

Supplementary Materials

Table S1. Mean monthly maximum and minimum temperature during the dormant seasons of 2017/18, 2018/19 and 2019/20.

	2017/18 mean maximum (°C)	2018/19 mean maximum (°C)	2019/20 mean maximum (°C)	2017/18 mean minimum (°C)	2018/19 mean minimum (°C)	2019/20 mean minimum (°C)
October	15.0	11.8	10.7	3.1	1.3	1.4
November	6.7	1.9	4.0	-4.6	-7.0	-5.9
December	-2.6	0.1	-1.7	-11.5	-8.8	-9.4
January	-4.5	-5.5	-3.2	-14.1	-14.8	-12.3
February	-5.5	-9.4	-1.4	-15.6	-17.5	-11.6
March	3.2	1.6	7.0	-3.8	-7.0	-2.7

Table S2. ANOVA for cultivar, sampling time, season, and interaction effects on LTEs.

Terms in the model	Df	Sum Sq	Mean Sq	F value	P-value
Cultivar	3	546	182	25.3	4.74e-16
Sampling time	8	2360	295	41	< 2e-16
Season	2	2425	1212.7	168.8	< 2e-16
Cultivar: Sampling time	24	345	14.4	2	0.0027
Cultivar: Season	6	555	92.4	12.8	2.78e-14
Sampling time: Season	16	2319	144.9	20.1	< 2e-16

Df, degrees of freedom; Sum Sq, sums of squares; Mean Sq, mean sums of squares

Table S3. Mean Bud LTE for Brianna, Frontenac gris, La Crescent, and Marquette during the dormant seasons of 2017/18, 2018/19 and 2019/20.

	<b>Brianna</b>	<b>Frontenac gris</b>	<b>La Crescent</b>	<b>Marquette</b>
<b>Mean (all years)</b>	<b>26.6<sup>w</sup></b>	<b>26.7</b>	<b>26.5</b>	<b>27.8</b>
<b>2017-2018</b>	<b>LTE<sup>x</sup></b>	<b>LTE</b>	<b>LTE</b>	<b>LTE</b>
11.02.17	-22.3 <sup>y</sup>	-21.8	-22.5	-25.8
11.17.17	-26.8	-25.4	-27.6	-27.3
11.30.17	-28.7	-27.1	-27.8	-27.7
12.15.17	-30.6	-29.4	-28.5	-28.3
12.29.17	-30.8	-30.7	-29.2	-29.6
01.13.18	-30.4	-28.7	-29.5	-29.6
01.29.18	-32.8	-32.0	-32.2	-32.0
02.10.18	-31.4	-30.5	-31.0	-30.5
03.23.18	-27.5	-26.7	-27.5	-27.0
<b>Mean 2017-2018</b>	<b>-29.1</b>	<b>-28.1</b>	<b>-28.4</b>	<b>-28.7</b>
<b>2018-2019</b>	<b>LTE</b>	<b>LTE</b>	<b>LTE</b>	<b>LTE</b>
11.09.18	-20.5	-25.7	-21.5	-27.8
12.03.18	-24.5	-26.2	-25.6	-27.1
12.15.18	-24.1	-26.1	-25.6	-27.9
12.27.18	-23.5	-24.2	-24.5	-26.0
01.25.19	-23.4	-22.9	-23.8	-26.2
02.15.19	-26.3	-26.9	-26.2	-30.2
03.03.19	-30.3	-27.4	-31.0	-31.6
03.18.19	-25.9	-25.7	-26.1	-26.8
04.03.19	-22.8	-23.9	-24.1	-23.9
<b>Mean 2018-2019</b>	<b>-24.7</b>	<b>-25.4</b>	<b>-25.5</b>	<b>-27.8</b>
<b>2019-2020</b>	<b>LTE</b>	<b>LTE</b>	<b>LTE</b>	<b>LTE</b>
11.12.19	-25.3	-26.4	-27.0	-25.3
12.06.19	-26.4	-24.5	-23.6	-25.4
12.16.19	-25.9	-27.2	-24.5	-27.1
01.03.20	-27.0	-26.6	-24.4	-27.6
01.14.20	-25.6	-27.2	-26.8	-28.2
01.28.20	-26.1	-25.6	-25.8	-26.9
02.14.20	-26.5	-27.3	-25.8	-27.6
02.28.20	-27.5	-27.7	-26.4	-28.2
03.11.20	-24.7	-26.5	-26.1	-26.9
<b>Mean 2019-2020</b>	<b>-26.0</b>	<b>-26.6</b>	<b>-25.7</b>	<b>-27.0</b>

w= mean of all time points across all years; x= mean cultivar LTE at given year; y = mean cultivar LTE at given time points (n=5).

Table S4. ANOVA for controlled and natural chilling on grapevine bud break across three seasons.

<b>Terms in the model</b>	<b>Df</b>	<b>Sum Sq</b>	<b>Mean Sq</b>	<b>F value</b>	<b>P-value</b>
Treatment	1	9	8.8	1.89	0.1697
Cultivar	3	984	328	70.64	< 2e-16
Chilling Group	3	1364	454.8	97.96	< 2e-16
Season	2	255	127.7	27.50	2.39e-12
Treatment: Cultivar	3	119	39.7	8.56	1.29e-05
Treatment: Chilling Group	3	182	60.7	13.07	2.24e-08
Treatment: Season	2	158	78.9	16.99	5.56e-08
Cultivar: Season	6	76	12.6	2.72	0.0128
Residuals	992	4606	4.6		

Df, degrees of freedom; Sum Sq, sums of squares; Mean Sq, mean sums of squares