



SPRING BEST PRACTICES

FROST SEASON IS UPON US!

Best Practices for Frost Control in Napa Valley Vineyards

Prepared by the Industry Issues Committee of the Napa Valley Grapegrowers

In our continuing efforts to promote and support viticultural best practices, the NVG would like to offer the following suggestions regarding frost protection. This is not an all-inclusive list of frost causes and all associated issues, but rather highlights some of the important aspects of protecting your valuable crop.

1. Whenever possible, communicate with your neighbors about frost season: its implications, practices, and duration.
2. Know your site! Start-up times for all machines & methods may vary according to your own unique sites. Employ weather stations, frost alerts, or other methods of keeping you abreast of the current situation in your vineyard.
3. There are many passive frost control measures you can employ, including delayed final pruning and different floor management strategies, i.e. mowing and where permitted, discing. Investigate all of your options.
4. Calibrate thermometers in a 32 degree Fahrenheit ice bath.
5. Monitor the ambient temperature and turn on the frost system only when needed to minimize energy needs (gas, diesel, and propane) and water use.
6. Timing is important. If the temperature is hovering above 34 degrees at day break; the chance of a frost are minimal. If temperatures are plummeting early in the night, then the threat of frost could be great.
7. Wind machines should be full throttled at 34 degrees Fahrenheit, as dew point can play a huge role in vine-perceived temperature.
8. For sprinkler operation, first and foremost: *consult your dew point chart*. In very general terms, sprinklers should be started by 34 degrees, particularly if it is before 5:00 a.m. and the dew point is below 30F. If ice forms on the vine/trellis, then the sprinkler system should not be turned off until all ice has been melted, regardless of the ambient temperature.

9. Try to put yourself in the neighbors' position when it comes to noise generated by wind machines. Protecting against frost is within everyone's right to farm, but we should also strive to be good neighbors.
10. Monitor the operation hours of machines. Temperatures should be monitored once frost systems are running. If a cloud layer begins to form; chances are the temperature will rise above 32 degrees and further frost protection may become unnecessary.
11. Provide adequate staffing to ensure that one person is not handling a large number of sites and therefore, by necessity, is turning on some wind machines very early. If unavoidable, you may be able to mitigate this scenario by avoiding early starts for machines in residential areas.

The Napa Valley Grapegrowers offers various weather support services ([Frost Alert](#), [Precision Forecasting Weather Service](#), [Picovale Network of Weather Stations](#)), and can also recommend the services of our Associate members who specialize in this field. Please telephone the NVG office at (707) 944-8311 with any questions that you may have, and we'll be happy to assist you.

www.napagrowers.org

To preserve and promote Napa Valley's world-class vineyards