

Grapevine Bud Hardiness in the Okanagan and Similkameen Valleys, BC, 2024-2025. Steve Marsh, Agriculture and Agri-Food Canada, Summerland, BC.

Variety	Location	sample day	Ave LTE10 (Nov 12,14)	Avg LTE10 (Nov 20)	Avg LTE10 (Dec 3,4)	Avg LTE10 (Dec 17,18)	Avg LTE10 (Jan 14,15)	Avg LTE10 (Jan 28,29)	Avg LTE10 (Feb 10,11)	Avg LTE10 (Feb 25,26)	Avg LTE10 (Mar 11,12)	Avg LTE10 (Mar 25,26)
Cabernet Franc	Black Sage	Wed	.	-20.4	-21.3	-21.0	-21.6	-23.5	-24.3			
Cabernet Franc	East Kelowna	Tues	-12.1	.	-13.7	-15.3	.	-19.5	.			
Cabernet Franc	Similkameen	Tues	-16.0	.	-20.3	-20.7	-18.6	-20.8	-24.3			
Cabernet Sauvignon	Black Sage	Wed	.	-17.9	-20.9	-20.3	-21.2	-21.6	-23.0			
Chardonnay	East Kelowna	Tues	-13.7	.	-20.4	-19.7	-20.2	-21.9	.			
Chardonnay	Oliver	Wed	.	-19.0	-18.9	-21.3	-22.1	-22.8	.			
Chardonnay	Similkameen	Tues	-18.3	.	-19.4	-20.6	-21.5	-20.9	.			
Chardonnay	Summerland	Wed	.	.	-21.1	-21.3	-23.3	-22.9	.			
Chenin blanc	Peachland	Tues	.	.	-17.8	-18.5	-19.7	.	.			
Gamay noir	South Kelowna	Tues	.	.	-19.3	-19.4	-20.6	-22.0	-25.2			
Gamay noir	Summerland	Wed	.	.	-17.6	-20.0	-21.2	-23.7	.			
Gewurztraminer	Kaleden	Wed	.	.	-20.0	-20.8	-20.1	-23.0	.			
Marachel Foch	East Kelowna	Tues	.	.	-22.4	-20.5	-20.4	-22.4	.			
Marquette	Peachland	Tues	.	.	-19.9	-20.7	-18.2	-24.5	.			
Marquette	Similkameen	Tues	-19.1	.	-23.6	-23.8	-24.6	-26.6	.			
Merlot	Black Sage	Wed	.	-17.0	-21.4	-20.1	-18.3	-20.9	-23.2			
Merlot	Summerland	Tues	-15.3	.	-20.1	-22.2	-20.4	-23.0	.			
Petit Meunier	South Kelowna	Tues	.	.	-20.1	-19.5	-19.6	-22.0	.			
Pinot gris	Kaleden	Wed	.	.	-20.3	-21.4	-21.0	-22.8	.			
Pinot gris	Oliver	Wed	.	-18.7	-22.5	-22.2	-21.0	-23.2	.			
Pinot gris	Similkameen	Tues	-15.8	.	-21.7	-19.6	-21.3	-22.4	.			
Pinot noir	East Kelowna	Tues	-18.4	.	-19.3	-20.0	-21.8	-22.4	.			
Pinot noir	East Kelowna	Tues	-16.6	.	-18.7	-20.2	-21.3	-22.3	.			
Pinot noir	Summerland	Wed	.	.	-19.2	-19.9	-20.9	-20.1	.			
Riesling	Black Sage	Wed	.	-18.7	-23.3	-22.9	-22.4	-24.6	.			
Riesling	East Kelowna	Tues	-16.9	.	-21.4	-19.3	-22.6	-24.4	.			
Riesling	East Kelowna	Tues	-18.3	.	-21.5	-22.3	-19.5	-23.3	.			
Riesling	Oliver	Wed	.	-21.1	-21.3	-23.4	-23.5	-25.2	.			
Sauvignon blanc	Black Sage	Wed	.	-18.6	-20.3	-21.0	-21.2	-22.4	-22.9			
Sauvignon blanc	Oliver	Wed	.	-19.9	-20.4	-20.7	-22.4	-22.7	.			
Syrah	Similkameen	Tues	-12.5	.	-16.4	-17.7	-17.6	-21.0	.			
Viognier	Black Sage	Wed	.	-18.6	-21.8	-19.3	-21.1	-23.2	-23.1			
Viognier	Black Sage	Wed	.	-15.6	-21.4	-21.0	-20.9	-22.5	-23.9			
Viognier	Lake Country	Tues	-12.3	.	.	.	.	.	.

LTE: Lethal temperature exotherm (°C). AVG LTE10: Average lethal temperature exotherm at 10% bud mortality for buds collected from 3 vines at selected sites in the Okanagan and Similkameen Valleys.

* if the peak count for 15 buds was below 10 peaks then no LTE10 or LTE90 are recorded just LTE 50.

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Variety	Location	sample day	Avg LTE50 (Nov 12,14)	Avg LTE50 (Nov 20)	Avg LTE50 (Dec 3,4)	Avg LTE50 (Dec 17,18)	Avg LTE50 (Jan 14,15)	Avg LTE50 (Jan 28,29)	Avg LTE50 (Feb 10,11)	Avg LTE50 (Feb 25,26)	Avg LTE50 (Mar 11,12)	Avg LTE50 (Mar 25,26)
Cabernet Franc	Black Sage	Wed	.	-22.3	-23.4	-22.1	-23.2	-24.5	-25.5			
Cabernet Franc	East Kelowna	Tues	-14.4	.	-18.3	-17.8	.	-22.4	.			
Cabernet Franc	Similkameen	Tues	-18.0	.	-21.9	-22.8	-21.6	-23.9	-25.1			
Cabernet Sauvignon	Black Sage	Wed	.	-20.1	-22.5	-22.4	-22.8	-24.0	-24.9			
Chardonnay	East Kelowna	Tues	-16.7	.	-21.6	-21.7	-22.1	-24.0	-24.9			
Chardonnay	Oliver	Wed	.	-21.1	-22.7	-23.2	-23.2	-24.4	-24.4			
Chardonnay	Similkameen	Tues	-19.6	.	-21.4	-22.2	-22.2	-22.7	-25.1			
Chardonnay	Summerland	Wed	.	.	-22.4	-23.1	-24.2	-24.7	-24.0			
Chenin blanc	Peachland	Tues	.	.	-19.4	-21.1	-20.7	.	-23.3			
Gamay noir	South Kelowna	Tues	.	.	-20.9	-21.4	-22.7	-24.3	-26.2			
Gamay noir	Summerland	Wed	.	.	-20.7	-21.8	-23.0	-25.1	-26.6			
Gewurztraminer	Kaleden	Wed	.	.	-21.3	-21.6	-21.6	-23.9	-23.5			
Marachel Foch	East Kelowna	Tues	.	.	-23.6	-23.0	-23.1	-26.8	-26.9			
Marquette	Peachland	Tues	.	.	-23.9	-23.7	-22.5	-27.6	-24.3			
Marquette	Similkameen	Tues	-21.4	.	-24.8	-24.7	-26.2	-28.0	-24.1			
Merlot	Black Sage	Wed	.	-19.5	-22.4	-22.6	-22.2	-23.8	-24.6			
Merlot	Summerland	Tues	-17.0	.	-21.5	-22.8	-22.3	-24.2	-24.0			
Petit Meunier	South Kelowna	Tues	.	.	-20.9	-20.9	-21.1	-23.6	-24.5			
Pinot gris	Kaleden	Wed	.	.	-22.1	-22.7	-22.7	-24.3	-25.4			
Pinot gris	Oliver	Wed	.	-21.7	-23.5	-23.2	-24.1	-25.3	-24.0			
Pinot gris	Similkameen	Tues	-18.8	.	-22.9	-22.5	-23.2	-24.1	-24.2			
Pinot noir	East Kelowna	Tues	-19.3	.	-22.2	-21.0	-23.3	-24.6	-24.6			
Pinot noir	East Kelowna	Tues	-17.8	.	-21.1	-21.6	-22.6	-24.1	-24.3			
Pinot noir	Summerland	Wed	.	.	-21.4	-21.2	-22.5	-23.1	-23.9			
Riesling	Black Sage	Wed	.	-21.8	-24.2	-24.3	-25.3	-25.9	-26.4			
Riesling	East Kelowna	Tues	-19.0	.	-22.4	-21.2	-23.9	-25.2	-23.5			
Riesling	East Kelowna	Tues	-19.7	.	-22.3	-23.9	-21.9	-24.8	-24.1			
Riesling	Oliver	Wed	.	-22.7	-24.3	-24.7	-25.0	-26.4	-23.4			
Sauvignon blanc	Black Sage	Wed	.	-20.0	-21.9	-22.3	-22.9	-23.8	-24.5			
Sauvignon blanc	Oliver	Wed	.	-21.4	-22.5	-22.5	-23.4	-24.4	-24.0			
Syrah	Similkameen	Tues	-14.5	.	-19.1	-20.0	-20.2	-22.7	-22.9			
Viognier	Black Sage	Wed	.	-21.6	-22.8	-21.9	-23.2	-24.6	-25.7			
Viognier	Black Sage	Wed	.	-20.2	-22.3	-22.2	-24.0	-25.1	-25.8			
Viognier	Lake Country	Tues	-14.8	.	.	.	.	.	.

LTE: Lethal temperature exotherm (°C). AVG LTE50: Average lethal temperature exotherm at 50% bud mortality for buds collected from 3 vines at selected sites in the Okanagan and Similkameen Valleys.

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Variety	Location	sample day	Avg LTE90 (Nov 12,14)	Avg LTE90 (Nov 20)	Avg LTE90 (Dec 3,4)	Avg LTE90 (Dec 17,18)	Avg LTE90 (Jan 14,15)	Avg LTE90 (Jan 28,29)	Avg LTE90 (Feb 10,11)	Avg LTE90 (Feb 25,26)	Avg LTE90 (Mar 11,12)	Avg LTE90 (Mar 25,26)
Cabernet Franc	Black Sage	Wed	.	-24.3	-25.4	-23.0	-25.1	-25.8	-26.6			
Cabernet Franc	East Kelowna	Tues	-16.7	.	-20.9	-19.7	.	-24.8	.			
Cabernet Franc	Similkameen	Tues	-19.3	.	-23.3	-24.5	-24.0	-25.4	-26.0			
Cabernet Sauvignon	Black Sage	Wed	.	-21.4	-24.2	-23.6	-24.4	-25.5	-26.8			
Chardonnay	East Kelowna	Tues	-19.5	.	-22.9	-23.8	-23.9	-25.8	.			
Chardonnay	Oliver	Wed	.	-22.5	-24.4	-24.5	-24.8	-26.0	.			
Chardonnay	Similkameen	Tues	-20.5	.	-23.1	-23.4	-22.8	-24.9	.			
Chardonnay	Summerland	Wed	.	.	-24.0	-23.8	-25.6	-27.2	.			
Chenin blanc	Peachland	Tues	.	.	-20.3	-23.4	-21.6	.	.			
Gamay noir	South Kelowna	Tues	.	.	-22.6	-23.5	-24.1	-26.3	-27.4			
Gamay noir	Summerland	Wed	.	.	-23.2	-24.0	-24.0	-25.8	.			
Gewurztraminer	Kaleden	Wed	.	.	-22.4	-22.5	-22.4	-24.8	.			
Marachel Foch	East Kelowna	Tues	.	.	-25.0	-25.1	-27.3	-28.7	.			
Marquette	Peachland	Tues	.	.	-27.2	-25.9	-24.8	-29.9	.			
Marquette	Similkameen	Tues	-23.4	.	-25.9	-26.3	-27.4	-28.8	.			
Merlot	Black Sage	Wed	.	-21.4	-23.5	-24.8	-24.2	-25.0	-26.2			
Merlot	Summerland	Tues	-19.0	.	-23.1	-24.0	-23.5	-25.1	.			
Petit Meunier	South Kelowna	Tues	.	.	-22.0	-22.5	-22.3	-25.0	.			
Pinot gris	Kaleden	Wed	.	.	-23.3	-23.8	-24.2	-25.8	.			
Pinot gris	Oliver	Wed	.	-22.8	-24.9	-24.1	-26.3	-27.1	.			
Pinot gris	Similkameen	Tues	-20.8	.	-24.5	-25.1	-24.7	-25.5	.			
Pinot noir	East Kelowna	Tues	-21.2	.	-24.3	-22.2	-24.5	-26.6	.			
Pinot noir	East Kelowna	Tues	-18.7	.	-22.3	-23.4	-23.5	-25.4	.			
Pinot noir	Summerland	Wed	.	.	-22.3	-22.6	-24.2	-24.8	.			
Riesling	Black Sage	Wed	.	-23.7	-25.3	-25.5	-26.7	-27.0	.			
Riesling	East Kelowna	Tues	-21.0	.	-24.6	-23.0	-25.1	-26.2	.			
Riesling	East Kelowna	Tues	-21.5	.	-23.2	-25.2	-24.0	-26.9	.			
Riesling	Oliver	Wed	.	-24.4	-25.7	-26.2	-26.7	-28.1	.			
Sauvignon blanc	Black Sage	Wed	.	-21.5	-23.1	-23.7	-24.5	-24.9	-26.3			
Sauvignon blanc	Oliver	Wed	.	-22.8	-24.3	-23.8	-24.8	-25.7	.			
Syrah	Similkameen	Tues	-16.8	.	-21.3	-21.0	-22.7	-24.1	.			
Viognier	Black Sage	Wed	.	-23.3	-24.2	-23.5	-25.3	-26.7	-27.2			
Viognier	Black Sage	Wed	.	-23.0	-23.0	-23.8	-26.2	-27.3	-27.9			
Viognier	Lake Country	Tues	-18.0	.	.	.	.	.	.

LTE: Lethal temperature exotherm (°C). AVG LTE90: Average lethal temperature exotherm at 90% bud mortality for buds collected from 3 vines at selected sites in the Okanagan and Similkameen Valleys.

* if the peak count for 15 buds was below 10 peaks then no LTE10 or LTE 90 are recorded just LTE 50.