

Winter Injury Studies 2006

Grape Bud Survival

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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. 9-13, 2006.

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 as some were concerned that a cold event so early in the dormant season might have caused some damage as plants may not have been properly acclimated at that date.

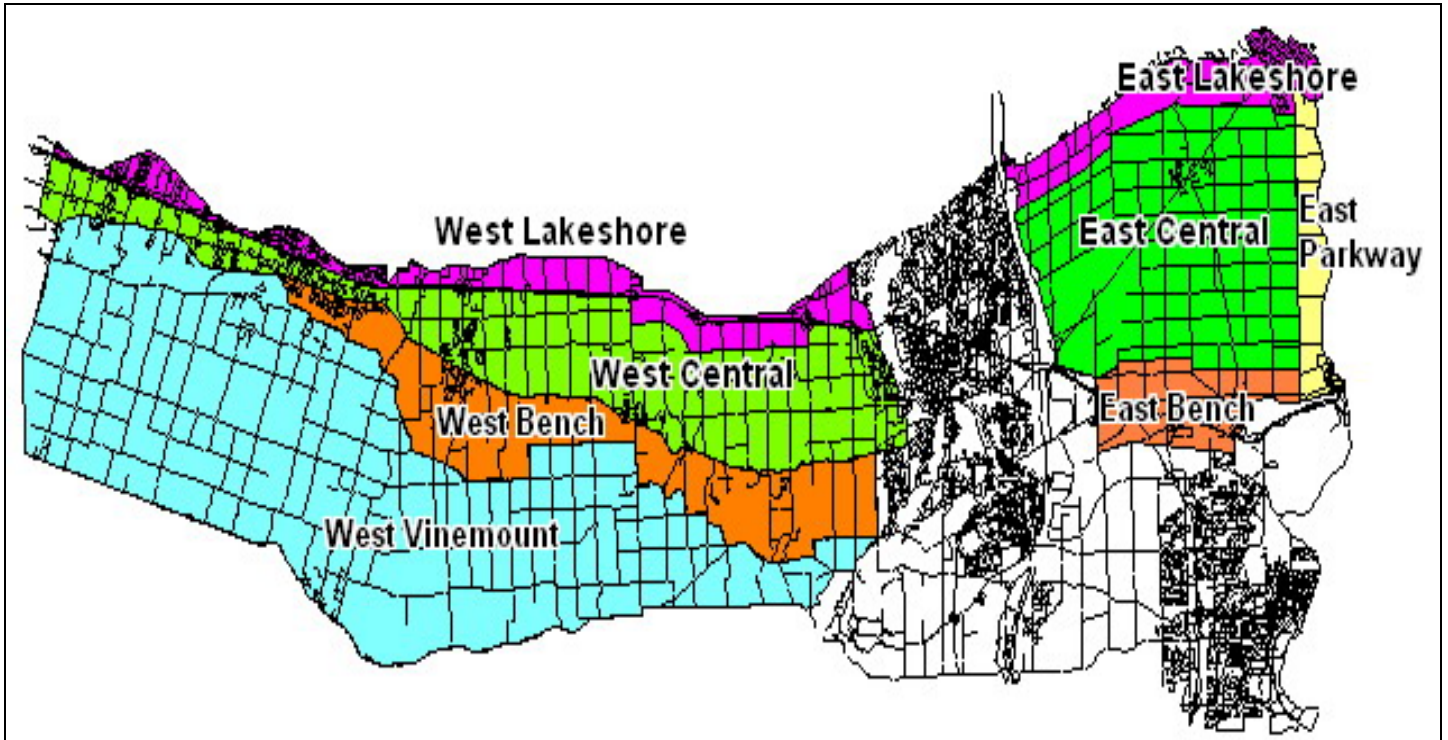
The table observations for each cultivar and location include both vineyards with wind machines and without.

Trends to date

- Labrusca grapes are generally good
- French Hybrid grapes are generally good except for some sites of Vidal on top of the escarpment in the Vinemount area
- Most vinifera are in good shape except for Sauvignon Blanc and Syrah at a couple of sites

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 west of 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. 13, 2006 (NS means no sample taken)

Cultivar	Location	East of Canal	West of Canal
Concord	Vinemount	NS	91-100
Niagara	Vinemount	NS	71-99

% Live Buds - French Hybrid – Jan. 13, 2006 (NS means no sample taken)

Cultivar	Location	East of Canal	West of Canal
Baco Noir	Central	100	94
	Parkway	96	NS
Foch	Central	NS	89-100
	Vinemount	NS	95
Vidal	Central	74-87	87-92
	Lakeshore	87-92	NS
	Parkway	90-92	NS
	Vinemount	NS	58-70

% Live Buds - Vinifera – Jan. 13, 2006 (NS means no sample taken)

Cultivar	Location	East of Canal	West of Canal
Cabernet Franc	Bench	94	71-96
	Central	82-88	80-94
	Lakeshore	79-87	NS
	Parkway	70-96	NS
	Vinemount	NS	85-97
Cabernet Sauvignon	Central	NS	77
	Lakeshore	NS	99
	Parkway	79	NS
Chardonnay	Bench	71-88	81-93
	Central	77-87	79-96
	Lakeshore	86-94	84
	Parkway	78-89	NS
	Vinemount	NS	82
Gamay	Parkway	96	NS
Merlot	Bench	88-93	87-94
	Central	75	82-95
	Lakeshore	99	82
	Parkway	89	NS
	Vinemount	NS	94
Cultivar	Location	East of Canal	West of Canal
Pinot Noir	Bench	66-87	66-95
	Central	84	59-89
	Lakeshore	72-88	78-82
	Parkway	89	NS
	Vinemount	NS	81-86
Riesling	Bench	72-88	82-86
	Central	83-92	83-100
	Lakeshore	82-84	94
	Parkway	86-93	NS
	Vinemount	NS	82-95
Sauvignon Blanc	Central	82	80
	Lakeshore	65	NS
Syrah	Lakeshore	NS	83
	Parkway	36	NS