

Publications

- Ebbenga, D. N.*, Burkness, E. C., Clark, M. D., & Hutchison, W. D. Risk of increased volatile acidity and Spotted wing drosophila injury in Minnesota wine grape varieties. *American Journal for Enology and Viticulture*.
- Underhill, A. N.*, Clark, M. D., & Hirsch, C. D. Image-based phenotyping identifies QTL for cluster compactness in grape. *J ASHS*
- Zou, C., Karn, A., Reisch, B., Nguyen, A., Sun, Y., Bao, Y., Cambell, M. S., Church, D., Williams, S., Xu, X., Ledbetter, C. A., Patel, S., Fennell, A., Glaubitz, J., Clark, M., Ware, D., Londo, J., Sun, Q., & Cadle, L. (2020).
- Haplotyping the *Vitis* collinear core genome with rhAmpSeq improves marker transferability in a diverse genus. *Nature Biotechnology*.
- Underhill, A. N.*, Clark, M. D., & Hirsch, C. D. (2020). Evaluating and mapping grape color using image-based phenotyping. *Plant Phenomics*: 8086309.
<https://doi.org/10.34133/2020/8086309>
- Yin, L.*, Clark, M., Burkness, E., & Hutchison, W. (2019). Grape Phylloxera, *Daktulosphaira vitifoliae* Fitch (Hemiptera: Phylloxeridae), on Cold-hardy Hybrid Wine Grapes (*Vitis* spp.): A Review of Pest Biology, Damage, and Management Practices. *J. Integrated Pest Management*. doi:<https://doi.org/10.1093/jipm/pmz011>
- Yin, L., Burkness, E., Hutchison, W.D., & Clark, M.D. Effect of foliar phylloxera infestation on grapevine photosynthesis, yield, and fruit quality. [Submitted to *J. of Entomological Science*]
- Schoelz, J., D. Volenberg, M. Adhab, V. Klassen, C. Spinka, and M. Al Rwahnih. 2021. A Survey of Viruses Found in Grapevine Cultivars Grown in Missouri. *AJEV* (accepted in press).
- Nasrollahiazar, E., M. Reinke, R. Isaacs, T. Miles and E. Pochubay. 2020. Viticultural Practices in northwest Michigan at veraison. Online: [Viticultural practices in northwest Michigan at veraison](#).
- Nasrollahiazar, E., P. Sabbatini and T. Miles. 2020. Bird damage reduction strategies utilizing viticultural practices. Online: [Bird damage reduction strategies utilizing viticultural practices](#).
- Nasrollahiazar, E., T. Miles and P. Sabbatini. 2020. Critical practices to control late season grape diseases and the potential effects of fungicides on fermentation. Online: [Critical practices to control late season grape diseases and the potential effects of fungicides on fermentation](#).
- Nasrollahiazar, E., P. Sabbatini, R. Isaacs, T. Miles and S. Chaudhari. 2020. Post-harvest vineyard management: Preparing vines for winter. Online: [Post-harvest vineyard management: Preparing vines for winter](#).
- Rice, S, Maurer, DL, Fennell, A, Dharmadhikari, M, Koziel, JA. 2019. Evaluation of volatile metabolites emitted in-vivo from cold-hardy grapes during ripening using SPME and GC-MS: A proof-of-concept. *Molecules*. 24:536.
- Rice, S., Maurer, D., Fennell, A. Y., Dharmadhikari, M., Koziel, J. 2019. Biogenic volatiles emitted from four cold-hardy grape cultivars during ripening. *Data*. 4:22.
- Rice, S, Tursumbayeva, M, Clark, M, Greenlee, D, Dharmadhikari, M, Fennell, A, Koziel, JA. 2019. Effects of harvest time on the aroma of white wines made from cold-hardy Brianna and

- Frontenac gris grapes using headspace solid-phase microextraction and gas chromatography-mass spectrometry-olfactometry. *Foods*. 8:29.
- Teh, S.L., Rostandy, B., Awale, M., Fennell, A., Luby, J., Hegeman, A. 2019. Genetic analysis of stilbenoid profiles in grapevine stems reveals a major mQTL hotspot on chromosome 18 associated with disease resistance motifs. *Nature Horticulture Research* 6:121.
- Chervin, C., Fennell, A. 2019. Ethanol sprays to release grapevine bud dormancy: a potential alternative to cyanamides. *OENO One* 4:661-666
- Nonnecke G. R. and J. Schrader. 2020. Impact of minimum winter temperatures on the growth of winegrape cultivars and advanced selections. *Iowa State University Research and Demonstration Farms Progress Reports 2019-36*, p. 23-24. RFR-A1928: Available online: <https://www.iastatedigitalpress.com/farmreports/article/id/11321/>
- Schrader, J.A., P. A. Domoto, G.R. Nonnecke, and D.R. Cochran. 2020. Multifactor models for improved prediction of phenological timing in cold-climate wine grapes. *HortScience*. Online publication date: October 26, 2020. Published online ahead of issue. doi: <https://doi.org/10.21273/HORTSCI15367-20>
- Schrader, J.A., D.R. Cochran, P.A. Domoto, and G.R. Nonnecke. 2020. Yield and berry composition of cold-climate grape cultivars and advanced selections in Iowa climate. *HortTechnology*. 30(2):193-203. doi: <https://doi.org/10.21273/HORTTECH04557-19>
- Schrader, J.A. D.R. Cochran, P.A. Domoto, and G.R. Nonnecke. 2019 (Dec.). Phenology and Winter Hardiness of Cold-climate Grape Cultivars and Advanced Selections in Iowa Climate. *HortTechnology*. 29(6):906-922. doi: <https://doi.org/10.21273/HORTTECH04475-19>
- Watrelet A.A. and E. Norton. 2020. Chemistry and reactivity of tannins in *Vitis* spp.: A Review. *Molecules*. 25(9):2110. doi: <https://doi.org/10.3390/molecules25092110>
- Bradshaw, Terence and Lorraine P. Berkett, 2020. "Relative Disease Ratings for Wine Grape Varieties Grown in Vermont." UVFRT-003 fact sheet.
- Bradshaw, T. UVM Fruit Website, <http://www.uvm.edu/~fruit>. Outreach website for tree fruit and viticulture-related horticultural and IPM information for commercial growers. Affiliated blog archives 12 email postings made to grape producer listserv (275 subscribers) during reporting period.
- Read, P.E., Loseke, B.A., Gamet, S.J. 2019. History of Viticulture and Wine Making in Midwest USA. (submitted/accepted: *Acta Horticulturae*)
- Read, P.E., Loseke, B.A., Gamet, S.J. 2019. Teaching Beverage Crop Science: Vines, Wines and You, a Case Study. (submitted/accepted: *Acta Horticulturae*)
- Read, P.E., Loseke, B.A., Gamet, S.J. 2019. Relating Harvest Timing to Growing Degree Day Accumulation. (submitted/accepted: c)
- Zhao, H., Xie, X., Xu, C., Read, P.E., Li, W., Loseke, B.A., Gamet, S.J. 2019. Biofortification with Selenium and Lithium Improves Nutraceutical Properties of Major Winery Grapes in the Midwestern United States. (Submitted: *Journal of Agricultural and Food Chemistry*).
- Gu, S., Read, P.E., Loseke, B.A.. 2019. Rootstock and Mounding Affect Growth and Cold Hardiness of Young 'Gewürztraminer' (*Vitis vinifera*) Vines. (submitted: *International Journal of Fruit Science*).

- Read, P.E., Loseke, B.A., Gamet, S.J. 2019. Impact of Alleyway and In-row Planted Groundcovers on 'Edelweiss' Grapevine Growth and Fruit Production. (Submitted: International Journal of Fruit Science).
- Smart, R., Barriault, E., Read, P., Volenberg, D. 2019. Trunk Diseases and Winter Injury in NE America, How are They Related? (Published: Wine Business Monthly).

Presentations

- Schoelz, J., Volenberg, D. Grapevine survey for viruses of potential economic importance in Norton, Chambourcin, and Vignoles.
- Smith, H., Volenberg, D., Finke, D. Potential insect vectors of grapevine red blotch virus in Missouri vineyards.
- Fennell, A. 2020. Cold Genetics. North Dakota Grape and Wine Association Conference, February 29. Mandan, ND.
- Read, P.E., Loseke, B.A., Gamet, S. J. Impact of Alleyway and In-row Planted Groundcovers on 'Edelweiss' Grapevine Growth and Fruit Production. American Society for Horticultural Science. 2019.
- Read, P.E., Loseke, B.A., Gamet, S. J. High Tunnel Table Grapes: An Alternative to Field Production in Nebraska? American Society for Horticultural Science. 2019.
- Read, P.E., Loseke, B.A., Gamet, S. J. Hybrid Trunk Disease Evaluation: A Serendipitous Opportunity. International Workshop on Trunk Diseases. 2019.
- Fitch-Deitz, C. Something to Wine About. Brown County Women in Ag. Hiawatha, KS. 11/19/2019. 75 Attendees.
- Fitch-Deitz, C. Pruning Workshop. Dover, KS. 2/8/2020. 25 Attendees.
- Fitch-Deitz, C; Kohl, S. Viticultural Field Day. Wamego, KS. 7/28/2020. 30 Attendees.
- Clark, M.D., Clark, A.M., Irish, L.E., & Smith, A.G. Bridging horticulture and art, using a drawing- to-learn framework to teach plant propagation concepts. American Society for Horticultural Science, Virtual Conference. (August 10-13, 2020)
- Moreira, L., Wannemuehler, S.D., Treiber, E., Suresh, J., Brockman, S., Clark, M.D., & Hegeman, A. Sensory and metabolomic analyses link attributes of flavor and aroma in North American cold-hardy grapes. American Society for Horticultural Science, Virtual Conference. (August 10-13, 2020)
- Syvantek, A., Stenger, J., Clark, M., Auwater, C., & Hatterman-Valenti, H., Exploratory observations on inheritance of lacinate leaves in hybrid grapevine populations derived from 'Chasselas Ciotat'.

American Society for Enology and Viticulture. 2020, 3rd Place Video Presentation. (No conference held due to COVID-19).

Clark, M.D. Flavorful grapes aren't just for wine. You can eat them, too! CFANS Spotlight. <https://www.youtube.com/watch?v=tf0X6LdU1ho&feature=youtu.be> (2020).

Clark, M.D., Treiber, E., Karn, A., Zou, C., Cadle-Davidson, L., & Reisch, B. Seedling selection with AmpSeq Enriches Populations for Seedlessness, Muscat Aroma, and Powdery Mildew Resistance. 9th International Table Grape Symposium, Santiago, Chile. (February 17-21, 2020).

Moreira, L., & Clark, M.D., Characterization of flavor and aroma compounds in Minnesota cold-hardy grapes. 9th International Table Grape Symposium, Santiago, Chile. (February 17-21, 2020).

Treiber, E., Moreira, L., & Clark, M. D. Cold-hardy table grapes in Minnesota. 9th International Table Grape Symposium, Santiago, Chile. (February 17-21, 2020).