

Project Number: 002300

OGWRI Project: 100% Ontario wines from Vidal and Marquette: Quality improvements and Consumer Preference

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Executive Summary

Program Coordinator: Debra Inglis With the changing market dynamics for Ontario wine sale outlets, with locations now in supermarkets, non-LCBO stores, and the LCBO, there is increased competition for domestic wines to maintain and gain market share. Along with these challenges, both producers and consumers want good quality white and red wines at a competitive price (approx. \$10-12 range). Ontario has an opportunity to improve the quality performance on an oenological basis of its dominant white hybrid Vidal and to investigate the potential for an up-and-coming red hybrid, Marquette, which is seeing increased interest from growers and wineries.

This proposal varied crop load of Vidal, maturity level via Brix at harvest, and tested three yeast strains recommended by yeast supply company Lallemand to enhance volatile thiols during fermentation to test if any treatments varied the aromatic profile of Vidal (total of 12 treatments, each fermented in triplicate). All fermentations from 2019 were completed, wines were bottled in June of 2020, all chemical analysis for basic wine chemistry was completed, the method was developed for volatile thiol measurements and volatile thiol measurements were completed. Overall, volatile thiols that are responsible for "Sauvignon blanc" characteristics in wine were found in the Vidal research wines fermented with the yeast strains recommended by Lallemand. Vidal wines were found to have 2 volatile thiols (4MMP and 3MHA) at levels comparable to these volatile thiols found in Sauvignon blanc produced in New Zealand. One additional volatile thiol found in the New Zealand wine (3MH) was not found in the Vidal research wines. The three yeast strains recommended by Lallemand did produce higher levels of 4MMP in comparison to EC1118 in Vidal table wine. The Stimula nutrient additive was beneficial in increasing volatile thiols in Vidal wines fermented at lower temperatures (14°C) but this beneficial effect was not observed at higher fermentation temperatures. Fermenting Vidal at 26°C resulted in a 6-fold increase in 4MMP in the wines over that found at 14°C and a small but significant increase in 3MHA also resulted at the higher fermentation temperature.

Due to a delay with COVID restrictions, difference testing of the Vidal wines at Vineland Research and Innovation Centre was delayed to March of 2021. Since we were delayed on the sensory evaluation and consumer testing of wines due to COVID restrictions, an additional subset of treatment wines were made in 2020 with Vidal to compare a second vintage. This decision was also made since 2020 was a much hotter growing season in comparison to 2019 and it was hoped wine acidity would be lower in 2020 and Brix higher in 2020 to better represent a typical growing season. All wines were bottled in 2021 and chemical analysis on the 2020 wines were completed. Since two vintages were not originally budgeted for in the project, only some of the 2020 wines were included in the difference and consumer testing at Vineland. The sensory panel at Vineland performed difference testing of the 2019 and 2020 wine treatments using Free Sorting to provide descriptive differences between the treatments. Consumer testing to determine Vidal treatments with the highest consumer appeal and willingness to pay was conducted in September of 2021.

Marquette is a hardy red hybrid that has gained interest across Canada. To gain cursory insights on the potential consumer appeal for Marquette, a consumer preference study of commercial Marquette wine was conducted in year two. Commercially made Ontario Marquette wines were compared to other red hybrid and *Vitis vinifera* red wines in the \$10-12 range. Determination of preference drivers would guide future research related to optimization of viticultural and

oenological practices for quality, entry level Ontario wines with consumer appeal and willingness to pay.

Consumer research identified drivers of liking for both Vidal and Marquette wines. Consumer groups were found that could be differentiated based on wine style for each varietal. Overall fruit forward and complex were drivers of liking and high acid and astringency were detractors of liking in both red and white styles. Vidal research wines scored higher in liking scores than commercial Vidal wines in some consumer groups. Willingness to pay indicates consumers are willing to pay \$13-\$16 for a dry Vidal table wine- an important outcome of this study. For Marquette, the liking scores are promising, and indicate a clear marketing opportunity for this grape variety on the Ontario market. Willingness to pay indicates consumer would be willing to spend \$15-\$21 on a bottle of Ontario Marquette.