

**SONET VAN ZYL**  
**CURRICULUM VITAE**

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## **PROFESSIONAL EXPERIENCE**

### **Faculty – Assistant Professor of 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 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, 2015

### *Undergraduate level:*

- Developed and taught VIT 1 – World Viticulture – 2012, 2013
- Developed and taught VIT 103 – Raisin production and processing – 2012, 2013, 2014, 2015
- Developed and taught VIT 105 – Table grape production and marketing – 2011, 2013

- Developed and taught VIT 165 – Grapevine varieties and rootstocks – 2012, 2013, 2014, 2015
- Supervised VIT 190 – Independent Study – 2012, 2013, 2014, 2015
- Taught VIT 196 – Viticulture Projects – 2013, 2014, 2015

Invited as a guest lecturer for PLANT 100, Fresno State – 2015

Invited as a guest lecturer for PLANT 150, Fresno State – 2015

*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

- Nelson, C.C., Kennedy, J.A., Van Zyl, S., Fidelibus, M.W. & Kurtural, S.K., 2016. Applied water amounts and rootstocks interact on productivity and phenolic composition of Zinfandel in San Joaquin Valley of California. Hort Science. In Review.
- Obenland, D., Feliziani, E., Zhu, S., Zhao, X., Margosan, D., Gabler, F.M., Van Zyl, S., Romanazzi, G., Smilanick, J., Beno-Moualem, D., T., Kaplunov & Lichter, A. 2015. Potassium application to table grape clusters after veraison increases soluble solids by enhancing berry water loss. *Scientia Horticulturae*. 187. 58-64.
- Van Zyl, S., Vivier, M.A., Riaz, S. & Walker, M.A., 2014. The genetic mapping of *Xiphinema index* resistance derived from *Vitis arizonica* by using SSR markers. *Acta Hort*. 1046. 165-168.
- 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.

## NON-PEER REVIEWED PUBLICATIONS

- Daane, K.M., Hochman Adler, V., Lutz, T. M., Wilson, H., Hutchins, J., Cooper, M. L., Hogg, B. N., Blaisdell, K., Dervishian, G., Van Zyl, S., Kurtural, K., Chen, J., Oh, H., Fonseca-Espinoza, N., Oneto, R., Golino, D., and Almeida, R. 2016. Vine mealybug controls – investigating improvement to current control programs, pp 23-29. In: Proceedings, San Joaquin Valley Table Grape Seminar, February 17, 2016. California Table Grape Commission. Fresno, CA.
- Van Zyl, S., 2015. Less water, more color: Table grape study investigates irrigation, and color development. *American Vineyard*. 24(4) 22-23.
- Van Zyl, S., 2014. Less water, more color: Table grape study investigates relationship between irrigation, plant growth regulators and color development. *The Catch Wire*. A quarterly newsletter, Department of Viticulture and Enology. Dec. 2014.
- 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. Agricultural Research Institute, California State University – 2013 – 2016
- 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 – 2015 – current
- 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, 2015

- 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 – 2014
- 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 – 2014
- Van Zyl, S. The evaluation of new selections, cultivars and clones for drying characteristics. *Annual Progress Report*. ARC Infruitec-Nietvoorbij, Private Bag X5026, Stellenbosch 7599, South Africa – 2003 – 2007
- Van Zyl, S. The evaluation and screening of new table grape selections and clones. *Annual Progress Report*. ARC Infruitec-Nietvoorbij, Private Bag X5026, Stellenbosch 7599, South Africa – 2003 – 2007

#### **FUNDED RESEARCH PROJECTS**

- Van Zyl, S., Daane, K.M., Westphal, A., Dervisian, G. & Hochman-Adler, V. Characterizing insecticide movement patterns in grapevine using HPLC analysis. Agricultural Research Institute, California State University - 2016 ~\$76,000 annually for two years
- Daane K.M., Van Zyl, S., Kurtural, S.K. & Westphal, A. Improving winter and spring vine mealybug controls: using HPLC to follow insecticide movement in the vine. CDEA. 2016 ~\$20,000 annually for two years
- 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
- Fidelibus, M. & Van Zyl, S. Evaluation of grapevine rootstock selections. American Vineyard Foundation – 2014 \$19,401

#### **INDUSTRY SERVICE PROJECTS**

- Allied Grape Growers – Grape juice sample analysis – 2016 Max. \$15,000.00
- Agajanian Vineyards – Grape juice sample analysis – 2016 Max. \$15,000.00

#### **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
- Oro Agri donation – 2016 \$4,890.00

## GRADUATE STUDENTS

### *Thesis Committees:*

- David Langone – 2013
- Jenifer Barak – 2013
- Annabel Rodriguez – 2016
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### *Supervisor:*

- Sijie Zhu – 2012, 2013, 2014
- Xiaofan Zhao – 2012, 2013, 2014
- Victoria Towers – 2013, 2014, 2015
- Andrew Beebe – 2016
- Cliff Yu – 2016

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 1<sup>st</sup> 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. 10<sup>th</sup> 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*. 60<sup>th</sup> 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*. 4<sup>th</sup> 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. 26<sup>th</sup> Conference of the South African Society for Enology & Viticulture, Somerset West, South Africa.

## ORAL PRESENTATIONS

- Van Zyl, S., 2016. Grape genetics and breeding: New grape cultivars. Arcenciel Agricultural Unit, Taanayel, Lebanon. May 16<sup>th</sup>, 2016.
- Van Zyl, S., 2016. Grapevine rootstocks and soil pests. Arcenciel Agricultural Unit, Beirut, Lebanon. May 18<sup>th</sup>, 2016.
- Van Zyl, S., 2016. Vineyard establishment: Table grapes. Arcenciel Agricultural Unit, Taanayel, Lebanon. May 18<sup>th</sup>, 2016.
- Van Zyl, S., 2016. Table grape training and trellising. Arcenciel Agricultural Unit, Taanayel, Lebanon. May 19<sup>th</sup>, 2016.

- Van Zyl, S., Kurtural, S.K. & Kennedy J.A. 2015. Managing anthocyanin concentration, proportion, acylation and hydroxylation of “Autumn Royal” table grape with plant growth regulator and applied water amount interaction. American Society for Horticultural Sciences Conference, August 4<sup>th</sup> - August 7<sup>th</sup> 2015, New Orleans LA.
- Van Zyl, S. 2015. Testing new rootstock selections for the San Joaquin Valley. Grape Day, University of California, Kearney Agricultural Research and Extension Center, August 11<sup>th</sup>, 2015, Parlier CA.
- 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 5<sup>th</sup>, 2014, Fresno CA.
- Van Zyl, S. 2014. The Effects of Foliar Potassium Applications on Table Grape Quality. American Society for Horticultural Sciences Conference, July 27<sup>th</sup> - August 1<sup>st</sup> 2014, Orlando FL.
- Van Zyl, S. 2014. Rootstocks for Raisin Production. San Joaquin Valley Grape Symposium. January 8<sup>th</sup>, 2014, Easton CA.
- Van Zyl, S. 2013. Raisin Production in South Africa. San Joaquin Valley Raisin Production and Marketing Symposium. January 23<sup>rd</sup>, 2013, Easton CA.
- Van Zyl, S. 2012. Fundamentals of Grapevine Pruning. CSU San Marcos Seminar Series. December 8<sup>th</sup> 2012, San Marcos CA.
- Van Zyl, S. 2012. Post-harvest Pest Management. CSU San Marcos Seminar Series. December 8<sup>th</sup>, 2012, San Marcos CA.
- Van Zyl, S. 2012. Rootstocks and Soil Pests. CSU San Marcos Seminar Series. December 8<sup>th</sup>, 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 14<sup>th</sup>, 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 1<sup>st</sup>, 2006, Uppington, 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 10<sup>th</sup>, 2005, Goudini, Western Cape, South Africa.

## PROFESSIONAL AFFILIATIONS

- Member of the Plant Growth Regulator Society of America – 2015
- 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

- Land O’Lakes Volunteer for the Middle East and North Africa Farmer-to-Farmer Program in Lebanon - 2016
- Public member, Raisin Administrative Committee – 2014 - *current*
- Public 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 - *current*
- 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 FFA State finals and Field Day – 2012 – *current*
- Candidate review panel – Research Horticulturalist or Research Geneticist – USDA ARS-D15W-0013 – 2015

## **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*

## **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*

October 2016