

Grapevine Pruning 2014

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So far in 2013/2014 we have experienced a pretty hard winter with multiple episodes of cold temperatures that have resulted in some significant damage to buds across the province. Preliminary bud survival numbers for LENS and PEC are very low with a likelihood of trunk injury and some vine death expected. The Niagara region has variable bud survival numbers at this time of writing (Late January 2014). Therefore it is important that proper pruning adjustments are done in order to mitigate the effects of cold injury as much as possible and ensure consistent production in future years. Upcoming forecasts and work by Brock University and KCMS (Ker, Willwerth and Brewster) show that vine hardiness levels are very good for the next while but we still have long way to go!

It is highly recommended that while you are doing pruning in 2014, you regularly check out the CCOVI website at <http://www.ccovi.ca/vine-alert/bud-survival> to see the latest status for bud survival in your area.

Some quick refresher points need to be made

1. Prune vines according to hardiness – that is hardiest vines first with most sensitive vines at the end of the pruning season (labrusca then hybrids then vinifera)
2. Generally, the most sensitive vinifera vines appear to be Merlot, Sauvignon Blanc, Pinot Noir and where possible should be pruned last.
3. Vines that are pruned earlier in winter often will break bud in the spring earlier than the same vines pruned later in the dormant period
4. Assess level of bud survival prior to pruning and check to see if there are any trends in terms of location of damage on canes. If damage is more consistent on upper portions of canes then spur pruning is recommended; if lower portions are highly damaged then longer canes are better. You want to retain viable buds AND avoiding crowding of renewal and fruiting zones.
5. If pruning where damage has been documented and you intend to cane prune, you must leave multiple extra canes (“kicker canes”) to hedge your bet against further bud injury later this winter.
6. Research has shown where vines have low bud survival numbers, spur pruning to 6 bud spurs has proven to be the fastest and most simple method for pruning in a recovery year. Be aware though that this requires GOOD FOLLOW-UP to clean out crowded shoots and to balance vines for crop load – especially injured vines!
7. Prune with an objective - and be aware that if you had issues the previous year (excess crop, excess bull wood or spindly growth, too dense of a canopy, spray coverage issues, etc) you WILL

need to modify your approach to pruning. If you leave excessive crop in 2014, vine collapse will likely be noticed in mid season.

8. In areas with higher bud damage, trunk damage, though not lethal, can still be severe and we expect to see a large number of cases of Crown Gall. For this reason we are recommending where bud survival numbers are low that suckers be trained up as renewal trunks in 2014. Injured trunks may survive 2014 but not subsequent years so start re-establishing the trunks in your vineyard this year!

There are some fundamental rules followed around the world for vinifera grape production

1. Balance – the amount of wood and buds you leave behind should match the training system used, and allow for the vine to properly mature the crop being carried
2. In a year where bud survival is low, spur pruning (6 buds per spur) has provided the greatest likelihood of having enough shoots to keep the root system supported.
3. Where trunk injury is likely, bringing up one or two suckers to re-establish trunks is critical. These should be as close to the graft union as possible. If there is no or little growth above the fruiting wire then leave more suckers to redistribute growth in order to reduce bullwood and persistent laterals. This will allow for stronger (and better) trucks in the future.
4. If using pruning weight approach, this is about 5-10 kg of fruit per kg of pruning weights depending on vine capacity and cultivar or 0.2-0.5 kg of wood per meter of row length.
5. Larger vines can have higher bud count numbers than smaller vines.
6. Proper shoot thinning at or just before bloom should allow for easiest manipulation of canopy later (especially crop load adjustment/thinning) including shoot positioning, hedging and fruit zone leaf removal where it is needed for premium grape production.
7. When in doubt at pruning – leaving slightly more buds/nodes is better than not enough. (Ker's Rule – it is easier to cut something off a vine than it is to try and glue it back on later!)

There is much debate about bud numbers and wine quality. There is a misconception that low yields always means high fruit quality. THIS MYTH HAS BEEN DISPROVEN BY PUBLISHED REASEARCH AROUND THE WORLD! Properly balanced vines always produce superior fruit to those with too little or too much crop. Crop load is regulated by PRUNING first and then by cluster thinning. Over-pruning (leaving too few buds/nodes) can be just as bad as under-pruning (too many buds/nodes) and lead to having to undertake very expensive time and labour to correct during the growing season.

The objective is have a balance of just enough vegetative growth to properly grow shoots and mature the fruit to optimum levels without having to undertake excessive amounts of in-season corrections (multiple times for crop thinning, hedging or leaf removal!).