

Supplementary material of the manuscript published in *Vitis* **61**, 125–132 (2022):

**A possibility of influence factors on winter physical damage of grapevines in a snowy vineyard**

Y. JITSUYAMA, Y. KITA, K. ARAKAWA, and T. SUZUKI

Graduate School of Agriculture, Hokkaido University, Sapporo, Hokkaido, Japan

Table S1

Geographical traits of each zone (flat and slope) and Morphological traits of 'Gewürztraminer' and 'Kerner' grapevine in the winery in 2021-2022

Cultivar	Geographical traits			Age (year)	Morphological traits							
	Averaged incline (°)				Circumference (mm)				Length of cordon (mm)			
					Basal trunk		Cordon					
Gewürztraminer in flat	0.5	(0.3)	b	7	863	(78)		167	(10)	1533	(44)	
Gewürztraminer in slope	9.2	(0.4)	a	7	887	(106)	ns	152	(8)	ns	1350	(76)
Kerner in flat	0.3	(0.3)	b	7	867	(117)		162	(19)		1350	(42)
<i>P value</i>	<i>0.0000034</i>				<i>0.984</i>			<i>0.630</i>			<i>0.110</i>	

Numbers in parenthesis means S.E.

Different letters represent significance at 5 % levels of Tukey-Kramer's test (n = 3), ns means not significant.

Table S2

Deepest snow depth from 2017 to 2022 in winter near experimental location, Bibai (15 km from Urausu)

Year	Deepest snow depth (cm) <sup>z</sup>							Average from Dec. to Mar. (cm) <sup>y</sup>		
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May			
2017-2018	31	100	118	167	136	30	0	130.3	(28.6)	a
2018-2019	25	62	82	104	69	23	0	79.3	(9.2)	bc
2019-2020	22	38	56	63	45	0	0	50.5	(5.6)	c
2020-2021	30	87	129	156	150	33	0	130.5	(15.6)	a
2021-2022	40	89	104	126	100	39	0	104.8	(7.8)	ab

<sup>z</sup> Japan Meteorological Agency (<http://www.jma.go.jp/jma/indexe.html>).

<sup>y</sup> Averaged value (standard error) for four months. Different letters represent significance at 5 % levels of Tukey-Kramer's test (n = 4).

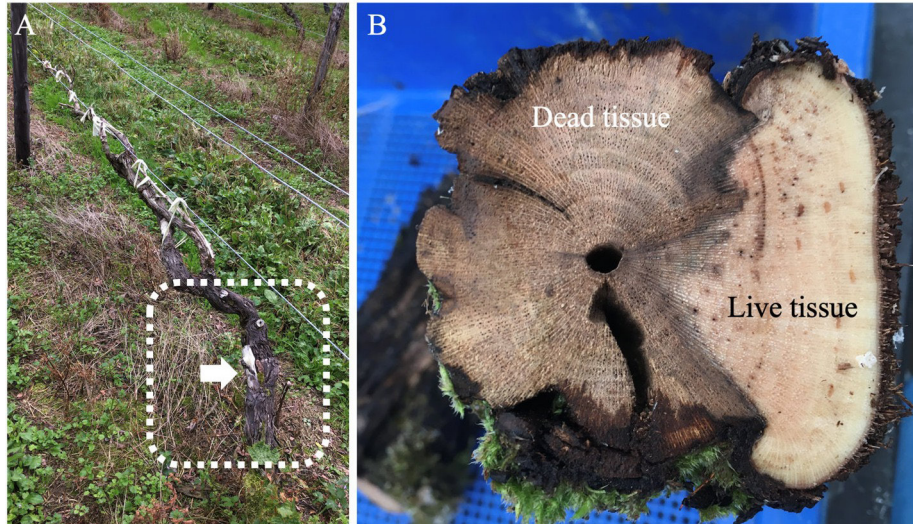


Fig. S1: **A:** ‘Gewürztraminer’ has wounded part of grapevine in basal trunk. **B:** The cross sections of the wounded point of the same grapevine. The section consisted of dead and live tissues.

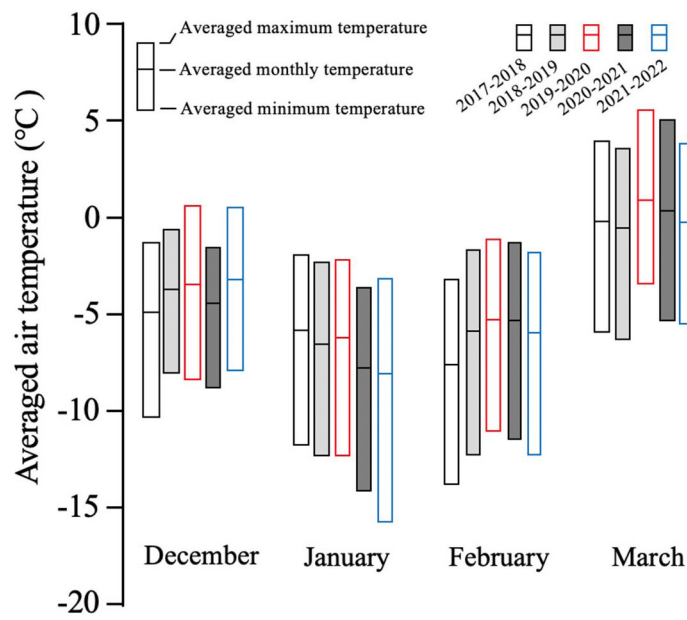


Fig. S2: Transition of averaged air temperature at Bibai (15 km from Urausu experimental location) from December to March in 2017-2022. A bar represents three averaged temperatures (upper: maximum temperature, middle: monthly temperature, bottom: minimum temperature).