**Publications:**

Aipperspach, A., J. Hammond, and H. Hatterman-Valenti. 2020. Utilizing pruning and leaf         removal to optimize ripening of Vitis riparia-based 'Frontenac Gris' and 'Marquette' wine grapes in the northern Great Plains. Horticulturae 6, 18; doi:10.3390/horticulturae6010018.

Bradshaw, T. (lead author). 2021. Grapes and Wine. Vermont Sustainable Jobs Fund Farm to Plate 2.0 Product Brief. Issue briefs drafted by statute for presentation to Vermont legislature in 2019-2020 session.

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.

Bradshaw, T.L., Berkett, L.P., Kingsley-Richards, S.L., and Foster, J.A. 2018. Horticultural Performance and Juice Quality of Cold-Climate Grapes in Vermont, U.S.A. European Journal of Horticultural Science 83:1, 42-48. Invited paper.

Bradshaw, T.L., Hazelrigg, A., and Berkett, L.P.. 2018. Characteristics of the cold-climate winegrape industry in Vermont, U.S.A. Acta Hortic. 1205, 469-476. DOI: 10.17660/ActaHortic.2018.1205.57

Chervin, C, Fennell A (2019) Ethanol sprays to release grapevine bud dormancy: a potential alternative to cyanamides. *OENO One* 4:661-666.

Clark, M.D. 2019. Development of Cold Climate Grapes in the Upper Midwestern U.S.: The Pioneering Work of Elmer Swenson. In Plant Breeding Reviews Vol 43. Ed. I. Goldman. p. 31-59

Fennell, A., Alahakoon, D., Luby, J. and Clark, M. (2019). Mapping the genetic architecture of grapevine bud growthcycling quantitative traits. Acta Hortic. 1248, 337-344 DOI: 10.17660/ActaHortic.2019.1248.49

Gabriel Perez-Gonzalez, Dana Sebestyen, Elsa Petit, Jody Jellison, Laura Mugnai, Eric Gelhaye, Norman Lee, Sibylle Farine, Christophe Bertsch, Barry Goodell. 2021. The Role of Low Molecular Weight Fungal Metabolites in Grapevine Trunk Disease Pathogenesis: Eutypa Dieback and Esca. Preprint

Gu, S., Read, P.E., and Loseke, B.A. (2019) Roostock and Mounding Affect Growth and Cold Hariness of Young 'Gewurztraminer' (Vitis vinifera) vines. Int. J. of Fruit Science (In Review)

Hazelrigg, A., T. Bradshaw and G. Maia. 2021. Disease Susceptibility of Interspecific Cold-Hardy Grape Cultivars in Northeastern U.S.A. Horticulturae 7(8): 216. Special issue on Grape Responses to Abiotic and Biotic Stresses.

Hazelrigg, A., Bradshaw, T.L., Berkett, L.P., Maia, G., and Kingsley-Richards, S.L. 2018. Disease Susceptibility of Cold-Climate Grapes in Vermont, U.S.A. Acta Hortic. 1205, 477-482. DOI: 10.17660/ActaHortic.2018.1205.58

Loseke, B. A. 2018. Replacing Herbicides with Groundcovers to Enhance Vineyard Sustainability. PhD dissertation, Department of Agronomy and Horticulture, University of Nebraska-Lincoln.  <https://digitalcommons.unl.edu/agronhortdiss/138/>

Maher, M.F., Nasti, R.A., Vollbrecht, M., Starker, C.G., Clark, M.D., & Voytas, D.F. (2019) Plant gene editing through de novo induction of meristems. Accepted Nature Biotechnology

Migicovsky Z, Harris ZN, Klein LL, Li M, McDermaidg A, Chitwood DH, Fennell, A, Kovacs LG, Kwasniewski M, Londo JP, Qin Ma, Q and Miller, AJ (2019) Rootstock effects on scion phenotypes in a 'Chambourcin' experimental vineyard. Nature Horticulture Research 6:64. (1 citation, 136 reads)

Moreira, L.S., Underhill, A., and M. Clark. Postharvest evaluation of cold-hardy table grape breedling lines. XII International Conference on Grapevine Breeding and Genetics. .doi:10.17660/ActaHortic.2019.1248.15

Moreira, L. and M. Clark (2021) Embryo rescue of cold-hardy table grapes. HortScience 56(9): 1059-1065.

Olson, J., and M. Clark. 2021. Characterization of Anatomical and Physiological Effects of Variegation Mutation on Grapevine. HortScience 56(10): 1251-1257.

Read, P.E., Loseke, B.A., Gamet, S.J. (2019) History of Viculture and Wine Making in Midwest USA. Accepted. Acta Hort.

Read, P.E., Loseke, B.A., Gamet, S.J. (2019) Teaching Beverage Crop Science: Vines, Wines, and You, a Case Study. Accepted. Acta Hort.

Read, P.E., Loseke, B.A., Gamet, S.J. (2019) Relating Harvest Timing to Growing Degree Day Accumulation. Accepted. Acta Hort.

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: Int J Fruit Science.

Rice, S., N Lutt, J.A. Koziel, M. Dharmadhikari and A. Fennell. 2018. Determination of Selected Aromas in Marquette and Frontenac Wine Using Headspace-SPME Coupled with GC- MS and Simultaneous Olfactometry. Separations 5:20; doi:10.3390/separations50100

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-M.S.: A Proof-of-Concept. *Molecules*24:536. (2 citations, 43 reads)

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. (3 citations, 31 reads)

Rice, S. Tursumbayeva, M., Clark, M., Greenlee, D., Dharmadhikari, M., Fennell, A., and J.A. Koziel. 2019. Effects of harvest time on aroma of white wines made from cold-hardy Brianna and Frontenac gris grapes using headspace solidphase microextraction and gas chromatography-mass spectrometry-olfactometry. Foods. 8(1): 29. <https://doi.org/10.3390/foods8010029>

Sabbatini, P. and E. Nasrollahiazan. 2021. Freezing stress, cold hardiness and managing winter damaged vines. MSU Extension Website.

Schoelz, J., M. Adhab, W. Qui, S. Peterson, and D. Volenberg. 2018. First report of grapevine red blotch virus in hybrid grapes in Missouri. Plant Disease. Accepted for publication. Posted online 10 September 2018.

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. Am J Enol Vitic 72:73-84.

Smart, R., Barriault, E., Read, P., and D. Volenberg. Trunk Diseases and Winter Injury in NE America, How are They Related? Wine Business Monthly.

Stenger, J. and H. Hatterman-Valenti.  2018. ‘NDMutant1’: A novel determinate interspecific grapevine for genetic and physiological study and breeding applications. HortScience 53(2):261-263.

Svyantek, A., B. Kose, J. Stenger, C. Auwarter, and H. Hatterman-Valenti. 2020. Cold-hardy grape cultivar winter injury and trunk re-establishment following severe weather events in North Dakota. Horticulturae6(4): 1–15.

Ware, L., Garofalo, E., Petit, E., and Piñero, J.C. 2021. Does the Red Color Enhance Spotted Wing Drosophila Response to Traps Baited with Diluted Concord Grape Juice? Fruit Notes 86: 15-16.

Watrelot, A. 2021.  Tannin content in Vitis species red wines quantified using three analytical methods. Molecules. 26(16):4923 (11pp)

Yilmaz T., D. Alahakoon, and A. Fennell. 2021. Freezing tolerance and chilling fulfillment differences in cold climate grape cultivars. Horticulturae 7(1):4

Yilmaz T., And A. Fennell. 2021. Spur and short cane pruning influence bud viability, yield, and fruit quality. Proceedings of the South Dakota Academy of Science 100:95-105.

Yin, L., A. Karn, L. Cadle-Davidson, C. Zou, A. Underhill, P. Atkins, E. Treiber, D. Voytas, and M. Clark. 2021. Fine mapping of leaf trichome density revealed a 747-kb region on chromosome 1 in cold-hardy hybrid wine grape populations. Frontiers in plant science 12: 150.

Yin, L., E. Burkness, W. Hutchison, and M. Clark. 2021. Effects of Foliar Phylloxera (Hemiptera: Phylloxeridae) Infestations on Wine Grape Photosynthesis, Yield, and Fruit Quality. Journal of Entomological Science 56(4): 504-518.

Yin, L., Clark, M.D., Burkness, E.C., & Hutchison, W.D. (2019) Grape phylloxera (Hemiptera: Phylloxeridae), on cold-hardy hybrid wine grapes (Vitis spp.): A review of pest biology, damage, and management practices. Journal of Integrated Pest Management 10:1,16.

Zhao, H., Xie, X., Xu, C., P.E. REad, Li. W., Loseke, B.A., and S.J. Gamet. (2019) Biofortifcation with Selenium and Lithium Imrpove Nutraceutical Properties of Major Winery Graps in the Midwestern United State. J. Agricultural and Food Chemistry (in review)

**Presentations:**

Caspari, H. 2/22/2021: Retraining vines after cold injury. Webinar.

Clark, M. 2021. Panelist: Future Grape Cultivars for Eastern North America. ASEV-ES Virtual Conference.

Clark, N. and S. Kohl. 7/24/2021. Home Winemaking Workshop.  Riley County Fair.  Manhattan, KS. 8 Attendees.

Fennell, A. North American Grape Breeders Conference, Aug. 16, 2019, Springfield, Missouri. *“Genetic analysis of grapevine root system architecture.”*

Fennell, A. 15th Annual VESTA National Summit and Michigan Wine Consortium Conference, June 6, 2019, Traverse City, MI. *“Advancing the American grape industry through research.”*

Fennell, A. 2021. Cold climate cultivars for upper Midwest. Fermentation, Brewing and Spirits class.

Fennell, A. 6/26/2021. Field tour of grape genetics.  Brookings Area Master Gardeners Tours.

Fennell, A. 9/13/2021. Cold climate cultivars fruit characteristics.  Local Foods Education Center, Brookings SD.

Fitch-Deitz, C. and S. Kohl. 11/9/2021. NE1720 Annual Conference host. 25 Attendees.

Fitch-Deitz, C. 2/8/2021. Pruning Workshop.  Dover, KS. 13 Attendees.

Fitch-Deitz, C, N. Clark, and S. Kohl. 7/27/2021. Viticulture and Enology Field Day.  Wamego, KS.  28 Attendees.

Iyer, S., J. Walker-Swaney, A. Christopher, A. Espe, D. Sarkar, H. Hatterman-Valenti, and K. Shetty. (July/Aug., 2018) Non-alcoholic probiotic beverages from cold-hardy grapes of the northern Plains: targeting for human health benefits. VitiNord 2018. Malmo, SE/Copenhagen, DK.

Hatterman-Valenti, H.M. (Feb., 2018) NDSU Grape Research – Germplasm Update. The annual meeting of the North Dakota Grape and Wine Association. Minot, ND.

Kadium, V., A. Svyantek, J. Stenger, S. Bogenrief, C. Auwarter, and H. Hatterman-Valenti. 2020. Diallel populations representing NDSU-GGEP. Proc. North Dakota Acad. Sci. 74:44.

Kohl, S.  4/26/2021. Grapes and Wine in Kansas.  Kansas Academy of Nutrition and Dietetics. Wamego, KS. 48 Attendees.

Kohl, S.  Winemaking in Kansas. 6/10/2021. Lawrence Brewing Guild Quarterly Meeting.  Lawrence, KS. 34 Attendees.

Kohl, S.  7/30/2021. Building an On-Ground V&E Program from Scratch.  Zoom with Pellissippi State Community College and Tennessee industry representatives. 5 Attendees.

Kohl, S. 9/3/2021. Emcee, Kansas Grape Stomp.  Kansas State Fair.  Hutchinson, KS. 80 Attendees.

Lachowitzer, J. and H. Hatterman-Valenti. (July/Aug., 2018) Yeast Influence on Sensory Attributes in ‘Petite Pear’ and ‘Crimson Pearl’ Wines. VitiNord 2018. Malmo, SE/Copenhagen, DK.

Martinson, T. July 25, 2013. Testing Loose-clustered Vignoles clones. (Presenter Only) Lake Erie Regional Grape Program Summer Conference, Cornell University and Penn State University, Portland, NY.

Moreira, L., Z. Vickers, E. Treiber, A. Andresen, M. Clark, and A. Hegeman. 8/7/2021. A procedure to investigated flavor in large grape samples. ASHS Conference. Denver, CO.

Nasrollahiazar, E. 3/23/2021. Michigan Statewide Grape Spring Kickoff. Webinar.

Nonnecke, G. 8/11/2021. Field day and Workshop – Topics: grape production and berry analysis used for harvest determination of cold-climate cultivars.  Iowa State University, Horticulture Station, Ames, IA.  25 Attendees.

Nonnecke, G. 8/3/2021. Field day and Workshop – USDA, Iowa Farm Service Agency Loss Adjuster Training. Topics: grapevine biology, production, and management of Iowa vineyards.  Iowa State University, Horticulture Station, Ames, IA. 12 Attendees.

Petit, E. 1/13/2021 - Over zoom - Massachusetts Fruit Growers Association Annual Meeting 2021: "Through the grapevine in Massachusetts in 2020: updates and new research" -  about 100 attendees

Petit, E. 4/13/2021 - Over zoom - Fruit Twilight Meeting – “April updates on viticulture in MA” – about 100 attendees

Petit, E. 5/6/2021 - Over zoom - Fruit Twilight Meeting - “May updates on viticulture in MA” – about 100 attendees

Petit, E. 7/14/2021 - In person at Clarkdale Fruit Farms - Massachusetts Fruit Growers Association – “Midyear updates on field trials on grapes” – about 100 attendees

Petit, E. 7/22/2021- In person at Cold Spring Orchard - Summer Scholars Field Trip - “Trial on disease resistance in the NE1720 plot” – about 50 attendees

Petit, E. 1/30/2021 - Over zoom - MassAggie pruning workshop 2021 – about 90 attendees

Read, P.E., Loseke, B.A., Gamet, S.J. (2019) High Tunnel Table Grapes: An Alternative to Field Production in Nebraska? ASHS Poster

Read, P.E., Loseke, B.A., Gamet, S.J. (2019) Chilling Requirements for 'Edelweiss', 'Frontenac', and 'Norton' Grapevines. ASHS Poster

Read, P.E., Loseke, B.A., Gamet, S.J. (2019)Hybrid Trunk Disease Evaluation: A Serendiptious Opportunity. Oral Presentation. International Workshop on Trunk Disease, Canada

Read, P. 1/25/2021. New UNVP Research Results. Nebraska Winery and Grape Growers Association Annual Conference.

Read, P. 3/15/2021. University of Nebraska Viticulture Program Progress Report. Nebraska Grape and Wine Board (Nebraska Department of Agriculture).

Read, P. 5/14-15/2021. The University of Nebraska Viticulture Program. NWGGA’s “Toast Nebraska” public wine showcase event.

Read, P. 7/19/2021. Viticulture Field Day. Topics: trellising, insect management and vineyard floor management for newly adopted cultivars.

Read, P. 9/29/2021. Nebraska: the Next Napa Valley?. Northeast Lincoln Kiwanis Club.

Read, P. 10/29/2021. Wines 101. University of Nebraska Alumni Women’s Leadership Group. 60 Attendees.

Read, P. 11/5/2021. Nebraska’s Burgeoning Grape and Wine Industry. University of Nebraska LEAD 39 Class of young developing agricultural leaders.

Stenger, J. and H. Hatterman-Valenti. (Feb., 2018) Converting Trellis Styles. The annual meeting of the North Dakota Grape and Wine Association. Minot, ND.

Stenger, J., I. Tartar, A. Svyantek, N. Theisen, C. Auwarter, and H. Hatterman-Valenti. (July/Aug., 2018) Shorter training systems produce yield earlier with no effect on quality in young ‘Marquette’ and ‘Petite Pearl’ grapevines. VitiNord 2018. Malmo, SE/Copenhagen, DK.

Stenger, J., H. Hatterman-Valenti, and C. Auwarter. (Feb., 2018) Comparison of alternative weed management strategies with four interspecific grape cultivars. Weed Science Society of America Annual Meeting. Arlington, VA.

Svyantek, A. and H. Hatterman-Valenti. 7/29/2020.  Observations on inheritance of lacinate leaves in hybrid grapevine populations derived from ‘Chasselas Cioutat’. American Society of Enology and Viticulture and American Society of Enology and Viticulture Eastern Section Virtual Conference.

Svyantek, A. and H. Hatterman-Valenti. (Feb., 2018) Crop Load and Canopy Management. The annual meeting of the North Dakota Grape and Wine Association. Minot, ND.

Svyantek, A. W., J. Stenger, C. Auwarter, N. Theisen, R. Ibriham, and H.Hatterman-Valenti. (July, 2018) Early season leaf removal reduces cluster compactness and yield in North Dakota ‘Marquette’. American Society for Enology and Viticulture – Eastern Section 43rd Annual Conference. King of Prussia, PA.

Svyantek, A. W., J. Stenger, C. Auwarter, N. Theisen, R. Ibriham, and H.Hatterman-Valenti. (July, 2018) Crop ‘til You Drop? Acidity not Linearly Correlated with Yield for ‘Frontenac’ Grapevines.  American Society for Enology and Viticulture – Eastern Section 43rd Annual Conference. King of Prussia, PA.

Svyantek, A., R. Ibrahim. J. Stenger, C. Auwarter, H. Hatterman-Valenti (April, 2018) Grapevine

Pruning Modifications Alter Fruit Chemistry and Yield More Than Augmentation of Canopy Architecture through Supplemental Trellis Support. Gamma Sigma Delta Symposium. Fargo, ND.

Svyantek, A. W., J. Stenger, C. Auwarter, N. Theisen, R. Ibriham, and H.Hatterman-Valenti. (January, 2018) Acidity Parameters and Cold-Hardiness are not Linearly Correlated with Yield for nonirrigated ‘Frontenac’ Grapevines in North Dakota. NDSU Graduate Student Council Research Symposium. Fargo, ND.

Volenberg, D. 2021. Grape IPM Reports. <https://gwi.missouri.edu/IPMreports/index.htm>

Ward, D. 2021. Grape growers and educators in the viticulture industry attended a symposium where they learned of the Grapevine Pinot Gris Virus (GPGV). Over 100 attendees.

Wise, A. 2020. [Performance of Selections in the Long Island Wine Grape Variety Trial](https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/49343/Cornell_Grapevine_Variety_Trial_-_2020_Final_Version_for_Web_-_A.pdf?1613050820). Presentation slides online.