

SONET VAN ZYL
CURRICULUM VITAE

Department of Viticulture & Enology
California State University, Fresno
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PROFESSIONAL EXPERIENCE

Faculty – Assistant Professor in Viticulture, Table & Raisin Grape Production

Department of Viticulture & Enology, California State University, Fresno – 2011 - Current

- Conduct research and teach undergraduate and graduate level courses in the areas of general viticulture, as well as table and raisin grape production.

Research Assistant

Department of Viticulture & Enology, UC Davis, CA, USA – 2008 to 2010

- Made controlled crosses to establish new plant populations to study the inheritance of *Xiphinema index* (nematode) resistance in grapevine rootstocks
- Established a new screening method to quantify *Xiphinema index* feeding
- Tested various accessions with a *Vitis arizonica* background to study *Xiphinema index* resistance
- Performed laboratory work to establish a SSR marker-based genetic map for *Xiphinema index* resistance in a population with *Vitis arizonica* in the background

Researcher

Agricultural Research Council (ARC), Infruitec-Nietvoorbij, Stellenbosch, South Africa. Breeding and Evaluation Division – 2002 to 2007

Project leader for two projects: the evaluation and screening of new table grape selections and cultivars and the evaluation of new selections, cultivars and clones for drying characteristics

- Administrative responsibilities included completing annual progress reports, reviewing annual budgets and establishing project goals
- Facilitated the day-to-day duties on two experimental farms during the growing season
- Was in charge of all viticultural aspects for both projects, including planting vines, canopy management, harvest, cold storage for table grapes, drying protocols, organoleptic evaluation of table grapes and raisins, and collection of plant material
- Worked closely with table and raisin grape producers who tested new varieties under contract in different growing areas in South Africa
- Responsible for the collaboration with international clients for the testing of new varieties
- Supervised technical personnel and seasonal workers in the field
- Presented and attended several talks to the table and raisin grape farming community
- Supervised undergraduate students from the Department of Viticulture & Enology at Stellenbosch University, as they performed summer canopy management, hormone treatments, bunch manipulations and thinning sprays for new table grape selections in part to complete their studies
- Organized several information days in the vineyards to introduce national and international clients to look at new and promising table and raisin grape selections

TEACHING EXPERIENCE

Department of Viticulture & Enology, Fresno State – 2011 – Current

Graduate level:

- Developed and taught VEN 280 – Research in Viticulture and Enology – 2012, 2014
- Supervised VEN 299 – Thesis – 2013, 2014
- Supervised VEN 290 – Independent Study – 2012, 2013

Undergraduate level:

- Developed and taught VIT 1 – World Viticulture – 2012, 2013
- Developed and taught VIT 103 – Raisin production and processing – 2012, 2013
- Developed and taught VIT 105 – Table grape production and marketing – 2011, 2013
- Developed and taught VIT 165 – Grapevine varieties and rootstocks – 2012, 2013
- Supervised VIT 190 – Independent Study – 2012, 2013, 2014
- Taught VIT 196 – Viticulture Projects – 2013, 2014

Agricultural Research Council (ARC), Infruitec-Nietvoorbij, Stellenbosch, South Africa. Breeding and Evaluation Division – 2003 to 2006

Supervised and taught undergraduate students practical field work in table and raisin grape vineyards

- Pruning practices for table and raisin grapes
- Summer canopy management
- Hormone applications and thinning sprays
- Harvest practices
- Cold storage management for table grapes
- Evaluation practices for new cultivars and selections
- Pest and disease management

Invited as a guest lecturer for undergraduate Viticulture classes at Stellenbosch University – 2005 & 2009

EDUCATION

PhD (Agric) in Viticulture

Stellenbosch University, South Africa, and UC Davis, CA, USA – 2012

- Dissertation title: Inheritance and genetic mapping of *Xiphinema index* resistance derived from *Vitis arizonica*
- Attended and presented at several national and international conferences in South Africa and the USA
- Audited courses in:
 - Nematology
 - Complex trait dissection and methods in marker-assisted breeding

MScAgric in Viticulture

Stellenbosch University, South Africa – 2003

- Completed graduate-level course work in Viticultural Science
- Completed a comprehensive research thesis
 - Thesis title: The influence of an open air hydroponic system on the production of table grapes: A case study
- Attended a workshop on Integrated Production of Wine
- Successfully completed a course on Wines of the World presented by the Cape Wine Academy
- Attended and presented at national conferences and workshops

BScAgric in Viticulture and Genetics (Plant Breeding)

Stellenbosch University, South Africa – 2000

- Four-year degree with Viticulture and Genetics (Plant Breeding) as separate dual majors
- Minor subjects included several modules in Soil Science
- Successfully completed a course in Integrated Pest Management
- Successfully completed a course in “Wines of the World” – Cape Wine Academy

PEER-REVIEWED PUBLICATIONS

- Van Zyl, S., Vivier, M.A. & Walker, M.A., 2012. *Xiphinema index* and its relationship to grapevines. *S. Afr. J. Enol. Vitic.* 33(1) 21-32.
- Van Zyl, S., Vivier, M.A., Walker, M.A., 2012. Evaluating the inheritance of *Xiphinema index* resistance derived from three grapevine populations with *Vitis arizonica* backgrounds. *J. Plant disease*. In Preparation.
- Van Zyl, S., Vivier, M.A., Walker, M.A., 2012. The effectiveness of *Xiphinema index* feeding on grapevines using different inoculation methods and plant sources under greenhouse conditions. *Am. J. Enol. Vitic.* In Preparation.
- Van Zyl, S., Vivier, M.A., Walker, M.A., 2012. The evaluation of different *Vitis arizonica* populations and accessions for *Xiphinema index* resistance. *Theor. Appl. Genet.* In Preparation.
- Van Zyl, S., Riaz, S., Vivier, M.A., Walker, M.A., 2012. A framework genetic map for *Xiphinema index* resistance derived from *Vitis arizonica*. *Am. J. Enol. Vitic.* In Preparation.
- Van Zyl, S., Vivier, M.A., Riaz, S. & Walker, M.A., 2010. The genetic mapping of *Xiphinema index* resistance derived from *Vitis arizonica* by using SSR markers. *Acta Hort.* In Press.

NON-PEER REVIEWED PUBLICATIONS

- Van Zyl, S., 2013. The importance of *Xiphinema index* in California. The Catch Wire. A quarterly newsletter, Department of Viticulture and Enology. May 2013.
- Van Zyl, S. 2013. Raisin production in South Africa. San Joaquin Valley Raisin Production and Marketing Symposium. 23 January 2013.
- Burger P. & Van Zyl, S., 2004. Breeding table grapes at the ARC Infruitec-Nietvoorbij (in Afrikaans). Deciduous Fruit Producers' Trust Newsletter, South Africa.

DISSERTATION AND THESIS

- Van Zyl, S., 2012. Inheritance and genetic mapping of *Xiphinema index* resistance derived from *Vitis arizonica*. PhD Dissertation, Stellenbosch University. Private Bag X1. 7602 Matieland, South Africa. In Progress.
- Van Zyl, S., 2003. The influence of an open air hydroponic system on the production of table grapes: A case study. MScAgric Thesis, Stellenbosch University. Private Bag X1, 7602 Matieland, South Africa.

ANNUAL PROGRESS REPORTS

- Van Zyl, S. The evaluation of different cultural practices on Scarlet Royal to determine post harvest quality and using different plastic cover materials. California Table Grape Commission. 2012 – 2013
- Fidelibus, M. & Van Zyl, S. Evaluation of nematode resistant rootstocks for use with early ripening raisin varieties grown for Dried on the Vine raisin production. California Raisin Marketing Board. 2012 - 2013

- Van Zyl, S., 2003 – 2007. The evaluation of new selections, cultivars and clones for drying characteristics. *Annual Progress Report*. ARC Infruitec-Nietvoorbij, Private Bag X5026, Stellenbosch 7599, South Africa.
- Van Zyl, S., 2003 – 2007. The evaluation and screening of new table grape selections and clones. *Annual Progress Report*. ARC Infruitec-Nietvoorbij, Private Bag X5026, Stellenbosch 7599, South Africa.

FUNDED RESEARCH PROJECTS

- Van Zyl, S. The evaluation of different cultural practices on Scarlet Royal to determine post harvest quality and using different plastic cover materials. Agricultural Research Institute, California State University – 2013, 2014 \$33,000.00 annually
- Van Zyl, S. The evaluation of different cultural practices on Scarlet Royal to determine post harvest quality and using different plastic cover materials. California Table Grape Commission. 2012, 2013 \$29,129.00 annually
- Fidelibus, M. & Van Zyl, S. Evaluation of nematode resistant rootstocks for use with early ripening raisin varieties grown for Dried on the Vine raisin production. California Raisin Marketing Board. 2012, 2013 \$10,000.00 annually
- Van Zyl, S. Evaluation of nematode resistant rootstocks for use with early ripening raisin varieties grown for Dried on the Vine raisin production. Agricultural Research Institute, California State University – 2014 \$10,000.00
- Van Zyl, S., Kurtural S.K. & Kennedy, J.A. Interactive effects of plant growth regulators and phenology based regulated deficit irrigation on the color development of Autumn Royal table grapes. Grapery – 2014 \$15,200.00
- Van Zyl, S., Kurtural S.K. & Kennedy, J.A. Interactive effects of plant growth regulators and phenology based regulated deficit irrigation on the color development of Autumn Royal table grapes. Agricultural Research Institute, California State University – 2014 \$60,800.00

FUNDRAISING AND GIFTS

- California Table Grape Commission Undergraduate Internship program – 2012 & 2013 \$7,500 annually
- Raisin Grape Program account in memory of Earl Rocca – 2013 \$1,950
- Sun Maid – 2014 \$5,000.00

GRADUATE STUDENTS

Thesis Committees:

- David Langone - 2013
- Jenifer Barak - 2013

Supervisor:

- Sijie Zhu – 2012, 2013, 2014
- Xiaofan Zhao – 2012, 2013, 2014
- Victoria Towers – 2013, 2014

Supervised post-doctoral scholar from Brazil – Marcio Czepak – 2012, 2013

POSTER PRESENTATIONS

- Towers, V. & Van Zyl, S., 2014. The evaluation of plant growth regulators on Scarlet Royal table grapes to determine post harvest quality. American Society for Horticultural Sciences Conference, July 27 - August 1st 2014, Orlando, FL.

- Towers, V. & Van Zyl, S., 2013. The evaluation of different cultural practices on Scarlet Royal table grapes to determine post-harvest quality. American Society for Horticultural Sciences Conference, July 22-25, Palm Desert, CA.
- Zhu, S., Obenland, D.M., Van Zyl, S., Gabler, F. & Smilanick, J.L., 2013. The influence of post-veraison foliar potassium applications on table grape berry quality. American Society for Horticultural Sciences Conference, July 22-25, Palm Desert, CA.
- Zhao, X., Narciso, J.A., Van Zyl, S. & Smilanick, J.L., 2013. Chlorine Dioxide sachets for the control of post harvest decay of ‘Crimson Seedless’ table grapes. American Society for Horticultural Sciences Conference, July 22-25, Palm Desert, CA.
- Van Zyl, S., Vivier, M.A., Riaz, S. & Walker, M.A., 2010. The genetic mapping of *Xiphinema index* resistance derived from *Vitis arizonica* by using SSR markers. 10th International Conference on Grapevine Breeding and Genetics. 1-5 August 2010, Geneva, New York, USA.
- Van Zyl, S., Vivier, M.A. & Walker, M.A., 2009. Inheritance of *Xiphinema index* resistance derived from *Vitis arizonica*. 60th Annual meeting, American Society for Enology & Viticulture, 23-26 June 2009, Napa, California, USA.
- Van Zyl, S., Vivier, M.A. & Walker, M.A., 2009. Inheritance of *Xiphinema index* resistance derived from *Vitis arizonica*. 4th International SASEV conference on Enology & Viticulture – Beyond 2010, 28-30 July 2009, Cape Town, South Africa.
- Van Zyl, S., Stassen, P.J.C., & Vivier, M.A., 2002. The influence of open air hydroponic systems on table grape production: A case study. 26th Conference of the South African Society for Enology & Viticulture, Somerset West, South Africa.

ORAL PRESENTATIONS

- Van Zyl, S. 2014. The Effects of Foliar Potassium Applications on Table Grape Quality. Grape Day, Department of Viticulture and Enology, California State University, Fresno, August 5th, 2014, Fresno CA.
- Van Zyl, S. 2014. The Effects of Foliar Potassium Applications on Table Grape Quality. American Society for Horticultural Sciences Conference, July 27th - August 1st 2014, Orlando FL.
- Van Zyl, S. 2014. Rootstocks for Raisin Production. San Joaquin Valley Grape Symposium. January 8th, 2014, Easton CA.
- Van Zyl, S. 2013. Raisin Production in South Africa. San Joaquin Valley Raisin Production and Marketing Symposium. January 23rd, 2013, Easton CA.
- Van Zyl, S. 2012. Fundamentals of Grapevine Pruning. CSU San Marcos Seminar Series. December 8th 2012, San Marcos CA.
- Van Zyl, S. 2012. Post-harvest Pest Management. CSU San Marcos Seminar Series. December 8th, 2012, San Marcos CA.
- Van Zyl, S. 2012. Rootstocks and Soil Pests. CSU San Marcos Seminar Series. December 8th, 2012, San Marcos CA.
- Van Zyl, S. 2012. Inheritance and Genetic Mapping of *Xiphinema index* Resistance Derived from *Vitis arizonica*. Grape Day, Department of Viticulture and Enology, Fresno State. August 14th, 2012.
- Van Zyl, S., 2006. Drying Characteristics of Known Table Grape Cultivars (In Afrikaans). South African Society for Enology and Viticulture. Table and raisin grape short course. August 1st, 2006, Upington, Northern Cape, South Africa.
- Burger, P. & Van Zyl, S., 2005. Goals, Progress and New Selections within the ARC Table Grape Breeding Programme (In Afrikaans). South African Society for Enology & Viticulture. Table and raisin grape short course, August 10th, 2005, Goudini, Western Cape, South Africa.

PROFESSIONAL AFFILIATIONS

- Member of the American Society for Enology & Viticulture – 2009 & 2010, 2012 - *current*
- Member of the South African Society for Enology & Viticulture – 2002 & 2007
- Member of the International Society for Horticultural Science – 2011
- Member of the American Society for Horticultural Sciences – 2013 - *current*

PROFESSIONAL ACTIVITIES AND SERVICES

- Public alternate member, California Raisin Marketing Board – 2012 - *current*
- Member and grant reviewer - American Vineyard Foundation Cultural Practices Committee – 2012
- Member and grant reviewer – California Table Grape Commission and California Raisin Marketing Board combined annual grant review panel - 2013
- Member and grant reviewer - California Table Grape Commission Scholarship Committee – 2012 – *current*
- Grant reviewer – USDA-ARS National Program 301 Panel 12 – Fruits: Grape – 2013
- Involved with the FFA State finals and Field Day – 2012 - *current*

COMMITTEES – FRESNO STATE

- Chair – Research and Scholarly Activities Committee, Jordan College of Agricultural Sciences and Technology, Fresno State – 2014
- Research and Scholarly Activity Committee, Jordan College of Agricultural Sciences and Technology, Fresno State – 2011 – *current*
- Faculty Hearing Panel, Fresno State – 2012 – *current*
- Untenured Faculty Organization, Fresno State – 2012 – *current*
- New Faculty Search Committee, Viticulture position – 2012 and 2013
- New Faculty Search Committee, Wine Chemist position – 2012 and 2013
- New Faculty Search Committee, Horticulture - 2013
- Advisor – Viticulture Club – 2012 – *current*
- Honors Council – Jordan College of Agricultural Sciences and Technology – 2013 – *current*
- University Agricultural Laboratory Committee – Jordan College of Agricultural Sciences and Technology – 2013 – *current*

SCHOLARSHIPS

- Departmental Scholarship, Viticulture & Oenology, Stellenbosch University – 2010
- NRF Scholarship and the South African Table Grape Industry Scholarship – 2008 & 2009
- South African Table Grape Industry Scholarship – 2007
- Deciduous Fruit Producer's Trust Scholarship – 2001 & 2002