

*IMPORTANT - Final Grapevine Winter Hardiness Data for 2009/2010 Dormant Season

Thursday, April 8, 2010

The following is the final bud hardiness sampling data for the 2009/10 dormant season. As we approach bud break we can no longer run exotherm analysis on grapevine buds.

With the warm temperatures over the past several days, bud hardiness measured across the Niagara Region has changed as expected.

The following data in the table below is based on samples across the Niagara Region as of April 06, 2010. The LTE 10 values are temperatures at which some bud injury may take place (resulting in 10% bud injury).

Cultivar	BUD LTE10 (°C)
Chardonnay	-6.7
Cabernet Franc	-6.4
Cabernet Sauvignon	-6.0
Sauvignon Blanc	-6.5

With bud break approaching (or reported for some very early cultivars in NOTL) injury to buds may occur at temperatures of -2 or colder. However, once green tissue is present injury can occur at freezing. For this reason, growers should now look at vines from a frost protection strategy as the vines are no longer dormant. Frost protection decisions should be made based upon your locations which are the highest risk from cold air accumulation. These would include areas of limited air drainage, low pockets in vineyards or areas in vineyards adjacent to bush areas where air flow may be restricted. For information on the use of wind machines for tree and vine protection see the Final Wind Machine Report, completed as an earlier project at: http://www.kcms.ca/pdfs/Final_Wind_Machine_Report_2010.pdf ; http://www.brocku.ca/ccovi/files/uploads/2010_Jan_11_Final_Wind_Machine_Report.pdf

For optimal use of wind machines, it is suggested that the start-up temperatures be set at 2 to 3 degrees warmer than temperatures at which injury might occur. Stressed vines are less able to withstand cold temperatures (weak, over-cropped or under-cropped, water-soaked soils in the fall, etc.). The above temperatures are general and may not be reflective of your specific vineyard location. Vine hardiness ratings are site specific and may vary depending on your specific environmental conditions, overall vine health and viticultural practices. KCMS is not responsible for any damage from the use or misuse of this information.

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