

## 2017 - 2018 Winter Grape Bud Hardiness Okanagan Valley BC

Variety	Location	sample day	Avg LTE/vine (Nov 7,8)	Avg LTE/vine (Nov 21,22)	Avg LTE/vine (Dec 5,6)	Avg LTE/vine (Dec 19,20)	Avg LTE/vine (Jan 2,3)	Avg LTE/vine (Jan 16,17)	Avg LTE/vine (Jan 30,31)	Avg LTE/vine (Feb 13,14)	Avg LTE/vine (Feb 27,28)	Avg LTE/vine (Mar 13,14)	Avg LTE/vine (Mar 27,28)	Avg LTE/vine (Apr 10,11)
Cabernet Franc	Oliver east	Tues	-20.9	-20.6	-23.4	-23.3	-25.8	-23.2	-23.5	-23.7	-23.3	-21.6	-16.8	-11.2
Cabernet Franc	Black Sage	Tues	-21.1	-20.5	-23.4	-22.2	-25.7	-21.6	-22.8	-24.0	-23.2	-21.6	-16.0	-10.1
Cabernet Franc	Black Sage	Wed	-20.1	-19.4	-22.3	-22.4	-25.1	-23.1	-22.3	-22.6	-22.5	-19.2	-11.8	-9.9
Cabernet Franc	Osoyoos, southeast	Wed	-19.9	-21.7	-22.6		-26.8		-23.1	-23.4	-23.2	-20.2	-14.9	-10.7
Cabernet Franc	Osoyoos, north	Wed	-19.7	-21.1	-21.6		-23.6		-23.3	-22.4	-22.6	-19.6	-16.4	-9.1
Cabernet Sauvignon	Osoyoos northeast	Tues	-19.8	-20.5	-22.6	-22.9		-23.2	-22.8	-23.1	-23.4	-22.5	-17.8	-11.7
Cabernet Sauvignon	Osoyoos northeast	Tues	-17.7	-18.8	-21.1	-22.1		-21.5	-22.3	-21.4	-22.3	-20.7	-17.7	-12.5
Cabernet Sauvignon	Black Sage	Tues	-19.3	-19.1	-21.5	-21.9	-23.6	-22.3	-21.4	-22.3	-22.4	-20.2	-17.3	-12.5
Cabernet Sauvignon	Osoyoos, southeast	Wed	-20.0	-20.3	-21.5		-26.0		-22.9	-22.5	-22.7	-20.4	-17.2	-11.2
Chardonnay	OK Falls, east	Tues	-21.5	-22.0	-24.0	-23.0		-24.0	-22.4	-23.6	-23.3	-21.8	-15.7	-9.8
Chardonnay	Oliver east	Tues	-22.2	-22.3	-24.3	-23.9	-25.7	-23.9	-22.4	-23.7	-23.4	-21.2	-15.0	-11.0
Chardonnay	Black Sage	Tues	-21.9	-22.0	-23.9	-24.0	-25.3	-23.4	-23.1	-24.3	-23.9	-21.4	-17.0	-11.8
Chardonnay	Naramata bench	Tues	-22.1	-22.1	-23.3	-22.5	-25.2			-23.0	-23.8	-23.9	-21.8	-17.5
Chardonnay	Osoyoos, southeast	Wed	-22.1	-22.8	-24.3		-25.8		-23.4	-23.6	-24.1	-20.0	-15.3	-11.5
Chardonnay	Oliver, south	Wed	-21.9	-21.9	-23.0	-24.6	-25.1	-23.3	-22.7	-22.5	-22.3	-18.6	-14.6	-10.9
Gewurztraminer	OK Falls, west	Tues	-19.7	-20.5	-22.9	-22.5	-23.2	-21.6	-21.7	-21.4	-21.8	-20.2	-17.7	-11.9
Gewurztraminer	Oliver east	Tues	-19.7	-20.4	-23.1	-22.0		-21.9	-22.0	-22.2	-22.4	-20.7	-17.8	-12.5
Gewurztraminer	Kelowna	Tues	-18.8	-19.1	-21.1	-21.4	-22.6	-22.4	-21.8	-21.7	-21.3	-19.8	-16.2	
Malbec	Osoyoos, north	Wed	-21.3	-20.0	-21.3		-25.8		-20.6	-22.3	-22.2	-20.2	-16.9	-11.5
Merlot	Osoyoos northeast	Tues	-19.8	-20.3	-22.4	-22.3	-24.2	-21.9	-22.3	-23.0	-22.5	-21.4	-17.1	-11.0
Merlot	Black Sage	Tues	-20.3	-20.9	-22.1	-21.4	-23.6	-20.1	-21.7	-21.6	-22.2	-21.0	-16.4	-11.2
Merlot	Osoyoos northeast	Wed	-21.1	-22.2	-23.9	-23.7	-24.9	-24.0	-23.9	-23.5	-23.1	-20.6	-16.8	
Merlot	Osoyoos northeast	Wed	-20.3	-21.4	-22.8	-23.0	-25.0	-22.4	-22.3	-23.0	-23.2	-20.6	-16.2	
Merlot	Osoyoos northeast	Wed	-21.1	-21.5	-22.5	-22.9	-24.5	-22.8	-23.4	-23.0	-22.8	-21.0	-16.7	-12.4
Merlot	Osoyoos northeast	Wed	-20.6	-21.1	-23.1	-23.5	-25.2	-22.8	-23.4	-23.0	-23.0	-20.3	-16.4	-11.7
Merlot	Oliver east	Wed	-20.8	-20.5	-22.6	-22.3	-24.8	-22.1	-22.2	-22.6	-21.5	-20.4	-16.6	-12.3
Merlot	Oliver, west	Wed	-19.5	-19.4	-19.3	-20.5	-23.8	-19.5	-20.2	-20.4	-19.7	-16.1	-15.7	-11.1
Merlot	Osoyoos west	Wed	-20.5	-21.9	-22.3		-25.0		-22.3	-22.3	-22.2	-20.2	-16.5	-12.5
Merlot	Osoyoos, southeast	Wed	-19.2	-20.8	-22.0		-25.7		-22.3	-22.7	-22.4	-20.1	-15.4	-10.2
Merlot	Black Sage	Wed	-20.0	-18.2	-22.5	-21.7	-25.3	-22.6	-22.6	-22.7	-22.7	-19.0	-14.6	-10.7
Merlot	Black Sage	Wed	-20.8	-21.4	-22.7	-22.9	-25.5	-22.1	-22.4	-23.0	-22.6	-20.0	-16.2	-11.4
Pinot blanc	Oliver east	Tues	-21.1	-21.8	-23.4	-22.4		-23.2	-24.1	-23.5	-24.7	-23.2	-17.9	-11.5
Pinot blanc	Black Sage	Tues	-21.6	-21.6	-23.5	-21.5	-22.8	-22.1	-23.0	-23.2	-23.8	-21.4	-16.1	-10.8
Pinot gris	OK Falls, east	Tues	-22.7	-22.3	-23.7	-23.3		-22.7	-23.5	-23.9	-23.9	-22.6	-18.4	-12.0
Pinot gris	Oliver east	Tues	-21.3	-22.2	-23.2	-22.7	-27.1	-24.3	-23.7	-24.8	-24.3	-22.2	-18.5	-12.9
Pinot gris	Black Sage	Tues	-22.3	-22.3	-23.5	-22.9	-25.2	-23.0	-23.6	-24.3	-24.0	-21.7	-16.1	-12.0
Pinot gris	Naramata bench	Tues	-20.7	-20.1	-22.9	-21.9	-25.3		-22.0	-22.1	-22.1	-20.2	-15.4	
Pinot gris	Oliver east	Wed	-22.3	-23.2	-24.7	-23.7	-26.8	-24.7	-24.3	-24.0	-24.4	-21.8	-18.6	-11.3
Pinot noir	Osoyoos northeast	Tues	-22.1	-22.6	-23.7	-23.2		-23.5	-23.4	-24.3	-23.7	-22.3	-18.4	-12.4
Pinot noir	Kelowna	Tues	-20.4	-21.3	-22.3	-22.7	-23.6	-23.3	-23.7	-23.7	-23.4	-21.2	-16.9	
Pinot noir	Naramata bench	Tues	-21.0	-20.2	-21.6	-21.8	-24.8		-22.3	-22.6	-22.9	-21.0	-16.9	
Pinot noir	Black Sage	Wed	-22.0	-21.7	-23.5	-23.9	-26.2	-24.5	-23.8	-23.3	-23.8	-20.8	-15.8	-11.2
Riesling	Oliver east	Tues	-20.7	-21.4	-23.2	-22.6		-23.0	-23.3	-24.0	-24.4	-22.6	-21.2	-16.0
Riesling	Black Sage	Tues	-23.2	-21.5	-24.5	-23.3	-23.8	-23.3	-23.1	-24.0	-23.4	-22.3	-21.4	-14.1
Riesling	West Kelowna	Tues	-20.3	-20.3	-22.6	-23.2	-23.8	-23.7	-23.7	-25.3	-24.3	-23.4	-20.3	
Riesling	Naramata bench	Tues	-20.9	-21.3	-22.9	-22.0	-25.3		-23.0	-23.9	-23.8	-21.5	-16.7	
Riesling	Black Sage	Tues	-21.2	-21.9	-23.5	-23.0	-23.4	-21.2	-23.3	-22.4	-22.4	-21.6	-18.4	-11.7
Sauvignon blanc	Black Sage	Tues	-20.7	-20.1	-21.7	-22.4	-24.0	-22.1	-21.5	-22.8	-21.8	-20.2	-17.4	-11.7
Sauvignon blanc	Black Sage	Tues	-19.1	-20.7	-21.5	-21.1	-26.0	-21.7	-21.9	-22.6	-22.4	-21.3	-17.7	-11.6
Sauvignon blanc	Black Sage	Tues	-20.6	-20.7	-23.3	-21.9	-25.4	-21.7	-21.5	-23.1	-23.5	-21.6		
Sauvignon blanc	Black Sage	Wed	-19.0	-19.7	-22.1	-22.1	-23.7	-21.6	-21.0	-22.4	-21.6	-19.8	-14.6	-10.8
Sauvignon blanc	Oliver east	Tues	-20.5	-20.6	-22.5	-22.7		-22.3	-21.7	-22.6	-22.7	-20.9	-17.6	-11.9
Sauvignon blanc	Oliver east	Tues	-20.9	-21.0	-23.4	-22.4	-26.3	-23.2	-22.9	-23.7	-23.2	-21.8	-18.2	
Sauvignon blanc	Osoyoos northeast	Wed	-18.8	-20.0	-22.0	-22.4	-23.2	-22.2	-21.8	-22.2	-22.1	-19.9	-14.8	-10.1
Sauvignon blanc	Osoyoos northeast	Wed	-19.4	-20.8	-21.7	-22.3	-24.0	-21.8	-21.4	-22.1	-21.9	-19.6	-17.0	-10.5
Sauvignon blanc	Osoyoos northeast	Wed	-19.5	-20.6	-22.6	-23.0	-22.7	-22.8	-22.5	-22.9	-22.2	-20.7	-15.3	-10.7
Sauvignon blanc	Oliver east	Wed	-20.8	-21.9	-23.9	-23.6	-25.0	-23.2	-22.8	-23.6	-22.8	-20.6	-18.2	-12.8
Sauvignon blanc	Oliver east	Wed	-21.1	-21.0	-22.4	-22.3	-23.0	-22.3	-21.9	-22.4	-22.6	-20.1	-18.0	-12.2
Shiraz	Osoyoos northeast	Tues	-17.7	-18.0	-20.6	-20.8	-23.5	-20.9	-21.9	-22.7	-22.0	-20.7	-16.6	-11.8
Shiraz	Osoyoos northeast	Tues	-18.4	-18.7	-20.2	-21.6	-20.9	-21.3	-21.9	-23.0	-22.5	-21.2	-16.6	-11.5
Shiraz	Black Sage	Tues	-19.6	-19.5	-21.6	-20.8	-21.2	-20.4	-22.2	-23.9	-23.4	-22.2	-18.2	-12.6
Shiraz	Osoyoos, southeast	Wed	-21.3	-20.9	-21.9		-25.4		-23.1	-23.8	-22.9	-20.8	-17.1	-12.0
Shiraz	Osoyoos, southeast	Wed	-17.8	-18.1	-21.2		-23.4		-21.5	-22.4	-21.8	-20.3	-15.7	-11.5
Shiraz	Osoyoos, southeast	Wed	-18.3	-18.7	-22.1		-19.1		-21.4	-21.8	-21.8	-19.3	-16.3	-11.8
Viognier	Osoyoos west	Wed	-21.3	-21.9	-24.4		-25.8		-23.6	-23.3	-23.6	-22.1	-16.0	-12.2

Avg LTE/site is the mean temperature for bud death from 3 vines at selected sites in the Okanagan Valley  
 LTE - Lethal Temperature Exotherm (°C)

Carl Bogdanoff - Summerland RDC Wine Grape Research