

Appendix A-07 North Fork Vineyard Frost Events

North Fork Vineyard Frost Events 2016-2019 During Frost Season

YEAR	EVENTS		
2016	3/29/2016 - 9 hr event	3/30/2016 - 7 hr event	3/31/2016 - 4 hr event
2017	3/31/2017 - 2 hr event		
2018	3/16/2018 - 5 hr event	3/18/2018 - 3 hr event	4/17/2018 4.5 hr event
2019	0 events		

Frost events were recored by permanent weather stations and by real time observations at North Fork.

North Fork Vineyard Frost Protection Requirements

YEAR	BUDBREAK, VARIETIES and ACRES		
2016	N\A		
2017	N\A		
2018	First bud break occurred on 3/15/18 in Pinot Noir, Chardonnay, Grenanch, Mourvedre, Petite Verdot, Pinot Gris, Sauvignon Blanc and Caberenet Franc. Acres for these varieties totals 600.07.	On 3/23/2018 an additional 165.24 acres buded out making the total of acres requiring protection 765.31. The additional varieties were Cabernet Sauvignon, Malbec, Merlot, Petite Sirah and Syrah.	An additional 74.11 acres of Petite Syrah and Syrah buded out on 4/19/2018
2019	First bud break occurred on 3/27/19 in Pinot Noir, Chardonnay, Grenanch, Mourvedre, Petite Verdot, Pinot Gris, Sauvignon Blanc and Caberenet Franc. acres for these varieties totals 600.07.	On 4/8/2019 an additional 165.24 acres buded out making the total of acres requiring protection 765.31. The additional varieties were Cabernet Sauvignon, Malbec, Merlot, Petite Sirah and Syrah.	An additional 74.11 acres of Petite Syrah and Syrah buded out on 4/22/2018

Vineyard acres requiring frost protection were determined from field observations of bud break occuring at different times for different varieties. While its designed to be able to do so, North Fork Vinyard has never required frost protection across all of its acerage since inception. Based on historical records from the past 4 years North Fork frost events have occurred within a 33 day period as early as March 16 and no later - than April 17. The average frost event is 4.9 hours in duration. 25% of years have 0 events with 0 frost proteccion required. No more than three events have occurred during the most extreme frost year and the average window requiring protection lasted 6.6 hours that year. The maximum acres requiring frost protect is 765.31 due to stratigec late pruning techniques and location of plantings.