

# PRACTICAL MANAGEMENT GUIDE FOR FALL/WINTER FREEZE DAMAGE IN MATURE CORDON VINES - APICAL TEXAS

The purpose of this guide is to pick up where Academia leaves off, and assist with making very difficult field-level decisions. The buds to care about are either your bottom 4, if you're fruiting, or all 8 to 10, if you are in vine training. So be mindful of where your dead buds are located. If you are in vine training years, please see our "Guide for Young Cordon Vines".

- Step 1\*:** OUR METHOD is Take 15 WHOLE shoots with 10 buds each for 5-10 acres of one variety. Spur and all. TEXTBOOK METHOD is Take 20 PRUNED shoots with 8 buds each, leaving the 2-3 bud pruning spur.
- Step 2:** Use an X-ACTO knife to slice the buds horizontally, on each shoot you cut.
- Step 3:** Count up the total buds you dissected for each variety and then count how many dead primary buds.
- Step 4\*\*:** Divide the Dead Primary Count by the Total Count. That's your Primary Bud Death Rate.
- Step 5:** See what category your % is in the chart below.

**QUICK LINKS**

[AMAZON - X-ACTO KNIFE](#)      [AMAZON - FIELD MAGNIFYING GLASS](#)  
[EXCEL SHEET TEMPLATE](#)      [HOW-TO VIDEO - 1 MINUTE](#)

	None	Slight	Moderate	Bad	Severe
<b>Primary Bud Death Rate</b>	Less Than 10%	11% - 30%	31% - 45%	46% - 65%	More than 65%
<b>Technical Interpretation</b>	Shouldn't notice significant differences this year and no carry over to next year.	You will notice a light to moderate yield loss this year and there should be no carryover effects to next year, unless you are approaching that 30% bud death. Then it may be possible depending on variety, site, etc., etc.	Yield loss could be 1/3 to 1/2 or more of normal. Will see some mild to moderate carryover effects and will need to prune carefully next year, as well. All canopy management decisions will become critical, as well as more difficult. May need to retrain a cordon arm here and there and you may need to fill cordon gaps, such as at ends of vines.	Yield this year will be very small, if any, and you will have to retrain out some but not all cordon arms, or fill in new gaps. May have to retrain a few top sections of trunks here and there. The choices between too few growing points and controllable vine growth will become difficult.	There will not be a crop this year. You will likely need to fully rebuild much of the cordon and may need to train new trunks or replace a few vines. This may be catastrophic under certain conditions but is often recoverable with excellent management.
<b>Management Interpretation</b>	You can do what you normally do.	You will need to make some important adjustments.	Big adjustments will be critical and plans will need revising as the season progresses, if you want get the most out of the year.	It's crucial to wait until the buds start to swell and push in order to make an accurate assessment and then craft a pruning/training plan from there.	It is possible that some vines may not survive if great care is not taken. Recovery will take multiple years but is often possible.
<b>Pre-Pruning Action</b>	You can Pre-Prune as Normal	You can Pre-Prune as Normal Unless Using the Circular Saw Blade-Type Pre-Pruner. Be very careful doing that because those often cut you down to 2-5 bud spurs already.	You can Pre-Prune but Barrel-Style Pre-Pruner Only. The kind that leave 10"-18" of wood on all shoots.	HIGHLY recommend Barrel-Style Pre-Pruner Only. The kind that leave 10"-18" of wood on all shoots.	If you have other varieties that are not in this category, go ahead and mechanically Pre-Prune. Either kind is fine.
<b>Pruning Action</b>	Prune as Normal. Really, don't add buds.	Increase bud counts by 50% @ 30% bud death. Increase bud counts by 37.5% @ 20% bud death. Increase bud counts by 25% @ 11% bud death.	Increase bud counts by 100% @ 45% bud death. Increase bud counts by 75% @ 37.5% bud death. Increase bud counts by 50% @ 31% bud death.	Wait to finish prune until 1 to 2 weeks into bud break @ 46% bud death. Wait as long AFTER bud break as possible to prune @ 65% bud death. This may be 3 to 4 weeks.	None, unless you are around 65% death rate and the option of replanting the vines is not an option.
<b>Timing</b>	No need to deviate from normal.	Mostly normal, but those approaching 30% bud death need to be prepared for an ultra late "pruning touch-up" or early/heavy shoot thinning if more buds push than planned on.	Mostly normal at 31% if all goes as expected. @ 45% it is advisable to wait into bud swell or just into bud break. If your vines are 4-5 years old and still filling out the last bit of cordon space, you may think about waiting a year to do that.	Wait until well into bud break and shoot growth. You need the time to see how the vine responds to bud break before you can make a good call.	You will need to wait until near the end of May or early June, to see what growth occurs. At that time, you can make an informed decision. Any decision before that is a wild guess at best.
<b>Watch Outs</b>	None.	Timing of early shoot thinning and canopy management. Fine if your plan goes off without a hitch. Will cost you real dollars if it doesn't and you react too late.	Timing of everything until shoots reach mid to upper wires. Reacting too late here (or too early) can cost you 1.5-3X in recovering and could derail your whole plan.	Not listening and watching for what the vines tell you can set you back a whole season and/or result in some vine death in the future.	Over reacting. This will require a huge test of patience to wait until the vines show you the possible options. Sorry. We wish there was a better answer, but hard things are hard.

\* Do not skip varieties because each one is different. Take a bigger sample if you have high variability. The buds that matter are Bud Positions 1 through 4, so if you don't take the whole shoot you WON'T BE SAMPLING 50% of the buds that matter. This is the difference between our method and the textbook method. In our experience, commercial vineyards need larger sample sizes to account for variability than most Univeristy & Extension research.

\*\* This is JUST counting PRIMARY buds. For more than 20% Death Rate, you SHOULD take a larger sample AND count secondary buds, for the best decision possible. We don't consider this optional if your death rate is over 35% for sound math reasons. If you choose to sample only PRUNED SHOOTS and not whole shoots with spurs, then ADD ~15% to your calculated Primary Bud Death Rate. That will be similar to the textbook method and numbers in most of Academia.

