

Winter Injury Studies 2006

Grape Bud Survival

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Research Team

Ken Slingerland and *Hugh Fraser*, OMAFRA

Kevin Ker, CCOVI Brock University & KCMS

Dr. Helen Fisher, University of Guelph

Ryan Brewster, KCMS Applied Research and Consulting Inc.

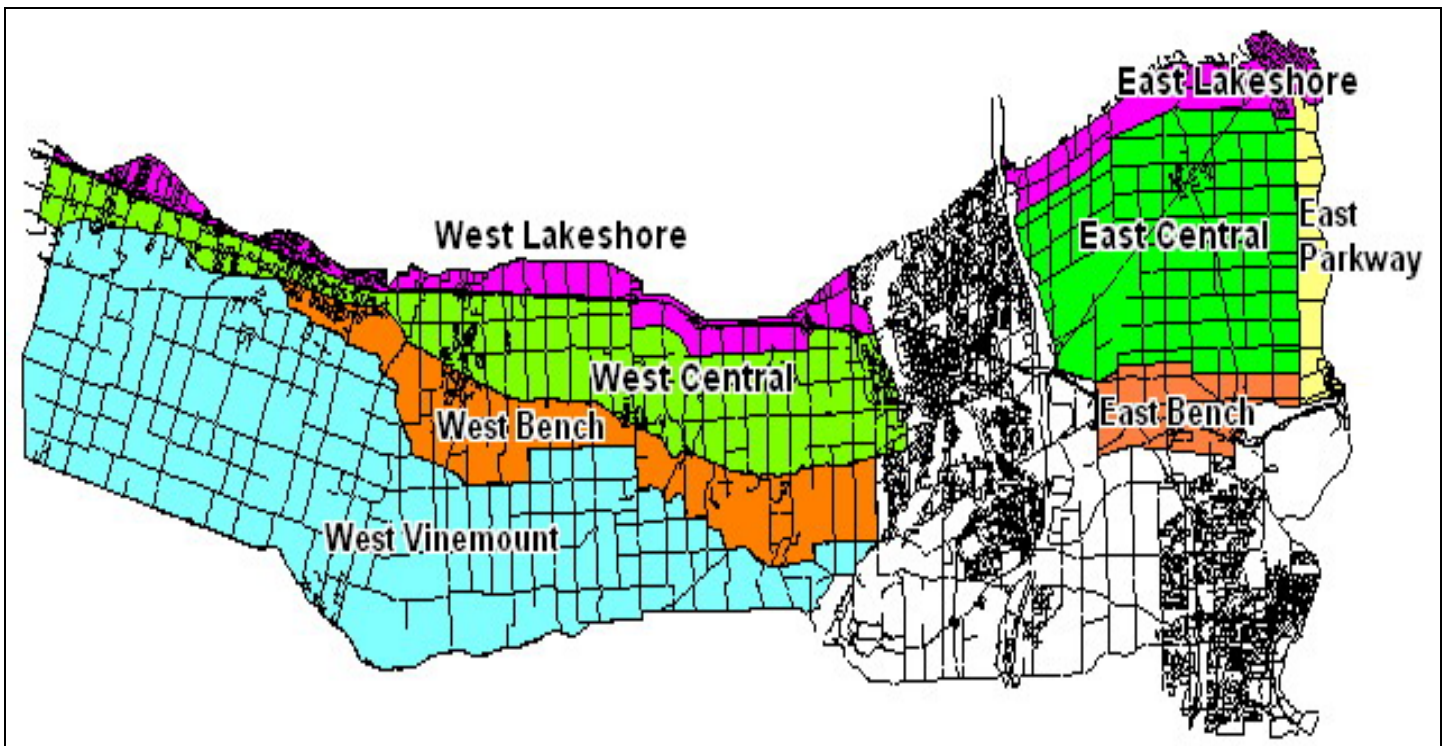
Grape bud sampling to establish winter survival is part of the 3 year - CanAdvance and CRESTech funded Winter Injury and Wind Machine project. The tables in this article report the sampling results based on the bud collection during the week of Feb. 20-24, 2006. There have been relatively few changes from the last sampling of Feb 6-10, 2006. However, the percent alive may vary up or down from the last sample due to the variation in the samples taken. The tables below are based on multiple samples and multiple sites within in area for each cultivar. Some sites had wind machines running between Dec. 12¹-14, and also Feb. 8/9 but all observations for each cultivar and location include both vineyards with wind machines and without.

To date, the coldest temperatures were recorded between Dec. 12 -14, 2005 and ranged between -14.1° C on the Jordan Escarpment to -19.1° C at the Virgil OWN weather site. These temperatures were not considered a “cold event which could cause considerable damage”; however, wind machines may have prevented some winter injury at certain sites. There was concern that a cold event so early in the season might have caused some damage as plants may not have been properly acclimated at that date.

The Grape Growers of Ontario (GGO) and the Wine Council of Ontario (WCO) are the major sponsors of the project. Other partners include; Stephane Bosc – Orchard Rite; Roger Vail – Chinook; KCMS Applied Research and Consulting; Agricorp; Ontario Tender Fruit Producers’ Marketing Board; the Niagara Peninsula Fruit & Vegetable Growers’ Association, OMAFRA; Brock University and the University of Guelph.

The Parkway zone runs approximately 1 km along the west side of the Niagara River from Niagara-on-the-Lake to Queenston; the Lakeshore zone is approximately 1 km south of the lake from the Niagara River to Grimsby; the Central zone continues south of the Lakeshore zone to the base of the escarpment; the Bench zone starts at the south side of the Central zone to the brink of the escarpment and the Vinemount zone runs south of the Bench Zone.





8 Sampling Zones Used

% Live Buds - Labrusca – Feb. 20-23, 2006 (NS means no sample taken)

| Cultivar | Location | East of Canal | West of Canal |
|----------|-----------|---------------|---------------|
| Concord | Vinemount | NS | 82-95 |
| Niagara | Vinemount | NS | 89-94 |

% Live Buds - Hybrids – Jan. 20-23, 2006 (NS means no sample taken)

| Cultivar | Location | East of Canal | West of Canal |
|-----------|-----------|---------------|---------------|
| Baco Noir | Central | 90 | 89 |
| | Parkway | 84 | NS |
| Foch | Central | NS | 80-95 |
| | Vinemount | NS | 71 |
| Vidal | Central | 82-90 | 72-96 |
| | Lakeshore | 70 | NS |
| | Parkway | 68-70 | NS |
| | Vinemount | NS | 62-81 |

% Live Buds - Vinifera – Feb. 20-23, 2006 (NS means no sample taken)

| Cultivar | Location | East of Canal | West of Canal |
|--------------------|-----------------|----------------------|----------------------|
| Cabernet Franc | Bench | 78-87 | 84-96 |
| | Central | 67-81 | 85-93 |
| | Lakeshore | 79-87 | 94 |
| | Parkway | 82-92 | NS |
| | Vinemount | NS | 85-88 |
| Cabernet Sauvignon | Central | NS | 89 |
| | Lakeshore | NS | 84 |
| | Parkway | 70 | NS |
| Chardonnay | Bench | 84-85 | 87-91 |
| | Central | 76-90 | 86-93 |
| | Lakeshore | 75-82 | NS |
| | Parkway | 87-90 | NS |
| | Vinemount | NS | 82 |
| Gamay | Parkway | 90 | NS |
| Merlot | Bench | 85-94 | 71-98 |
| | Central | 82 | 72-93 |
| | Lakeshore | 83 | 87 |
| | Parkway | 77-82 | NS |
| | Vinemount | NS | 92 |
| Pinot Noir | Bench | 86 | 69-86 |
| | Central | 78 | 65-85 |
| | Lakeshore | 70 | 74-91 |
| | Parkway | 97 | NS |
| | Vinemount | NS | 51-77 |
| Riesling | Bench | 58-92 | 83-96 |
| | Central | 79-80 | 75-86 |
| | Lakeshore | 48-81 | 78 |
| | Parkway | 76-91 | NS |
| | Vinemount | NS | 83-95 |
| Sauvignon Blanc | Central | 85 | 79 |
| | Lakeshore | 19 | NS |
| Syrah | Lakeshore | NS | 59 |
| | Parkway | 24 | NS |