as a source of iron for hybrid poplars (*Populus* sp) grown in Northwest New Mexico. *Agroforestry Systems*. 81(1): 45-56. DOI: 10.1007/s10457-010-9334-7
- Lombard, K.A.**, Mick O'Neill, John Mexal, April Ulery, Blake Onken, *Greg Bettmann, and Robert Heyduck. 2010. Can Soil Plant Analysis Development (SPAD) Values Predict Chlorophyll and Total Fe in Hybrid Poplar? *Agroforestry Systems*. 78(1):1-11. DOI: 10.1007/s10457-009-9214-1.
- Lombard, K.A.**, S. Forster-Cox, D. Smeal, and M.K. O'Neill. 2006. Diabetes on the Navajo Nation: What role can gardening and agriculture extension play to reduce it? *Journal of Remote and Rural Health* 6:640. <http://www.rrh.org.au/articles/subviewnew.asp?ArticleID=640>
Aug 13, 2014: This article has been viewed 43785 times since October 16, 2006 and is the top viewed in the PMID domain 17044752

- Lombard, K.A.**, E. Peffley, E. Geoffriau, L. Thompson, and A. Herring. 2005. Quercetin in onion (*Allium cepa* L.) after heat-treatment simulating home preparation. *Journal of Food Composition and Analysis* 18: 571-581.
- Lombard, K.A.**, E. Geoffriau and E.B. Peffley, 2004. Total quercetin content in onion (*Allium cepa* L.): survey of cultivars originating from various locations. *HortTechnology* 14(4): 628-630.
- *Smith, Crystal, **Kevin A. Lombard**, Ellen B. Peffley, 2003. Genetic analysis of quercetin in onion (*Allium cepa* L.) 'Lady Raider'. *Texas Journal of Agriculture and Natural Resources* 16:24-28.
- Lombard, K.A.**, E. Geoffriau, E.B. Peffley, 2002. Flavonol quantification in onion (*Allium cepa* L.) by spectrophotometric and HPLC analyses. *HortScience* 37(4): 682-685.

SELECTED PRESENTATIONS (Last 5 years) *indicates student working with us

- *Fullen S., *G. Jha, **K.A. Lombard**, A. Ulery, L. Stanford, and D. VanLeeuwen. 2018. Total Sediment Lead (Pb) Concentrations in a Northwestern New Mexico Irrigation Ditch following the Gold King Mine Spill. July 29, 2018. 73rd Soil and Water Conservation Society (SWCS). Albuquerque, New Mexico.
- *Jha, G., A. Ulery, **K.A. Lombard**, D.C. Weindorf, and B. Francis. 2018. Rapid and in-situ analysis of metal concentrations in agricultural fields in San Juan County using Portable X-ray fluorescence (PXRF). 3rd Annual Conference on Environmental Conditions of the Animas and San Juan Watersheds Past, Present and Future. Water Resources Research Institute. Farmington, NM. June 20-22, 2018.
- Lombard, K.A.**, I.J. Ornelas, D. Deschenie, S. Bishop, S. A. A. Beresford. 2017. Yéego Gardening!: Results from a Pilot Community Garden Intervention to Promote Health on the Navajo Nation. American Public Health Association Annual Meeting and Expo. Atlanta, GA. November 4-8, 2017.
- *Jha, G., A.L. Ulery, **K.A. Lombard**, D.C. Weindorf, *S. Fullen, and B. Francis. 2017. Metal Concentration in Agricultural Fields Downstream from the Gold King Mine Spill (2015). Soil Science Society of America, American Society of Agronomy and Crop Science Society of America International Annual Meeting. October 23, 2017. Tampa, FL.
- Lombard, K.A.**, D. Deschenie, I. Ornelas, S. Bishop, S.A.A. Beresford. 2017. Where health and horticulture intersect: A Navajo Wellness Collaboration Pilot (Yéego Gardening!). Navajo Nation Human Research Review Board 2017 Conference. October 18-19, 2017, Window Rock, Arizona.
- Lombard, K.A.** and F.J. Thomas. 2017. New Mexico State University Winter Malted Barley Trial. Master Brewers Association of the Americas, Rocky Mountain District Annual Meeting. August 18, 2017. Albuquerque, NM.
- *Jha, G., A. Ulery, **K.A. Lombard**, B. Francis, B. Hunter, *H. Winsor. 2017. Metal Concentrations in Soil and Sediments after Gold King Mine Spill. 2nd Annual Conference on Environmental Conditions of the Animas and San Juan Watersheds with Emphasis on Gold King Mine and Other Mine Waste Issues. Water Resources Research Institute. Farmington, NM. June 20-22, 2017.
- *Fullen, S., **K.A. Lombard**, A. Ulery, B. Hunter, *G. Jha, and B. Francis. 2017. Lead and Arsenic Concentrations in the Lower Animas Irrigation Ditch Sediments. 2nd Annual Conference on Environmental Conditions of the Animas and San Juan Watersheds with Emphasis on Gold King Mine and Other Mine Waste Issues. Water Resources Research Institute. Farmington, NM. June 20-22, 2017.
- Lombard, K.A.**, *S. Fullen, A. Ulery, B. Hunter, D. VanLeeuwen, *G. Jha, B. Francis. 2017. What are the effects of the Gold King Mine Spill on San Juan County, NM agricultural irrigation ditches and farms? University Council on Water Resources/The National Institutes for Water Resources (UCOWR/NIWR) 2017 Annual Conference. June 13-15, 2017. Fort Collins, CO.
- Lombard, K. A.** and F.J. Thomas, F. 2017. Mobile Hops Harvester for 4-Corners. 2017. 4th What's Hop'n-Winter Workshop. March 25, 2017. Bayfield CO.
- Lombard, K.A.** 2017. Trellising. New Mexico Organic Farming Conference. February 17-18, 2017. Albuquerque, NM.
- Hyder, Don and **K.A. Lombard**. 2016. From China to New Mexico: Assessing Goji Berry qualities for Southwestern medicinal herb production. Soil Science Society of America, American Society of Agronomy and Crop Science Society of America International Annual Meeting. Nov 6-9, 2016. Phoenix, AZ.
- *Fullen, Samuel, **K.A. Lombard**, A. Ulery, and B. Hunter. 2016. Heavy metal contamination in New Mexico soils after 2015 Gold King Mine Spill. Soil Science Society of America, American Society of Agronomy and Crop Science Society of America International Annual Meeting. Nov 6-9, 2016. Phoenix, AZ.

- Bauer, Mark, **K.A. Lombard**, F. Nez, and L. Garcia. 2016. An Intervention to Promote Navajo Gardening, Nutrition, and Community Wellness. 12th Annual FALCON (First Americans Land-Grant Consortium) Conference. Nov. 5, 2016. Albuquerque, NM.
- *Paul, Davin. 2016. The impact of Residential gardening on food choices, and dietary intake. 12th Annual FALCON (First Americans Land-Grant Consortium) Conference. Nov. 5, 2016. Albuquerque, NM.
- *Tom, Katrina. 2016. An intervention to promote gardening in the Navajo Nation. 12th Annual FALCON (First Americans Land-Grant Consortium) Conference. Nov. 5, 2016. Albuquerque, NM.
- *McCarver, K., **K.A. Lombard**, M.L. Stanford, M. Uchanski. 2016. Capacity Building of Female Farmers' Group through the Use of Bio-fertilizers in an Off-season Vegetable System in Shankapur, Nepal. American Society for Horticultural Sciences. Aug 8-11, 2016. Atlanta, GA.
- Lombard, K.A.**, A. Ulery, B. Hunter, *S. Fullen. 2016. What are the effects of the Gold King Mine spill on San Juan County, NM agricultural irrigation ditches and farms? Environmental Conditions of the Animas and San Juan Watersheds with Emphasis on Gold King Mine and Other Mine Waste Issues. Water Resources Research Institute. May 17, 2016.
- *Fullen, S., **K.A. Lombard**, A. Ulery, B. Hunter. 2016. What are the effects of the Gold King Mine spill on San Juan County, NM agricultural irrigation ditches and farms? Environmental Conditions of the Animas and San Juan Watersheds with Emphasis on Gold King Mine and Other Mine Waste Issues. Water Resources Research Institute. May 17, 2016.
- *Francis, B., **K.A. Lombard**, D.C. Weindorf, A. Ulery, *B. Duda, and *C. Millares. 2016. Rapid Assessment of Soil Metal Concentrations Along the Animas River, New Mexico. Environmental Conditions of the Animas and San Juan Watersheds with Emphasis on Gold King Mine and Other Mine Waste Issues. Water Resources Research Institute. May 18, 2016.
- Lombard, K. A.** and F.J. Thomas, F. 2016. Equipment for Hops Production, 3rd What's Hop'n-Winter Workshop. March 12, 2016. Fort Lewis College, Durango, CO.
- Deschenie, D., **K.A. Lombard**, S. A.A. Beresford, I. Ornelas, and M. Bauer. 2015. Where Health and Horticulture Intersect: A Navajo Wellness Collaboration. Navajo Nation Human Research Review Board 2015 Conference. Oct. 21-22, 2015. Window Rock, AZ.
- Bauer, M., **K.A. Lombard**, and F. Nez. 2015. An Intervention to Promote Navajo Gardening, Nutrition and Community Wellness. Navajo Nation Human Research Review Board 2015 Conference. Oct. 21-22, 2015. Window Rock, AZ.
- Lombard, K.A.**, and others, Update on Gold King Mine Spill. New Mexico Environment Department. Farmington, NM. Oct 20, 2015. About 75 attendees.
- Weindorf, D. and **K.A. Lombard**. Testimony to U.S. Senate Indian Affairs Committee on Gold King Mine Spill Impacts to Agricultural Lands in northwest New Mexico. Washington, D.C. September 16, 2015.
- Deschenie, D., **K.A. Lombard**, S. A.A. Beresford, I. Ornelas, Jesse Jim and M. Bauer. 2015. Where Health and Horticulture Intersect: A Navajo Wellness Collaboration. American Society for Horticultural Sciences. Aug 4-7, 2015. New Orleans, LA.
- Lombard, K.A.**, B. Barnett, R. Arnold. 2015. Tiny Houses for Northwest New Mexico: A Collaboration between San Juan College and the New Mexico State University Agricultural Science Center at Farmington to Demonstrate Sustainable Living. American Society for Horticultural Sciences. Aug 4-7, 2015. New Orleans, LA. **Lombard, K. A.**, B. LaShell, F.J. Thomas, and A. Beye. 2015. Old Fort/NMSU Variety Trial Updates. 2nd What's Hop'n-Winter Workshop. March 22, 2015. Fort Lewis College, Durango, CO.
- Lombard, K.A.**, and B. Maier, Grapevine Disease and Mitigation. Pesticide Applicators Workshop. Farmington, NM. February 5, 2015. About 50 attendees.
- Lombard, K.A.**, and F.J. Thomas. 2015. Four Corners (hops) Production Realities. Hops, grains and craft beer in New Mexico workshop. Questa Village Hall. Questa, NM. January 31, 2015. About 40 attendees.
- *Benally, P., *L. Harvey, D. Deschenie, *J. Zimmerman, **K.A. Lombard**, S.A.A. Beresford, I. Ornelas. 2014. Where health and horticulture intersect: A Navajo wellness collaboration. Preliminary Shiprock, NM results. Society for Advancement of Chicanos and Native Americans in Science (SACNAS) Annual Meeting. October 16-18, 2014. Los Angeles, CA.
- Lombard, K.A.**, B. Maier, F.J. Thomas and others. 2014. Wine Grape Cultivar Performance in the Four Corners Region of New Mexico in 2010-2012. Summer Grape Workshop. August 2, 2014. Los Lunas, NM.

Lombard, K.A., *K. McCarver, F.J. Thomas, R. Acharya, T. Bates. 2014. What's Hop'pening in Northwest New Mexico? Hops (*Humulus lupulus*) trials summary 2009 to 2014. American Society for Horticultural Sciences. July 28-30, 2014. Orlando, FL.

Idowu, O. J., **K.A. Lombard**, D. Hyder, A. Ulery. 2014. Indicators of Soil Quality in a Wastewater-Amended Semi-Arid Soil. Innovation in Soil-Based Onsite Wastewater Treatment Conference, ASA-CSSA-SSSA. April 7, 2014. Albuquerque, New Mexico (Proceedings).

Lombard, K.A., and F.J. Thomas. 2014. Four Corners (hops) Production Realities. 1st What's Hop'n-Winter Workshop. Fort Lewis College. Durango, CO. March 22, 2014.

Lombard, K.A., B. Maier, F.J. Thomas and others. 2014. Wine Grape Cultivar Performance in the Four Corners Region of New Mexico in 2010-2012. The 33rd Southwest Wine and Vine Society Annual Meetings. March 7, 2014. Albuquerque, NM.

Maier, B., **K.A. Lombard**. 2014. Vineyard irrigation: Planning and Layout. The 33rd Southwest Wine and Vine Society Annual Meetings. March 7, 2014. Albuquerque, NM.

RESEARCH SUPPORT

Funding summary 2008-2018. Research support is almost exclusively through external funding sources through collaborative efforts in grant writing and project implementation. Credit is listed through NMSU ARGIS import. Total awarded is the combined collaborative effort (ARGIS and non-ARGIS).

Funding Category	Credit	Total	
		Awarded	Pending
Education/Water Conservation ^z	\$155,897	\$249,735	\$0
Environmental Monitoring/GKM Response ^y	\$250,728	\$462,586	\$0
Horticulture and Health ^x	\$1,472,064	\$7,135,897	\$0
Specialty Crops ^w	\$144,080	\$275,555	\$239,999
Industry ^v	\$0	\$25,000	\$0
Hatch Appropriations ^u	\$0	\$45,000	\$0
TOTAL	\$552,177	\$8,193,773	\$239,999

^zFunding sources include: San Juan College through Senate Bill 190 and Rio Grande Basin Initiative through Texas A&M/NMSU, New Mexico Farmers Market through New Mexico Department of Agriculture

^yFunding sources include: United States Department of Agriculture (USDA)/Natural Resource Conservation Service, NMSU Agricultural Experiment Station, NM Water Resources Research Institute, and New Mexico Environment Department.

^xFunding sources include: National Cancer Institute/National Institutes of Health NMSU/Fred Hutchinson Cancer Research Center U-54 Partnership for the Advancement of Cancer Research, San Juan Regional Medical Center, NMSU Bridges to the Baccalaureate Program, USDA/Tribal Research Grants Initiative, NW NM Council of Governments.

^wFunding sources include: Colorado Department of Agriculture through Fort Lewis College (Durango, CO), New Mexico Department of Agriculture, USDA/National Institutes of Food and Agriculture, USDA/Agriculture and Food Research Initiative, USDA/Western Center for Risk Management, USDA Specialty Crops Research Initiative.

^vFunding sources include Potato USA for Agricultural Science Center Farmington enhancement.

^uThe Hatch Act of 1887 (Multistate Research Fund). This grant is used to support continuing agricultural research at 1862 Land-grant institutions, as well as State agricultural experiment stations.