

W. Gill Giese Jr. PhD

Los Lunas Agricultural Science Center
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EDUCATION

PhD Horticulture, Virginia Polytechnic Institute and State University, Blacksburg, VA (2014)
Dissertation: "Root Pruning and Ground Cover Effect on Cabernet Sauvignon Grapevines"

Teacher Certification: Vocational Agriculture/General Science/Biology, University of Arkansas, Fayetteville, AR (1990)

MS Horticulture, University of Arkansas, Fayetteville, AR (1988)
Thesis: "A Comparison of Nitrogen Rates and Method of Application on Yield and Quality of Three Broccoli Cultivars"

BS Agriculture, University of Arkansas, Fayetteville, AR (1983)

PROFESSIONAL APPOINTMENTS AND WORK EXPERIENCE

Assistant Professor, Viticulture Extension Specialist

July 2017 - Present

Extension Plant Sciences, New Mexico State University, Las Cruces, NM

- Extension:
 - Enhance New Mexico winegrowers' sustainability and long-term economic success
 - Collaborate to deliver programming with NM Wine (commercial growers' association) and NM Wine and Vine Society (amateur winegrowers)
 - Organize and execute annual NM Wine Educational Conference per the technical program and invited speakers
 - Revise existing viticulture extension bulletins, guides and circulars using site specific applied research
 - Create and publish new bulletins, circulars, instructional videos, timely viticulture blog <https://nmsuloslunasasc.blogspot.com> and website
 - Develop and deliver practical and innovative viticulture and enology information vetted by NMSU Viticulture Advisory Board
 - Inform commercial winegrowers, County Extension Agents, private consultants, governmental agencies, Master Gardeners, homeowners and community colleges (workforce development)
 - Execute ~30 workshops/seminars/field days/private pesticide applicator/Master Gardener training sessions annually
 - Make site visits and extension consultations with growers concerning their challenges and questions
 - Distribute production information per new cultivars and rootstocks inclusive of hybrids and table grapes
 - Collect/interpret soil and plant tissue sample results with growers
 - Measure irrigation water and correlate to production goals at collaborative vineyards to improve water use efficiency
 - Mentor, teach, train: graduate/undergraduate students in effective applied agricultural/viticultural research and outreach
- Research:
 - Evaluate rootstocks, table and wine grape cultivars inclusive of hybrids
 - Investigate vineyard cover crop impact on soil health, eco-services, yield and grapevine water relations,
 - Field evaluation of commercial products intended to enhance ripeness, flavor and aroma precursors
 - Survey occurrence and distribution of plant parasitic nematodes in New Mexico vineyards
 - Collate, correlate and interpret statewide climatic data and interpret its impact on grapevine phenology and performance
 - Investigate trellis system and canopy management impact on vine yield and berry composition
 - Investigate water use efficiency of several cultivars for specific production goals: sparkling wine, rose and low alcohol wines

Winemaker/Viticulturist, Shelton Vineyards, Dobson, NC

2005 - 2017

- Directed harvest, processing, fermentation, fining, blending, filtering, aging, bottling, storage and release of ~ 25,000 cases annually
- Supervised 7 vineyard/winery employees
- Maintained wine lab for analysis of berries, must and wine
- Managed 100-acre vineyard: select varieties/clones and rootstocks, pruning, nutrient management, pest control, and frost mitigation
- Assured winery/vineyard compliance: TTB, EPA, NCDA, and OSHA
- Conducted wine education classes, dinners, vendor education, and external events for retail and wholesale clientele
- Managed budget, responsible for bid research and evaluation/purchasing of winery and vineyard supplies, equipment and labor
- Collaborated on applied research and extension with:
 - North Carolina State University: water use cover crops, foliar nitrogen impact on Merlot berry composition
 - Virginia Tech: virus surveys, cover crops, grape rooting patterns, fungicide efficacy, enhancement grape composition
 - North Carolina Cooperative Extension Service: recurring programming for regional winegrower's technical group
- Board Member of North Carolina Wine Council

Lead Viticulture and Enology Instructor, Surry Community College, Dobson, NC

2001 - 2013

- Established, developed and delivered 2-year degree program in Viticulture and Enology
 - Researched, compiled and created curriculum for five new viticulture courses within the North Carolina Community College system: *Introduction to Viticulture, Vineyard Establishment and Development, Grape and Wine Science, Grape Pests, Diseases and Disorders, Vineyard Operations*
- Taught, mentored and supervised internships for students pursuing AA degrees, diplomas or certification, and/or transfer to 4-year institutions
- Designed, planted and managed 5-acre on-campus vineyard

- Maintained and operated 2,500-gallon capacity, on-campus, TTB bonded winery
- Supervised three employees: enology instructor, vineyard and winery technicians
- Harvested ~ 15 wine grape varieties, fermented, filtered, finished, label design, barrel aged, bottled, and marketed 'SURRY CELLARS' wines via student managed accounts at restaurants, retail accounts and wine festivals: sales supported departmental budget
- Advised growers on disease control, cultivar/rootstock selection, vineyard design and construction, canopy management, vineyard IPM
- Taught agriculture courses: Agricultural Marketing, Agricultural Economics, and Soils
- Advised/consulted with Western Virginia Community College, Roanoke, VA, Harrisburg Area Community College, Harrisburg, PA
- Delivered/coordinated continuing education, seminars, workshops and field days with invited speakers and regional winegrowers
- Collaborated on viticulture research projects:
 - Fungicide efficacy and evaluation (Dr. Anton Baudoin, Virginia Tech)
 - Ground cover/water dynamics: (Dr. Josh Heitman, NCSU and Dr. N. Agam, Ben-Gurion Univ., Negev, Israel)
 - NE 10-20 project, evaluation of red vinifera varieties in warm, humid climate (NCSU)
 - Phenological/climate characterization of the Yadkin Valley, NC (Mr. Michael Leonardelli, Univ. of Missouri)
 - On-farm, fertilizer/lime study (Mr. Tim Hambrick, NCDA, NC Cooperative Extension Service)

Research Specialist, Food Science Department, University of Arkansas, Fayetteville, AR **1995 - 2001**

- Managed research vineyard, equipment and greenhouse and pilot winery for processing and analysis of juice and wine
- Executed grape harvest/processing, winemaking and lab/sensory analysis of wine and juice
- Coordinated and supervised graduate and undergraduate student labor in accomplishment of research projects

Graduate and Research Assistant, Agronomy and Entomology Departments, University of Arkansas, Fayetteville, AR **1990 - 1995**

- Vegetable entomology: IPM, insect pests and virus vectors, pesticide screening/efficacy within the IR-4 program
- Small grains breeding: planted/maintained/harvested field plots statewide, supervised labor, collected/analyzed data

Student Teacher, University of Arkansas, Fayetteville, AR and Greene County Tech HS, Paragould, AR **1989 - 1990**

- Taught HS vocational agriculture, horticulture, gas engine/welding/shop, drafting, agronomy, and public speaking

Assistant Plant Breeder, Petoseed Co, Felida FL **1988 - 1989**

- Supervised field crews, conducted field operations, collected data in various vegetable crops
- Assured safety and compliance with methyl bromide treatment of field plots

Student/Graduate Student, Texas A&M University, College Station, TX **1985 - 1988**

- Student and research technician for Dr. Leonard Pike, TAMU, short-day onion breeding

Stock Seed Technician, ARCO Seed Co., El Centro, CA **1983 - 1984**

- Assured safe/efficient culture and harvest of short-day hybrid onion and vegetable seed, breeder to commercial lots
- Managed, treated and stored stock seed in controlled atmosphere warehouse
- Traveled to and contracted seed increase farms in Yuma, AZ and Baja, Mexico

Farmer, Laborer/Manager, ABC Farm, Fayetteville, AR **1975 - 2001**

- Produced grapes/small fruit, flowers, honey, chestnuts, greenhouse plants and vegetables, marketed same via grower's cooperative, grocery stores, restaurants and on-farm retail market
- Designed and installation of drip irrigation systems
- Hosted 'Farm School' for pre-school and elementary age students

PEER-REVIEWED PUBLICATIONS

- Velasco-Cruz, C., G. Giese, D. Zepeda-Saldana, and J. Beacham. *Modeling Nematode Population Dynamics Using a Multivariate Poisson Mixture Model*. Journal Applied Statistics (submitted December, 2020)
- Lujan, P., M. Kersten, and G. Giese. *First Report of Grapevine red blotch virus (GRBV) in New Mexico*. Phytopathology. <https://apsjournals.apsnet.org/journal/phyto>, (submitted: October 2020)
- Dold, C., J. Heitman, G. Giese, A. Howard, J. Havlin and T.J. Sauer. 2018. *Water Dynamics and Water Stress in a North Carolina Vineyard*. Agronomy, 9, 152, March, Special Issue, Crop Evapotranspiration.
- Kelly, M., G. Giese, C. Velasco-Cruz, L. Lawson, S. Ma, M. Wright and B. Zoecklein. 2017. *Effect of Foliar Nitrogen and Sulfur on Petit Manseng (Vitis vinifera L.) Composition*. Journal of Wine Research. May 2017.
- Giese, G., T.K. Wolf, C. Velasco-Cruz, L. Roberts. 2016. *Cover Crop and Root Pruning Effects on the Rooting Pattern of SO4 Rootstock Grafted to Cabernet Sauvignon*. Am. J. Enol. Vitic. 67:106-115.
- Giese, G., T.K. Wolf, C. Velasco-Cruz, L. Roberts and J. Heitman. 2015. *Cover Crop and Root Pruning Impacts on Vegetative Growth, Crop Yield Components, and Grape Composition of Cabernet Sauvignon*. Am. J. Enol. Vitic. 66:212-226.
- Giese, G., C. Velasco-Cruz, L. Roberts, J. Heitman and T.K. Wolf. 2014. *Complete Vineyard Floor Cover Crops Favorably Limit Grapevine Vegetative Growth*. Sci. Hortic. 170: 256-266.
- Holland, S., A. Howard, J.L. Heitman, T.J. Sauer, W. Giese, T.B. Sutton, N. Agam, A. Ben-Gal, and J.L. Havlin. 2014. *Implications of an Interrow Fescue Cover Crop for Below-Canopy Water Dynamics in a vineyard*. Agron. J. 106:1267-1274.
- Holland, S., J. Heitman, A. Howard, T. Sauer, W. Giese, A. Ben-Gal., N. Agam, D. Kool, and J. Havlin. 2013. *Micro-Bowen Ratio System for Measuring ET in a Vineyard Interrow*. Ag. For. Met. 177: 93-100.
- Giese, G. 2010. *Managing Soil Quality in Mid-Atlantic Vineyards*. Crops & Soils. 43: 4-9.
- Giese, G. 2008. *Winegrape Quality: When is it Time to Pick?* In: T.K. Wolf, editor, Wine Grape Production Guide for Eastern North America. NRAES, Cooperative Extension, Ithaca, NY.

EXTENSION PUBLICATIONS

- **Giese, G.**, Frank Sholedice (Ed.), H-338 *Grapevine Phenology: Annual Growth and Development*. Las Cruces: NMSU Extension, 2020.
- Wolf, T. K., **Giese, W. G.**, *Floor Management Strategies for Virginia Vineyards*. Blacksburg, VA: Virginia Cooperative Extension. www.ext.vt.edu, 2020
- NMSU, H-303 Pruning Grapes to the Four-Arm Kniffen System, 2019
- NMSU, H-309 Grape Varieties for North-Central New Mexico, 2019
- NMSU Circular-483 Growing Grapes in New Mexico (*in process January 2021*)

FUNDED GRANTS

- New Mexico Department of Agriculture NMDA: 2020-2022, *Evaluation of 15 Table Grape Varieties at Three Sites* - \$52,818
- County of Santa Fe: 2019-2021, *Vineyard/Winery Incubator Feasibility Study* - \$9,500
- Stahmann Pecan Co. Inc., Las Cruces NM, 2017-2021, NMSU Viticulture, *Annual Undergraduate Viticulture Internship*- \$14,000/year
- National Institute of Food and Agriculture: NIFA-USDA: NMSU, 2017-2019. Co-PI with PI Dr. Ashley Bennett (author) *Extension Implementation Program Area (EIP)*, 20% of grant amount, *IPM Implementation in Specialty Crops: Grapes* – \$634,286
- Golden LEAF Foundation (co-author), North Carolina Wine and Grape Council: Surry Community College, 2009. *Sentinel Vines to Evaluate Powdery Mildew Sensitivity to Fungicides on Winegrapes*, with Dr. Anton Baudoin, Virginia Tech - \$14,364
- NC Wine and Grape Council: Surry Community College, 2009. with Dr. Molly Kelly, Virginia Tech, *Optimized Grape & Wine Potential Through Intensive Vineyard and Winery Management*- \$50,000
- NC Wine and Grape Council/ SRSFC Research Project 2009. with Dr. Sara E. Spayd, NC State University, *Evaluation of Grape Cultivars and Clones for North Carolina*- \$11,754

TEACHING

- **Invited Lecturer – for the following classes:**
 - **Soil Chemistry – Plant and Environmental Sciences Department, New Mexico State University**
September 2020. “Terroir and Soils...Myth and Matter” – Las Cruces, NM
 - **Economics of Making and Marketing Wine – Agricultural Economics Department, New Mexico State University**
October 2018, 2019, 2020. “Growing Grapes in New Mexico” – Las Cruces, NM
 - **Hospitality Restaurant and Tourism Department, New Mexico State University**
each semester August 2017 to February 2021. “Grape and Wine Science” – Las Cruces, NM
 - **Wine and Culture, English Department, University of New Mexico**
September 2019. “Grafting and Propagation of Wine Grapes” – Albuquerque, NM
 - **Organic Fall Vegetable Production, Plant and Environmental Sciences Department, New Mexico State University**
October 2018. “Grape Berry Maturity... When Is It Time to Harvest?” – Las Cruces, NM
 - **Sustainable Agriculture, University of New Mexico**
May 2018. “Sustainability of New Mexico Grape Production” – Albuquerque, NM
 - **Student Symposium STEM program, University of New Mexico, Valencia Campus**
April 2018. “Careers in Agriculture” – Valencia, NM
 - **Instructor - Viticulture Educational Series, High Country Winegrowers Association – Spring 2013, Boone, NC: 10-week viticulture course: for grape growers and county agents**
- **Instructor – Viticulture and Enology: Curriculum Development, Surry Community College – 2001 to 2013, Dobson, NC**
- **Instructor – Spring Viticulture VIN 114, VESTA, Redlands Community College – 2012, 2013, El Reno, OK**

MEETING ABSTRACTS AND PRESENTATIONS

- **Giese, G.**, 2020. *New Mexico Wine Conference, February, Las Cruces, NM*
- **Giese, G.**, 2019. *Grapevine Water Use in New Mexico*, El Llano Estacado/Prairie Partners Annual Conference, December, Tucumcari, NM
- **Giese, G.**, 2019. L. Quintana, C. Velasco-Cruz, and M. Kersten. *Characterization of Grapevine Water Use in Central New Mexico*. New Mexico Water Resources Research Institute, 64th Annual New Mexico Water Conference, Common Water, Sacred Water Tribal perspectives on water issues in New Mexico. November, Pojoaque, NM
- **Giese, G.**, 2019. J.M. Beacham, C. Velasco-Cruz, S.H. Thomas and T.O. Powers. *Plant Parasitic Nematodes Associated with Grapevines, Vitis vinifera, New Mexico*. Society of Nematologists Annual Meeting, July, Raleigh, NC
- **Giese, G.**, 2019. *Regional report, NVEELC (National Viticulture Enology Extension Leadership Conference)*, April, Fredericksburg, TX
- **Giese, G.**, 2019. *New Mexico Wine Conference, March, Albuquerque, NM*
- **Giese, G.**, 2018. *Grape Growing in New Mexico*, El Llano Estacado/Prairie Partners Annual Conference, December 4, Tucumcari, NM
- **Giese, G.**, 2018. *Terroir: Myths and Misconceptions*, Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC, October
- **Giese, G.**, 2018. *Vineyard Ground Covers and Vineyard Soil Compaction*, Virginia Vineyard Association, Winchester, VA, June
- **Giese, G.**, J. Beacham, S.H. Thomas, C. Sutherland, T.O. Powers, L. Roberts, M. Kersten, and A. Bennett. 2018. *Plant Parasitic Nematodes Associated with New Mexico Vineyards*. Society of Nematologists Annual Meeting, July, Albuquerque, NM
- **Giese, G.**, K. Lombard, C. Velasco-Cruz, and M. Leonardelli. 2018. *Rootstock Influence on Scion Mortality, Performance and Berry Composition in The Four Corners Region of New Mexico*. 69th Annual Meeting, ASEV, June, Monterrey, CA
- **Giese, G.**, 2018. *Regional report, NVEELC (National Viticulture Enology Extension Leadership Conference)*, May, Prosser, WA
- **Giese, G.**, 2018. *Varieties and Rootstocks for Arizona, “Vine Balance”*, Arizona Grape Growers, Benson, AZ, March
- **Giese, G.**, 2018. *Root-pruning, intra-row Ground Covers and Cabernet Sauvignon*, Oregon Wine Symposium, Portland, OR, February
- **Giese, G.** 2018. *Viticulture Update, Grapes...Myth, Mystery and Terroir, Grape Anatomy and Physiology: Practical Applications in the Vineyard*. New Mexico Wine Conference, February, Santa Fe, NM
- **Giese, G.** 2016. *Varietal Information: Tannat in North Carolina*. Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC

- **Giese, G.** 2016. *Vine performance after ten years of exposure to under-trellis ground covers*. ASEV, Eastern Sect., July 18-21, St. Louis, MO
- **Giese, G.** 2016. *Vineyard Cover Crops*. Southern SARE Cover Crops Conference, July 18-19, Mt. Olive and Goldsboro, NC
- **Giese, G.** 2016. *Canopy Management Workshop/Field Day*. Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC
- **Giese, G.** 2016. *Spraying to the label and beyond: Science and intuition to optimize disease control*. NC Winegrowers Association, January 22-24, Winston-Salem, NC
- Elder, K., S. Spayd, **G. Giese** and J. Geller. 2015. *Assessment of Winegrape Cultivars in North Carolina*. Abstract, 66th Annual Meeting ASEV, Portland, OR, June 15-18.
- **Giese, G.** 2015. *Canopy Management: What, When, Why and How*. Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC
- **Giese, G.** 2015. *Ozone – Uses and Hazards of Ozone in the Cellar. Safety & Sanitation*. NC Winegrowers Association, Winston-Salem, NC
- **Giese, G.** 2014. *Determination of Harvest Timing*. Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC
- **Giese, G.** 2014. *Dormant Pruning*. NC Winegrowers Association, Winston-Salem, NC
- Howard, A., **G. Giese**, J.L. Heitman, and J.L. Havlin. 2013. *V. Vinifera Water Dynamics in the Southeast: Observations and Modeling*. Am. Soc. Enology Vit. Eastern Sect. Winston-Salem, NC
- Baudoin, A. L. Rallos, M. Nita, **G. Giese**. 2012. *Sentinel vines to monitor fungicide resistance in grape powdery mildew*. Phytopathology 102: S3.1 (abstr.)
- **Giese, G.** 2013. *Winter, Frost and Chilling...Injury?* Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC
- **Giese, G.** 2013. *Cover Crops to Optimize Grapevine Growth*. Grape Expectations: The Bordeaux/New Jersey Connection, Rutgers University Extension Service, Monroe Twp, NJ
- **Giese, G.**, M.K. Kelly, C. Velasco-Cruz, and T.K. Wolf. 2011. *Root Pruning and Cover Crops Influence Berry Composition*. ASEV-Eastern Sect. Baltimore, MD
- Heitman, J.L., A. Howard, S. Holland, N. Agam, A. Ben-Gal, T. Sauer, J. Havlin, and **G. Giese**. 2012. *Below Canopy Evapotranspiration in a Rain-fed Southeastern U.S. Vineyard*. ASA CSSA SSSA International Annual Meetings, Cincinnati, OH
- **Giese, G.**, J.L. Heitman, and T.K. Wolf. 2011. *Perennial Cover Crops to Optimize Vegetative Growth of Cabernet Sauvignon Grapevines*. ASA CSSA SSSA International Annual Meetings, San Antonio, TX
- Holland, S., J.L. Heitman, A. Howard, J. Havlin, T. Sauer, and **G. Giese**. 2011. *Measuring the Influence of an Inter-row Fescue Crop on Below-Canopy Humidity in a North Carolina Vineyard*. ASA CSSA SSSA International Annual Meetings, San Antonio, TX.
- Howard, A., J.L. Heitman, J. Havlin, **G. Giese**, and T. Sauer. 2011. *Water Stress Dynamics for North Carolina V. Vinifera*. ASA CSSA SSSA International/Annual Meetings, San Antonio, TX
- **Giese, G.**, and T.K. Wolf. 2010. *Grapevine Growth Management with Root Pruning and Perennial Cover Crop*. ASEV, 63rd Annual Meeting, Seattle, WA
- **Giese, G.**, and A. Baudoin. 2010. *Sentinel vines to evaluate powdery mildew sensitivity to fungicides on winegrapes and New Options for Winegrape Disease Control*. NC Wine and Grape Council and NC Winegrowers Association, Greensboro, NC
- Howard, A., J.L. Heitman, **G. Giese**, and J.L. Havlin. 2010. *Water Management for North Carolina Wine Grape Production*. Soil Sci. Soc. Raleigh, NC
- Howard, A., J.L. Heitman, J. Havlin, **G. Giese** and T. Sauer. 2010. *Water Dynamics for North Carolina V. Vinifera*. ASA-CSSA-SSSA International Annual Meetings. Long Beach, CA
- **Giese, G.**, and T.K. Wolf. 2009. *Root pruning and groundcover to optimize vine vigor and berry composition in Cabernet Sauvignon grapevines*. Am. J. Enol. Vitic. 60:551A (abstr.)
- **Giese, G.**, M. Kelly and T. K. Wolf. 2007. *Can root pruning and ground covers restrict vegetative growth and improve fruit composition of Cabernet Sauvignon grapevines?* National Viticulture Research Conference, Davis, CA

EXTENSION PRESENTATIONS, WORKSHOPS, MEDIA

- 2020. *New Mexico Wine Pairings for the Holidays*, Ready, Set, Grow!, WEBINAR, collaboration with County Agent, Susan DeVos-Cole
- 2020. *Winterize Your Grapevines*, WEBINAR, collaboration with County Agent, Don Martinez
- 2020. *Balanced Harvest*, WEBINAR, collaboration with Penn State University Extension, August, <https://psuwineandgrapes.wordpress.com/2020/08/24/a-balanced-harvest/>
- 2020. *Pruning workshop*, Santa Ana Pueblo Vineyard Sandoval County, NM, February
- 2020. *Grape growing in NM*, Bi-annual In-service Training, NM Cooperative Extension Agents and Specialists, Las Cruces, January
- 2019. *Wine and Food Pairing for the Holidays*, Los Ranchos Agri-Nature Center, Albuquerque, NM, December
- 2019. *Pesticide Resistance, Private Pesticide Applicator Training/Certification*, Las Cruces and Isleta Pueblo, November
- 2019. *Grape Production, Master Gardener Lectures (6)*, Valencia, Taos, Bernalillo, Santa Fe, and Eddy Counties, March-April
- 2019. *Wine Making 101 Workshop, PARTS I and II*, Albuquerque Bio-Park, Albuquerque, October
- 2019. *Berry Sensory Assessment Workshop*, Agri-Nature Park Los Ranchos, Albuquerque, September
- 2019. *Grape Grafting and Propagation*, Agri-Nature Park Los Ranchos, Albuquerque, January
- 2018. *Wine Making 101 Workshop, PARTS I and II*, Albuquerque Bio-Park, Albuquerque, October
- 2018. *Berry Sensory Assessment Workshop*, Agri-Nature Park Los Ranchos, Albuquerque, September
- 2018. *Grape Production*, Artesia ASC Field Day, September
- 2018. *Cover Crops and Vineyard Health*, Grape Field Day, Fabian Garcia ASC, Las Cruces, August
- 2018. *Wine Analysis Workshop*, Los Lunas ASC, Los Lunas, July
- 2018. *Grape Varieties, Rootstocks and New Mexico Terroir*, Fruit Growers Workshop, Alcalde, NM, March
- 2018. *Grape Production, Master Gardener Lectures (7)*, Valencia, Bernalillo, Sandoval, Santa Fe, Los Alamos, and Cibola Counties, March
- 2018. *Pruning Workshops (6)*: Fabian Garcia ASC, Las Cruces, January, Albuquerque Bio-Park, Albuquerque, January, Jaramillo Vineyard, Belen, February, Los Lunas ASC, Los Lunas, Rio Rancho Agri-Nature Center, Albuquerque, March, Farmington ASC, March
- 2018 to present. YouTube, videos:
 - *Pruning Grapevines After the First Year, PART I* <https://www.youtube.com/watch?v=IDKQ-BwOtfG>
 - *Pruning Grapevines After the First Year, PART II* <https://www.youtube.com/watch?v=zz0fMIYvZ2U>

- *Training Grapevines: Renovation of a Neglected Grapevine* <https://www.youtube.com/watch?v=c8V1da9y3js>
- *Training a Grapevine to a “high-wire” trellis system* <https://www.youtube.com/watch?v=8krxWF8u0M4>
- *Harvesting Grapes: Field Assessment of Grape Maturity* <https://www.youtube.com/watch?v=665iXo1ApXs>
- 2017. *Potassium in the Vineyard and Winery*, Hot-Weather Winemaking Workshop, Los Lunas ASC, Los Lunas, November.
- 2017. *Canopy Management*, Grape Field Day, Fabian Garcia ASC, Las Cruces, August
- 2017. *Grape Varieties for New Mexico*, Los Lunas ASC Field Day, July
- 2016. *Varietal Information, Tannat in North Carolina*. Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC
- 2016. *Canopy Management Workshop/Field Day*. Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC
- 2014. *Determination of Harvest Timing*. Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC
- 2013. *Winter, Frost and Chilling...Injury?* Surry County Vinedressers Meeting, NC Coop. Ext., Dobson, NC

STAKEHOLDER, COMMUNITY, ACADEMIC SERVICE and COLLABORATION

- **Collaborator**, Vineyard Cover Cropping, practical guidelines, Dr. Mark Hoffmann NCSU, Ms. Hannah Lepsch, Ms. Elina Synder, Ext Agents
- **Organizer**, NM Wine Annual Education Conference, collaboration with *NM Wine*, guest speakers and technical program (2017 to present)
- **Board Member**, National Grape and Research Association, Extension and Outreach Committee (November 2019 to present)
- **Board Member**, American Society of Enology and Viticulture, Nominations Committee (October 2019 to present)
- **Board Member**, NM Wine Growers Association (ex-officio, August 2017 to Present)
- **Wine Judge**, NM State Fair Wine Competition, (2017, 2018, 2019)
- **Faculty Sponsor**, for visiting scholar, sustainable agriculture, Ms. Ludim Quintana, (2019)
- **Faculty Sponsor**, for visiting scientist, agricultural statistics, Dr. Ciro Velasco-Cruz, Research Professor, Estadística, Colegio de Posgraduados, Carretera Mexico-Texcoco, Estado de Mexico, Mexico (2018-2020)
- **Board Member**, S.T.E.M. Advisory Board, UNM Valencia Campus (August 2018 to Present)
- **Reviewer**: *American Journal Enology and Viticulture, Agronomy, HortScience, HortTechnology, Plant and Soil, Soil Systems, Scientia Horticulturae*,
- **Volunteer**, IPM/EIP grant funded Demonstration Garden, Los Lunas ASC (2017 to present)
- **Volunteer**, Soil Health Institute (July 2018)

PROFESSIONAL DEVELOPMENT

- 2020. University of California, Chemistry for Winemakers VIT259, July to September, (online)
- 2020. University of Arizona, Greenhouse Crop Production and Engineering Design Short Course, Controlled Environment Agriculture Center, Tucson, AZ, March 2-5 <https://ceac.arizona.edu/events/cea-short-course>
- 2019. Lean Farm School, Clay Bottom Farm, Goshen, IN, June <https://www.claybottomfarm.com/>
- 2018. Fertigation, Drip/Micro Irrigation Design Courses, Irrigation Training and Research Center, California Polytechnic State University, San Luis Obispo, CA, August <http://www.itrc.org/>

PROFESSIONAL MEMBERSHIPS

- American Society of Enology and Viticulture (ASEV)
- American Society of Horticulture (ASHS)

AWARDS

- Graduate Student Scholarship, 2005. ASEV Eastern Section, St Louis, MO
- Best Student Paper, 2009. *Root Pruning and Cover Crops to Optimize Vine Vigor and Berry Composition in Cabernet Sauvignon Grapevines*, ASEV-Eastern Section, Painesville, OH