

# Winter Injury Studies 2006

## Grape Bud Survival

### January 27, 2006

#### Research Team

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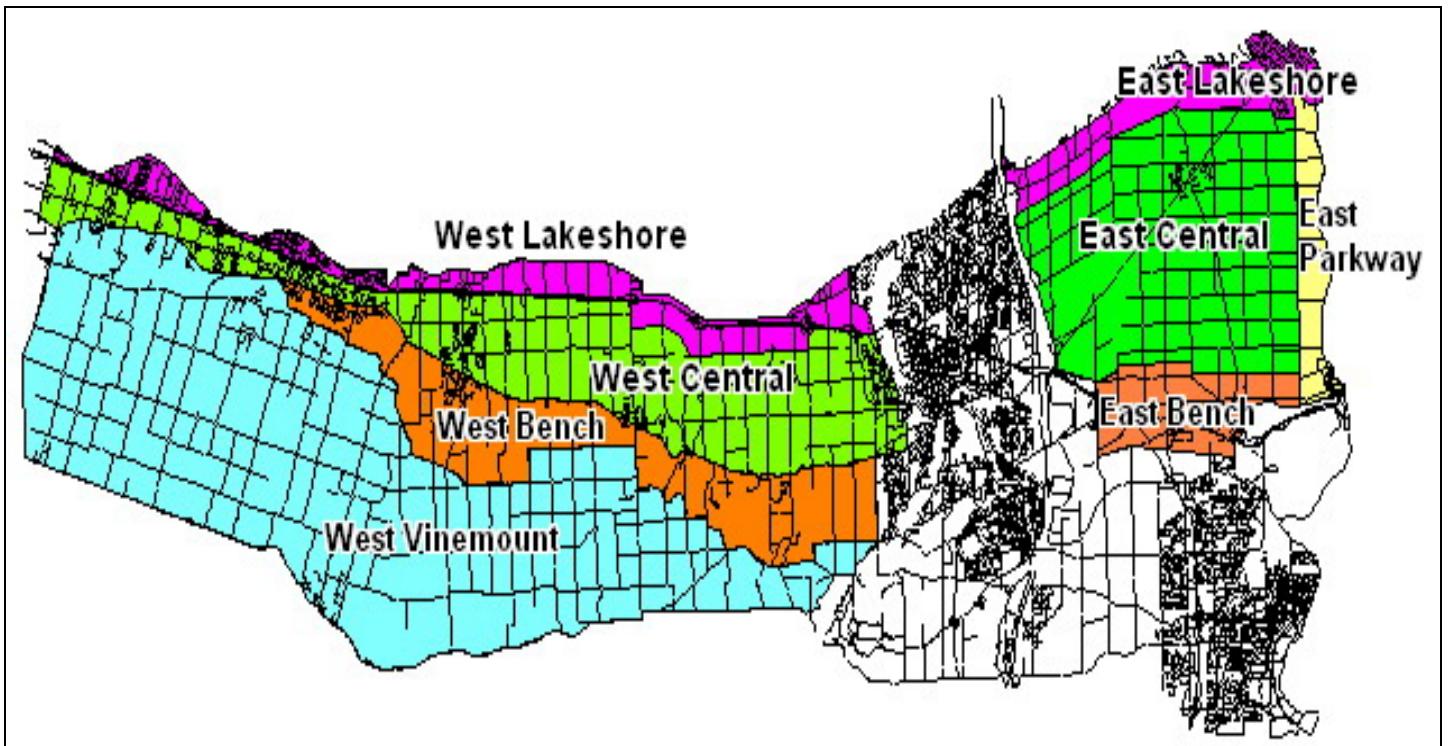
Grape bud sampling to establish winter survival is part of the 3 year - CanAdvance and CRESTech funded Winter Injury and Wind Machine project. The tables in this article report the sampling results based on the bud collection during the week of Jan. 23-27, 2006. There have been relatively few changes from the last sampling of Jan. 9-13, 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. 12<sup>t</sup>-14 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.

For sampling purposes, the grape growing areas of the Niagara Peninsula were placed into different climatic zones which closely resemble the “Niagara Grape Climatic Zones”, map originally published in 1976 and revised in 2001 by Fisher and Slingerland.

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 – Jan. 23-27, 2006 (NS means no sample taken)**

Cultivar	Location	East of Canal	West of Canal
Concord	Vinemount	NS	95-99
Niagara	Vinemount	NS	90-95

**% Live Buds - Hybrids – Jan. 23-27, 2006 (NS means no sample taken)**

Cultivar	Location	East of Canal	West of Canal
Baco Noir	Central	91	96
	Parkway	91	NS
Foch	Central	NS	92-99
	Vinemount	NS	97
Vidal	Central	83-91	87-88
	Lakeshore	89	NS
	Parkway	83-87	NS
	Vinemount	NS	70-76

**% Live Buds - Vinifera – Jan. 23-27, 2006 (NS means no sample taken)**

<b>Cultivar</b>	<b>Location</b>	<b>East of Canal</b>	<b>West of Canal</b>
Cabernet Franc	Bench	94	86-96
	Central	83-85	81-95
	Lakeshore	87	99
	Parkway	56-90	NS
	Vinemount	NS	91-93
Cabernet Sauvignon	Central	NS	86
	Lakeshore	NS	79
	Parkway	85	NS
Chardonnay	Bench	60-95	86-95
	Central	85-89	92-97
	Lakeshore	90-93	NS
	Parkway	92-95	NS
	Vinemount	NS	92
Gamay	Parkway	97	NS
Merlot	Bench	70-86	84-96
	Central	77	75-97
	Lakeshore	95	91-98
	Parkway	89-90	NS
	Vinemount	NS	92
Pinot Noir	Bench	60-93	75-92
	Central	78	76-100
	Lakeshore	79	75-88
	Parkway	82	NS
	Vinemount	NS	88
Riesling	Bench	89-94	75-99
	Central	83-86	75-90
	Lakeshore	87-89	95
	Parkway	73-83	NS
	Vinemount	NS	83-93
Sauvignon Blanc	Central	88	73
	Lakeshore	74	NS
Syrah	Lakeshore	NS	83
	Parkway	45	NS

A Collaborative project by:

