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## Extension 45%, Research 40%, Teaching 10%, Service 5%

## EDUCATION AND EMPLOYMENT INFORMATION

### Education

### Ph.D., Entomology, Stellenbosch University, South Africa, 2003 M.Sc., Integrated Pest Management, Stellenbosch University, 1998 H.E.D. (Teaching Higher Education Diploma), Stellenbosch University, 1993 B.Sc., Botany and Zoology, Stellenbosch University, 1992

### Applicable Employment History

2017 –Present. Professor, Department of Horticulture, Oregon State University

2012 –2017. Associate Professor, Department of Horticulture, Oregon State University

2006-2012. Assistant Professor, Department of Horticulture, Oregon State University, Corvallis, Oregon

2003-2005. Postdoctoral Researcher, Department of Environmental Science, Policy, and Management, University of California, Berkeley, California

**SELECTED PEER REVIEWED PUBLICATIONS**

Mermer, S., G. Tait, F. Pfab, E. Mirandola, A. Bozaric, C. D. Thomas, M. Moeller, K. G. Oppenheimer, L. Xue, L. Wang, and V. M. Walton. 2022. Comparative Insecticide Application Techniques (Micro-Sprinkler) Against Drosophila suzukii Matsumura (Diptera: Drosophilidae) in Highbush Blueberry. Environmental Entomology. 51: 413–420.

Panthi, B., K. R. Cloonan, C. Rodriguez-Saona, B. D. Short, D. M. Kirkpatrick, G. M. Loeb, N. C. Aflitto, N. Wiman, H. Andrews, F. A. Drummond, P. D. Fanning, E. Ballman, B. Johnson, D. J. Beal, E. H. Beers, H. J. Burrack, R. Isaacs, J. Perkins, O. E. Liburd, A. R. Lambert, V. M. Walton, E. T. Harris, S. Mermer, D. Polk, A. K. Wallingford, R. Adhikari, and A. A. Sial. 2022. Using Red Panel Traps to Detect Spotted-Wing Drosophila and its Infestation in US Berry and Cherry Crops. Journal of Economic Entomology. 115: 1995–2003.

Tait, G., S. Mermer, R. D. B. Chave, M. V. Rossi-Stacconi, C. Kaiser, and V. M. Walton. 2022. A Horticultural Cuticle Supplement Can Impact Quality Characters and Drosophila suzukii Damage of Several Small and Stone Fruit. Environmental Entomology. 51: 772–779.

Mermer, S., F. Pfab, G. Tait, R. Isaacs, P. D. Fanning, S. Van Timmeren, G. M. Loeb, S. P. Hesler, A. A. Sial, J. H. Hunter, H. K. Bal, F. Drummond, E. Ballman, J. Collins, L. Xue, D. Jiang, and V. M. Walton. 2021. Timing and order of different insecticide classes drive control of Drosophila suzukii; a modeling approach. J Pest Sci. 94: 743–755.

Ðurović, G., A. Alawamleh, S. Carlin, G. Maddalena, R. Guzzon, V. Mazzoni, D. T. Dalton, V. M. Walton, D. M. Suckling, R. C. Butler, S. Angeli, A. De Cristofaro, and G. Anfora. 2021. Liquid Baits with Oenococcus oeni Increase Captures of Drosophila suzukii. Insects. 12: 66.

Rossi Stacconi, M. V., G. Tait, D. Rendon, A. Grassi, G. Boyer, R. Nieri, and V. M. Walton. 2020. Gumming Up The Works: Field Tests of a New Food-Grade Gum as Behavioral Disruptor for Drosophila suzukii (Diptera: Drosophilidae). Journal of Economic Entomology. 113: 1872–1880.

Mermer, S., F. Pfab, G. A. Hoheisel, H. Y. Bahlol, L. Khot, D. T. Dalton, L. J. Brewer, M. V. R. Stacconi, C. Zhang, L. Xue, and V. M. Walton. 2020. Canopy spray deposition and related mortality impacts of commonly used insecticides on Drosophila suzukii Matsumura (Diptera: Drosophilidae) populations in blueberry. Pest Management Science. 10.1002/ps.5672

Tait, G., K. Park, R. Nieri, M. C. Crava, S. Mermer, E. Clappa, G. Boyer, D. T. Dalton, S. Carlin, L. Brewer, V. M. Walton, G. Anfora, and M. V. Rossi-Stacconi. 2020. Reproductive Site Selection: Evidence of an Oviposition Cue in a Highly Adaptive Dipteran, Drosophila suzukii (Diptera: Drosophilidae). Environ. Entomol. 10.1093/ee/nvaa005

Cloonan, K.R., Hernández-Cumplido, J., De Sousa, A.L.V., Ramalho, D.G., Burrack, H.J., Della Rosa, L., Diepenbrock, L.M., Ballman, E., Drummond, F.A., Gut, L.J., Hesler, S., Isaacs, R., Leach, H., Loeb, G.M., Nielsen, A.L., Nitzsche, P., Park, K.R., Syed, Z., Van Timmeren, S., Wallingford, A.K., Walton, V.M., Rodriguez-Saona, C., 2019. Laboratory and Field Evaluation of Host-Related Foraging Odor-Cue Combinations to Attract Drosophila suzukii (Diptera: Drosophilidae). J Econ Entomol. <https://doi.org/10.1093/jee/toz224>

Dalton, D.T., Hilton, R.J., Kaiser, C., Daane, K.M., Sudarshana, M.R., Vo, J., Zalom, F.G., Buser, J.Z., Walton, V.M., 2019. Spatial Associations of Vines Infected With Grapevine Red Blotch Virus in Oregon Vineyards. Plant Disease PDIS-08-18-1306-RE. <https://doi.org/10.1094/PDIS-08-18-1306-RE>

Lee, J.C., Wang, X., Daane, K.M., Hoelmer, K.A., Isaacs, R., Sial, A.A., Walton, V.M., 2019. Biological Control of Spotted-Wing Drosophila (Diptera: Drosophilidae)—Current and Pending Tactics. J Integr Pest Manag 10. <https://doi.org/10.1093/jipm/pmz012>

Miller, B., Dalton, D.T., Xue, L., Rossi Stacconi, M.V., Walton, V.M., 2019. Use of filbertworm (Cydia latiferreana) mating disruption within a hazelnut IPM program. Crop Protection 122, 118–124. <https://doi.org/10.1016/j.cropro.2019.04.030>

Rendon, D., Hamby, K.A., Arsenault, Benoit, A.L., Taylor, C.M., Evans, R.K., Roubos, C.R., Sial, A.A., Rogers, M., Petran, A., Timmeren, S.V., Fanning, P., Isaacs, R., Walton, V., n.d. Mulching as a cultural control strategy for Drosophila suzukii in blueberry. Pest Management Science 0. <https://doi.org/10.1002/ps.5512>

Rendon, D., Walton, V., Tait, G., Buser, J., Souza, I.L., Wallingford, A., Loeb, G., Lee, J., 2019. Interactions among morphotype, nutrition, and temperature impact fitness of an invasive fly. Ecology and Evolution 9, 2615–2628. <https://doi.org/10.1002/ece3.4928>

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Silva, Cherre S. Bezerra Da, Price, B.E., Soohoo-Hui, A., Walton, V.M., 2019. Factors affecting the biology of Pachycrepoideus vindemmiae (Hymenoptera: Pteromalidae), a parasitoid of spotted-wing drosophila (Drosophila suzukii). PLOS ONE 14, e0218301. <https://doi.org/10.1371/journal.pone.0218301>

Silva, Cherre Sade Bezerra Da, Price, B.E., Walton, V.M., 2019b. Water-Deprived Parasitic Wasps ( Pachycrepoideus vindemmiae ) Kill More Pupae of a Pest ( Drosophila suzukii ) as a Water-Intake Strategy. Scientific Reports 9, 3592. <https://doi.org/10.1038/s41598-019-40256-8>

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Daane, K. M., M. C. Middleton, R. F. H. Sforza, N. Kamps-Hughes, G. W. Watson, R. P. P. Almeida, M. C. G. Correa, D. A. Downie, and V. M. Walton. 2018. Determining the geographic origin of invasive populations of the mealybug Planococcus ficus based on molecular genetic analysis. PLOS ONE. 13: e0193852.

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Pfab, F., M. V. R. Stacconi, G. Anfora, A. Grassi, V. Walton, and A. Pugliese. 2018. Optimized timing of parasitoid release: a mathematical model for biological control of Drosophila suzukii. Theor Ecol. 1–13.

Tait, G., A. Grassi, F. Pfab, C. M. Crava, D. T. Dalton, R. Magarey, L. Ometto, S. Vezzulli, M. V. Rossi-Stacconi, A. Gottardello, A. Pugliese, G. Firrao, V. M. Walton, and G. Anfora. 2018. Large-scale spatial dynamics of Drosophila suzukii in Trentino, Italy. J Pest Sci. 1–12.

Wang, X.-G., M. A. Serrato, Y. Son, V. M. Walton, B. N. Hogg, and K. M. Daane. 2018. Thermal Performance of Two Indigenous Pupal Parasitoids Attacking the Invasive Drosophila suzukii (Diptera: Drosophilidae). Environ Entomol. 47: 764–772.

Biondi, A., X. Wang, J. C. Miller, B. Miller, P. W. Shearer, L. Zappalà, G. Siscaro, V. W. Walton, K. A. Hoelmer, and K. M. Daane. 2017. Innate Olfactory Responses of *Asobara japonica* Toward Fruits Infested by the Invasive Spotted Wing Drosophila. J Insect Behav. 30: 495–506.

Mohekar, P., J. Osborne, N. G. Wiman, V. Walton, and E. Tomasino. 2017. Influence of Winemaking Processing Steps on the Amounts of (E)-2-Decenal and Tridecane as Off-Odorants Caused by Brown Marmorated Stink Bug (Halyomorpha halys). J. Agric. Food Chem. 65: 872–878.

Berset, J. D., S. Mermer, A. E. Robel, V. M. Walton, M. L. Chien, and J. A. Field. 2017. Direct residue analysis of systemic insecticides and some of their relevant metabolites in wines by liquid chromatography – mass spectrometry. Journal of Chromatography A. 1506: 45–54.

Hamby, K. A., Bellamy, D. E., Chiu, J. C., Lee, J. C., Walton, V. M., Wiman, N. G. and Biondi, A. 2016. Biotic and abiotic factors impacting development, behavior, phenology, and reproductive biology of *Drosophila suzukii*. J Pest Sci, 1-15.

Tochen S., Vaughn M. Walton and Jana C. Lee 2016.Impact of floral feeding onadult *Drosophila suzukii* survival and nutrient status. J Pest Sci DOI: 10.1007/s10340-016-0762-7.

Wiman N. G., Gianfranco Anfora, Antonio Biondi, Joanna C. Chiu, Kent M. Daane, Daniel T. Dalton, Beverly Gerdeman, Angela Gottardello, Kelly A. Hamby, Rufus Isaacs, Alberto Grassi, Claudio Ioriatti, Jana C. Lee, Betsey Miller, M. Valerio Rossi Stacconi, Peter W. Shearer, Lynell Tanigoshi, Xingeng Wang and V. M. Walton 2016. *Drosophila suzukii* population response to the environment and management strategies. J Pest Sci DOI: 10.1007/s10340-016-0757-4.

Shearer P. W., West J., Walton V.M., Brown P., Svetec N., and Chiu, J. 2016. Environmental cues enhance winter survival of *Drosophila suzukii*. BMC Ecology, 16:11. DOI: 10.1186/s12898-016-0070-3.

Wang XG, Stewart TG, Biondi A, Chavez BM, Ingels C, Caprile JA, Grant J, Walton VM, and Daane KM 2016. Population dynamics and ecology of *Drosophila suzukii* in Central California. J Pest Sci DOI: 10.1007/s10340-016-0747-6.

Daane KM, Xin-Geng Wang, Antonio Biondi, Betsey Miller, Jeffrey C. Miller, Helmut Riedl, Peter W. Shearer, Emilio Guerrieri, Massimo Giorgini, Matthew Buffington, Kees van Achterberg, Yoohan Song, Taegun Kang, Hoonbok Yi, Chuleui Jung, Dong Woon Lee,Bu-Keun Chung, Kim A. Hoelmer, and Vaughn M. Walton 2016. First exploration of parasitoids of *Drosophila suzukii* in South Korea as potential classical biological agents.J. Pest Sci. DOI 10.1007/s10340-016-0740-0

Miller B, Anfora G, Buffington M, Daane KM, Dalton DT, Hoelmer KM, Stacconi MV, Grassi A, Ioriatti C, Loni A, Miller JC, M’bark Quantar, X. Wang, Nik G. Wiman, and Vaughn M. Walton 2015. Seasonal occurrence of resident parasitoids associated with *Drosophila suzukii* in two small fruit production regions of Italy and the USA. Bull Insectology 68(2): 255-63.

Lee, Jana C., Daniel T. Dalton, Katharine A. Swoboda-Bhattarai, Denny J. Bruck, Hannah J. Burrack, Bernadine C. Strik, J. Megan Woltz, and Vaughn M. Walton 2015 Characterization and manipulation of fruit susceptibility to *Drosophila suzukii*. J. Pest Sci. 10.1007/s10340-015-0692-9.

Asplen M.K., Gianfranco Anfora, Antonio Biondi, Deuk-Soo Choi, Dong Chu, Kent M Daane, Patricia Gibert, Andrew P Gutierrez, Kim A Hoelmer, William D Hutchison, Rufus Isaacs, Zhi-Lin Jiang, Zsolt Kárpáti, Masahito T Kimura, Marta Pascual, Christopher R Philips, Christophe Plantamp, Luigi Ponti, Gábor Vétek, Heidrun Vogt, Vaughn M Walton, Yi Yu, Lucia Zappalà, and Nicolas Desneux 2015. Invasion biology of spotted wing Drosophila (*Drosophila suzukii*): a global perspective and future priorities. J. Pest Sci. 88: 469-494.

Tochen S, Woltz JM, Dalton DT, Lee JC, Wiman NG, and Walton VM 2015. Humidity affects populations of *Drosophila suzukii* (Diptera: Drosophilidae) in blueberry. J. Appl. Entomol.. doi: 10.1111/jen.12247.

Ioriatti, C., Walton, V., Dalton, D., Anfora, G., Grassi, A., Maistri, S. and Mazzoni, V. 2015. *Drosophila suzukii* (Diptera: Drosophilidae) and its potential impact to wine grapes during harvest in two cool climate wine grape production regions. J. of Econ. Entomol., http://dx.doi.org/10.1093/jee/tov042.

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Wiman, N. G., Parker, J. E., Rodriguez-Saona, C., and Walton, V. M. 2015. Characterizing Damage of Brown Marmorated Stink Bug (Hemiptera: Pentatomidae) in Blueberries. J. Econ. Entomol. dx.doi.org/10.1093/jee/tov036.

M. Valerio Rossi Stacconi, M. Buffington, K. M. Daane, D. T. Dalton, A. Grassi, G. Kaçar, B. Miller, J. C. Miller, N. Baser, C. Ioriatti, V. M. Walton, N. Wiman, X. Wang, and G. Anfora 2015. Host stage preference, efficacy and fecundity of parasitoids attacking *Drosophila suzukii* in newly invaded areas. Biol. Contr. 84: 28-35.

Murphy K.A., T. R. Unruh, L. M. Zhou, F. G. Zalom, P. W. Shearer, E. H. Beers, V. M. Walton, B. Miller, and J. C. Chiu 2015. Using comparative genomics to develop a molecular diagnostic for the identification of an emerging pest *Drosophila suzukii*. Bull. Entomol. Res. 105(03): 364-372.

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Tochen, S., D. T. Dalton, N. G. Wiman, C. Hamm, P. W. Shearer, and V. M. Walton. 2014.Temperature-related development and population parameters for *Drosophila suzukii* (Diptera: Drosophilidae) on cherry and blueberry. Environ. Entomol. DOI: <http://dx.doi.org/10.1603/EN13200>.

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**PEER-REFEREED PUBLICATIONS**

ii. Book Chapters

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iii. Selected Peer Reviewed Publications

Mermer, S., P. D. Fanning, G. Tait, F. Pfab, C. G. Adams, L. J. Brewer, and V. M. Walton. 2022. Spotted-wing Drosophila, Relative Rankings and Seasonal Strategies for Insecticide Use. Oregon State University Extension Service EM 9360.

Mermer, S., G. Tait, J. Vlach, J. Lee and V.M. Walton 2021. Spotted Lanternfly is an invasive insect that may impact Oregon. Oregon State University Extension Service EM 9312.

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**Patents:**

International Patent Filing: Cuticle supplement for plant production (OSU-17-40).

International Patent Filing: Non-pesticidal attract and kill composition for control of insects (OSU-17-53).

International Patent Filing: Non-pesticidal deterrent for control of insects (OSU-20-04).