

SUPPLEMENTARY DATA

Blank, M., Samer, S. & Stoll, M. (2022).

Grapevine rootstocks genotype influences berry and wine phenolic composition (*Vitis vinifera* L. cv. Pinot noir). *OENO One*, 56(1).

<https://doi.org/10.20870/oeno-one.2022.56.1.4459>

Supplementary Material

SUPPLEMENTARY TABLE S1. Climatic conditions and modelled vine predawn leaf water potential (ψ_{pd}).

	Weather conditions during Bb-BI			Weather conditions during BI-V			Weather conditions during V-H		
	Σ GDD _{10°C}	Σ PP	Ψ Predawm	Σ GDD _{10°C}	Σ PP	Ψ Predawm	Σ GDD _{10°C}	Σ PP	Ψ Predawm
		[mm]	[mPa]		[mm]	[mPa]		[mm]	[mPa]
Year (Y)									
2012	282	84	-0.08	766	137	-0.22	139	33	-0.51
2013	269	124	-0.05	795	121	-0.32	84	51	-0.29
2014	241	67	-0.19	715	221	-0.21	199	97	-0.07

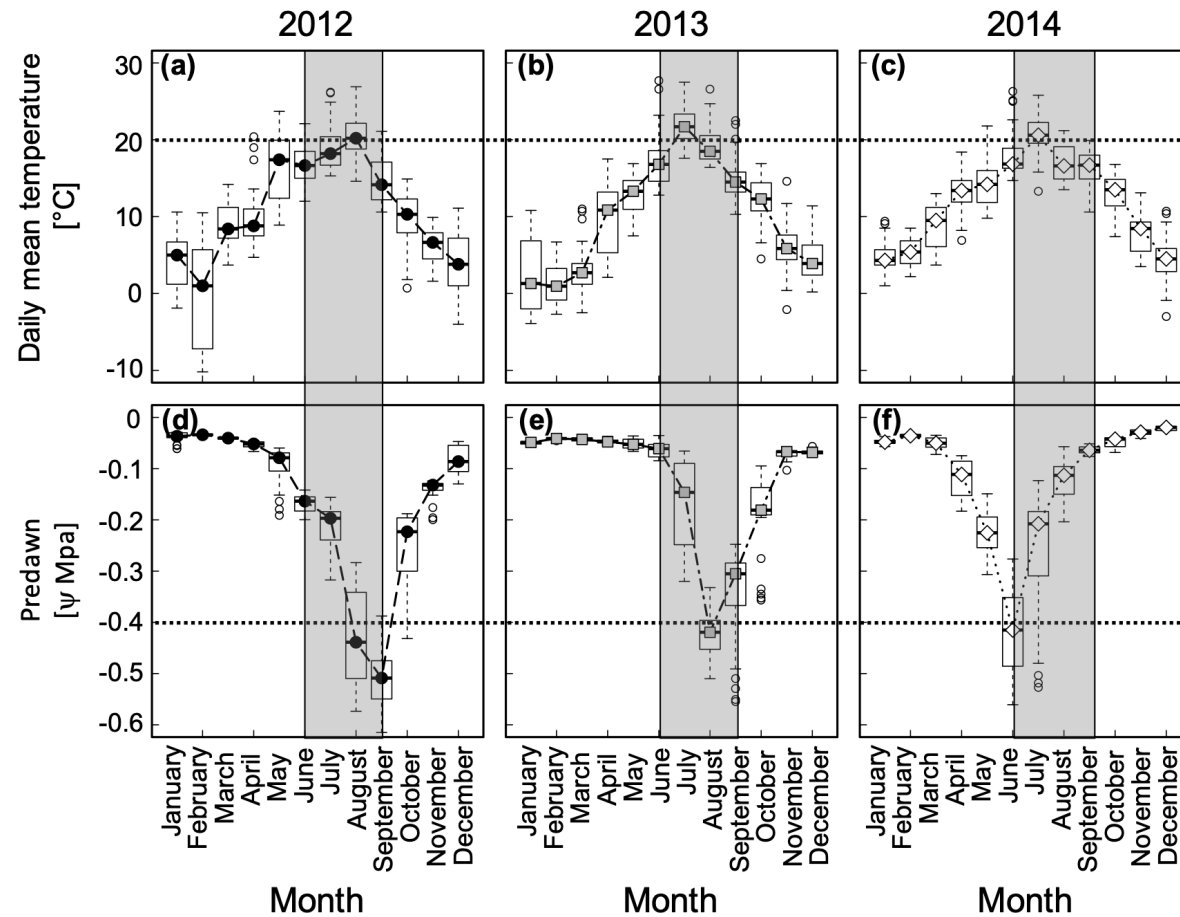
Meteorological and phenological data from the German Weather Service (Deutscher Wetterdienst, DWD) weather station in Geisenheim, located approximately 400 m from the experimental site. Minimum, maximum and average temperature were recorded daily together with the cumulative sum of precipitation. The major phenological stages were evaluated for SO4 according to the BBCH system (Lorenz *et al.*, 1995) for budburst (Bb) (BBCH 9), 50 % flowering (Fl) (BBCH 65), veraison (V) (BBCH 81) and harvest (H). Σ GDD10 °C, cumulative growing degree days (GDD10 °C) was determined as the sum of the daily average temperature above a base temperature of 10 °C (Winkler *et al.*, 1974); Σ PP, sum of precipitation was determined as the cumulative sum of daily precipitation in mm; ψ_{pd} , Median for the given period of the vine predawn leaf water potential modelled from the fraction of transpirable soil water (FTSW) (Lebon *et al.*, 2003; Gruber and Schultz, 2005).

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SUPPLEMENTARY FIGURE S1. Monthly distribution of temperature and vine predawn leaf water potential.

Distribution of weather conditions that were recorded daily by a station located approximately 400 m away from the site of the experiment. Average temperatures recorded daily for 2012 (a), 2013 (b) and 2014 (c). Vine predawn leaf water potential modelled daily from the fraction of transpirable soil water (FTSW) (Blank *et al.*, 2019) for 2012 (d), 2013 (e) and 2014 (f). The central box in each box plot indicates the interquartile range and the bold line indicates the median; whiskers indicate the 10th and 90th percentiles. The mean is marked as a point.

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SUPPLEMENTARY TABLE S1. Concentration of single amino-acids in juices of Pinot noir grafted onto six rootstocks for three seasons.

	Year (Y)			Rootstock (R)								
	2012	2013	2014	Riparia	Schwarzmann	101-14 Mgt	R110	SO4	125 AA	(Y)	(R)	(Y*R)
Aspartate												
Aspartic acid (ASP)	7.72 ±	4.41 ±	2.87 ±	4.61 ±	4.82 ± 0.92 ^a	5.62 ± 2.82 ^a	4.77 ±	4.43 ± 1.96 ^a	5.75 ±	7.54 ^{***}	4.35 ^{***}	7.88 ^{***}
Asparagine (ASN)	1.31 ±	2.28 ±	1.55 ±	1.61 ±	1.21 ± 0.67 ^b	2.07 ± 0.63 ^a	1.52 ±	1.74 ± 0.72 ^{ab}	2.13 ±	6.30 ^{***}	26.44 ^{***}	0.89 ^{ns}
Methionine (MET)	0.77 ±	0.97 ±	0.53 ±	0.85 ±	0.47 ± 0.38 ^b	0.89 ± 0.31 ^a	0.74 ±	0.69 ± 0.23 ^{ab}	0.88 ±	7.42 ^{***}	28.30 ^{***}	2.69 ^{**}
Threonine (THR)	12.89 ±	15.41 ±	14.7 ±	14.6 ±	13.41 ± 2.85 ^{ab}	15.36 ± 1.86 ^a	12.74 ±	14.31 ±	15.57 ±	4.85 ^{***}	13.57 ^{***}	2.02 [*]
Lysine (LYS)	0.64 ±	0.80 ±	0.97 ±	0.83 ±	0.81 ± 0.34 ^a	0.83 ± 0.13 ^a	0.66 ±	0.79 ± 0.25 ^a	0.91 ±	4.40 ^{***}	37.68 ^{**}	3.13 ^{**}
Isoleucine (ILE)	2.22 ±	2.38 ±	1.38 ±	2.11 ±	1.75 ± 0.45 ^a	2.22 ± 0.73 ^a	1.93 ±	1.82 ± 0.58 ^a	2.16 ±	1.98 ^{***}	30.76 ^{ns}	1.29 ^{ns}
3-phosphoglycerate												
Serine (SER)	8.18 ±	12.22 ±	9.59 ±	9.62 ±	8.31 ± 3.3 ^b	11.04 ± 2.38 ^{ab}	9.04 ±	10.53 ±	11.44 ±	6.69 ^{***}	38.40 ^{***}	1.65 ^{ns}
Glycine (GLY)	0.51 ±	0.70 ±	0.85 ±	0.69 ±	0.56 ± 0.24 ^a	0.77 ± 0.16 ^a	0.62 ±	0.71 ± 0.2 ^a	0.74 ±	5.76 ^{***}	58.37 ^{***}	1.89 ^{ns}
Cysteine (CYS)	0.05 ±	0.01 ±	0.25 ±	0.12 ±	0.10 ± 0.01 ^a	0.13 ± 0.17 ^a	0.11 ±	0.12 ± 0.13 ^a	0.13 ±	7.79 ^{***}	112.80 [*]	5.26 ^{***}
Pyruvate												
Alanine (ALA)	25.35 ±	35.71 ±	40.05 ±	35.21 ±	18.92 ± 11.51 ^b	39.62 ± 14.90 ^a	32.11 ±	37.22 ±	39.18 ±	6.62 ^{***}	12.54 ^{***}	0.96 ^{ns}
Valine (VAL)	3.66 ±	3.78 ±	3.28 ±	3.73 ±	2.81 ± 0.71 ^b	4 ± 0.78 ^a	3.5 ±	3.38 ± 0.83 ^{ab}	4.04 ±	4.88 [*]	3.25 ^{***}	1.42 ^{ns}
Leucine (LEU)	3.28 ±	3.83 ±	2.35 ±	3.25 ±	2.71 ± 0.88 ^a	3.42 ± 1.01 ^a	3.02 ±	3.01 ± 0.89 ^a	3.52 ±	2.58 ^{***}	31.95 [*]	1.09 ^{ns}
Shikimate												
Tyrosine (TYR)	0.75 ±	0.88 ±	0.54 ±	0.74 ±	0.63 ± 0.19 ^a	0.81 ± 0.23 ^a	0.68 ±	0.68 ± 0.21 ^a	0.81 ±	3.77 ^{***}	42.35 ^{**}	1.62 ^{ns}
Phenylalanine	1.42 ±	2.02 ±	0.96 ±	1.32 ±	1.69 ± 0.28 ^a	1.55 ± 0.71 ^a	1.31 ±	1.37 ± 0.64 ^a	1.58 ±	2.04 ^{***}	46.35 ^{ns}	1.49 ^{ns}
Tryptophan (TRP)	1.37 ±	0.98 ±	0.35 ±	0.92 ±	0.72 ± 0.32 ^a	0.97 ± 0.59 ^a	0.96 ±	0.77 ± 0.45 ^a	1.05 ±	1.14 ^{***}	37.80 ^{ns}	1.72 ^{ns}
α-Ketoglutarate												
Glutamic acid	15.67 ±	13.24 ±	10.63 ±	14.35 ±	10.34 ± 3.33 ^b	14.47 ± 3.63 ^a	13.46 ±	11.73 ±	14.75 ±	8.73 ^{***}	35.29 ^{***}	4.54 ^{***}
Glutamine (GLN)	31.15 ±	37.65 ±	17.98 ±	26.58 ±	19.88 ± 11.24 ^b	34.22 ± 13.1 ^{ab}	26.96 ±	28.66 ±	37.25 ±	6.44 ^{***}	34.32 ^{***}	1.66 ^{ns}
Arginine (ARG)	192 ±	243 ±	212 ±	224 ±	202 ± 50.35 ^{ab}	216 ± 37.94 ^{ab}	197 ±	208 ±	249 ±	2.53 [*]	9.29 [*]	0.70 ^{ns}
Proline (PRO)	45.5 ±	41.1 ±	32.6 ±	42.3 ±	29.4 ± 13.01 ^b	39.9 ± 14.48 ^{ab}	42.8 ±	38.9 ±	44.8 ±	2.44 [*]	7.05 ^{***}	1.25 ^{ns}
Histidine (HIS)	5.61 ± 1.5 ^a	5.22 ±	4.45 ±	5.35 ±	4.33 ± 0.77 ^b	5.53 ± 1.14 ^{ab}	4.88 ±	4.54 ± 1.11 ^b	5.9 ± 0.99 ^a	5.04 ^{***}	9.57 ^{***}	1.23 ^{ns}
γ-Amino butyric	3.06 ±	5.32 ±	15.76 ±	8.63 ±	5.52 ± 3.73 ^a	8.60 ± 6.28 ^a	8.29 ±	9.01 ± 7.49 ^a	8.23 ±	9.32 ^{***}	533.08 [*]	4.37 ^{***}
Ornithine (ORN)	0.81 ±	1.69 ±	0.82 ±	1.13 ±	0.94 ± 0.54 ^a	1.08 ± 0.55 ^a	0.89 ±	1.04 ± 0.72 ^a	1.56 ±	4.26 ^{***}	38.85 ^{**}	0.94 ^{ns}
Citrulline (CIT)	3.36 ±	3.12 ±	2.53 ± 1.3 ^b	1.91 ±	1.82 ± 1.84 ^a	1.61 ± 1.46 ^a	1.88 ±	1.89 ± 1.69 ^a	2.7 ± 2.39 ^a	1.24 ^{***}	53.83 ^{ns}	1.78 ^{ns}
Others												
Ammonia	51.81 ±	50.62 ±	42.32 ±	44.3 ±	38.6 ± 10.06 ^b	47.6 ± 10.57 ^{ab}	46.2 ±	57.1 ± 15.49 ^a	55.9 ±	3.92 ^{**}	4.26 [*]	0.671 ^{ns}

A sample of five bunches per replicate was pressed and analyzed to evaluate the concentration of single amino acids. Values represent the mean as mg L⁻¹ ± standard deviation at harvest, for the four replicates per rootstock within one year. Rootstock (R) and year (Y) effects were evaluated using a two way ANOVA. Main effects and interactions significant at * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ or ns not significant. Values with the same letter within one column are not significantly different at $p < 0.05$ using the LSD Post hoc test.

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SUPPLEMENTARY TABLE S2. Proportion of skin and seeds in berries of Pinot noir grafted onto six rootstocks for three seasons.

	% berry skin	% berry seeds	Seed number	Seed weight
	[% berry ⁻¹]	[% berry ⁻¹]	[number berry ⁻¹]	[g seed ⁻¹]
Year (Y)				
2012	5.53 ± 0.54 ^a	4.48 ± 0.41 ^a	1.77 ± 0.20 ^a	0.047 ± 0.003 ^a
2013	5.51 ± 0.43 ^a	4.41 ± 0.51 ^a	1.46 ± 0.15 ^b	0.049 ± 0.004 ^a
2014	4.53 ± 0.27 ^b	3.63 ± 0.37 ^b	1.53 ± 0.18 ^b	0.041 ± 0.004 ^b
Rootstock (R)				
Riparia	5.29 ± 0.69	3.97 ± 0.71	1.55 ± 0.23	0.043 ± 0.006 ^b
Schwarzmann	5.20 ± 0.66	4.36 ± 0.73	1.57 ± 0.25	0.045 ± 0.005 ^{ab}
101-14	4.96 ± 0.48	4.17 ± 0.47	1.65 ± 0.21	0.046 ± 0.004 ^{ab}
R110	5.40 ± 0.70	4.19 ± 0.59	1.50 ± 0.18	0.045 ± 0.005 ^{ab}
SO4	5.30 ± 0.66	4.34 ± 0.41	1.66 ± 0.26	0.048 ± 0.002 ^a
125AA	5.01 ± 0.59	4.01 ± 0.45	1.59 ± 0.18	0.047 ± 0.005 ^{ab}
ANOVA factors and interactions (F* values)				
Year (Y)	1.95 ^{ns}	1.74 ^{ns}	1.34 ^{ns}	3.14 [*]
Rootstock (R)	41.59 ^{***}	28.98 ^{***}	18.96 ^{***}	35.70 ^{***}
Interaction (Y*R)	0.48 ^{ns}	1.07 ^{ns}	0.63 ^{ns}	1.12 ^{ns}

At harvest, a sample of 20 berries per replicate was peeled to evaluate the concentration of phenolic compounds in skins and seeds. Values represent the mean ± standard deviation at harvest, for the four replicates per rootstock within one year. Rootstock (R) and year (Y) effects were evaluated using a two way ANOVA. Main effects and interactions significant at * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ or ns not significant. Values with the same letter within one column are not significantly different at $p < 0.05$ using the LSD Post hoc test.

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SUPPLEMENTARY TABLE S3. Berry phenolic content for Pinot noir grafted onto six rootstocks for three seasons.

	Seed tannins		Skin tannins		Total tannins	Skin Anths
	[mg CE g ⁻¹ seed]	[mg CE berry ⁻¹]	[mg CE g ⁻¹ skin]	[mg CE berry ⁻¹]	[mg CE berry ⁻¹]	[mg M3OG berry ⁻¹]
Year (Y)						
2012	27.21 ± 3.29 ^c	2.27 ± 0.38 ^b	22.18 ± 3.84 ^c	2.27 ± 0.41 ^b	4.54 ± 0.58 ^b	1.41 ± 0.15 ^a
2013	38.87 ± 2.71 ^b	2.77 ± 0.38 ^a	36.95 ± 3.10 ^a	3.31 ± 0.43 ^a	6.08 ± 0.71 ^a	1.42 ± 0.12 ^a
2014	41.99 ± 4.18 ^a	2.64 ± 0.43 ^a	27.53 ± 2.71 ^b	2.16 ± 0.32 ^b	4.79 ± 0.64 ^b	1.15 ± 0.14 ^b
Rootstock (R)						
Riparia	36.33 ± 6.40 ^{ab}	2.35 ± 0.31 ^b	27.13 ± 6.18 ^{bc}	2.39 ± 0.56 ^{bc}	4.74 ± 0.79 ^b	1.34 ± 0.23 ^a
Schwarzmann	38.32 ± 8.28 ^a	2.63 ± 0.53 ^{ab}	25.88 ± 6.81 ^c	2.13 ± 0.60 ^c	4.76 ± 0.96 ^b	1.25 ± 0.16 ^b
101-14	34.58 ± 6.51 ^b	2.55 ± 0.45 ^{ab}	29.76 ± 6.67 ^{ab}	2.64 ± 0.68 ^{ab}	5.19 ± 1.05 ^b	1.34 ± 0.16 ^a
R110	34.93 ± 9.49 ^{ab}	2.35 ± 0.42 ^b	29.61 ± 7.04 ^{ab}	2.59 ± 0.61 ^{ab}	4.94 ± 0.91 ^b	1.38 ± 0.22 ^a
SO4	37.64 ± 6.52 ^{ab}	2.94 ± 0.33 ^a	30.66 ± 8.86 ^a	2.93 ± 0.70 ^a	5.87 ± 0.80 ^a	1.38 ± 0.15 ^a
125AA	34.39 ± 6.31 ^b	2.52 ± 0.37 ^{ab}	30.29 ± 5.72 ^{ab}	2.79 ± 0.49 ^a	5.32 ± 0.69 ^{ab}	1.25 ± 0.12 ^b
Year (Y)	169.45 ^{***}	13.09 ^{***}	177.25 ^{**}	104.87 ^{***}	52.84 ^{***}	35.32 ^{***}
Rootstock (R)	3.83 ^{**}	4.61 ^{**}	5.88 ^{***}	10.76 ^{***}	7.08 ^{***}	2.89 [*]
Interaction (Y*R)	2.21 [*]	0.88 ^{ns}	1.28 ^{ns}	0.66 ^{ns}	0.41 ^{ns}	2.13 [*]

At harvest, a sample of 20 berries per replicate was analysed to evaluate the concentration of phenolic compounds in skins and seeds according to Harbertson *et al.* (2002). CE, Catechin Equivalent; BFW, Berry fresh weight; Anths, Anthocyanins; M3OG: Malvidin 3-O-Glucoside. Values represent the mean as mg g⁻¹ BFW ± standard deviation at harvest, for the four replicates per rootstock within one year. Rootstock (R) and year (Y) effects were evaluated using a two way ANOVA. Main effects and interactions significant at * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ or ns not significant. Values with the same letter within one column are not significantly different at $p < 0.05$ using the LSD Post hoc test.

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SUPPLEMENTARY TABLE S4. Multiple linear regression analysis for the prediction of berry tannins.

	Variables	Estimate ± sd	t value	F value	p
	Intercept	9.128 ± 2.786	3.277		0.001**
X1	<i>MX_Leaf_SFR_R</i>	-0.422 ± 0.331	-1.275	42.122	$p < 0.001^{***} 08^{**}$ *
X2	<i>MX_Leaf_FLAV</i>	-0.503 ± 1.914	-0.263	149.682	$p < 0.001^{***}$
X3	<i>MX_Leaf_NBI_R</i>	1.261 ± 3.001	0.420	5.297	0.024*
X6	<i>Average berry weight (g berry⁻¹)</i>	-1.352 ± 0.262	-5.157	21.511	$p < 0.001^{***}$
X8	<i>Number of seeds (n berry⁻¹)</i>	0.747 ± 0.212	3.517	7.457	0.008**
X9	<i>Average seed weight (g seed⁻¹)</i>	28.057 ± 9.041	3.103	10.662	0.001**
X10	<i>Total soluble solids TSS (°Brix)</i>	0.130 ± 0.050	2.564	0.025	0.874
X11	<i>pH</i>	-2.614 ± 0.474	-5.512	34.878	$p < 0.001^{***}$
X15	<i>N-OPA (mg iso. equ. L⁻¹)</i>	0.002 ± 0.001	2.768	7.661	0.008**

Prediction of tannins concentration in Pinot noir berries [mg g⁻¹ BFW] through an MLR analysis and model reduction through a stepwise selection of predictor variables (forward, backward and both). Residual standard error 0.285, R² = 0.881, F = 31.03***; N-OPA: Primary Amino Nitrogen.

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SUPPLEMENTARY TABLE S5. Wine standard parameter for Pinot noir grafted onto six rootstocks for three seasons.

	Alcohol	Titrateable acidity	pH	Residual Sugars
	[% v/v]	[g L ⁻¹]		[g L ⁻¹]
Year (Y)				
2012	11.93 ± 0.37b	4.03 ± 0.36c	3.63 ± 0.09a	1.51 ± 0.45a
2013	12.92 ± 0.28a	4.57 ± 0.56b	3.42 ± 0.09b	1.62 ± 0.88a
2014	11.08 ± 0.42c	5.02 ± 0.85a	3.35 ± 0.12c	1.06 ± 0.75b
Rootstock (R)				
Riparia	11.73 ± 0.73	4.12 ± 0.52 ^b	3.54 ± 0.16 ^a	1.58 ± 0.28
Schwarzmann	11.99 ± 0.79	4.34 ± 0.75 ^b	3.51 ± 0.16 ^a	1.33 ± 0.67
101-14	12.03 ± 0.75	4.39 ± 0.90 ^b	3.47 ± 0.18 ^a	1.18 ± 0.61
R110	12.11 ± 1.16	4.55 ± 0.34 ^{ab}	3.45 ± 0.09 ^{ab}	1.23 ± 1.05
SO4	11.89 ± 0.74	5.15 ± 0.78 ^a	3.35 ± 0.15 ^b	1.43 ± 0.68
125AA	12.05 ± 0.89	4.64 ± 0.72 ^{ab}	3.48 ± 0.14 ^a	1.44 ± 1.03
ANOVA factors and interactions (F* values)				
Year (Y)	198.54 ^{***}	21.54 ^{***}	73.56 ^{***}	5.05 ^{**}
Rootstock (R)	2.08 ^{ns}	5.24 ^{***}	7.31 ^{***}	0.52 ^{ns}
Interaction (Y*R)	2.27 [*]	1.21 ^{ns}	1.71 ^{ns}	1.43 ^{ns}

The wines were made by micro-scale winemaking of 80 berries per replicate taken at harvest. Standard parameters were determined with FTIR (OenoFoss™ (Foss, Hilleroed, Denmark). Values represent the mean ± standard deviation at harvest, for the four replicates per rootstock within one year. Rootstock (R) and year (Y) effects were evaluated using a two-way ANOVA, the F* values are reported for each factor. Main effects and interactions significant at * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ or ns not significant. Values with the same letter within one column are not significantly different at $p < 0.05$ using the LSD Post hoc test.

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SUPPLEMENTARY TABLE S6. Multiple linear regression analysis for the prediction of wine tannins.

Variables	Estimate ± sd	t value	F value	p
<i>Intercept</i>	2510.38 ± 1669.83	1.503		0.138 ^{ns}
<i>MX_Leaf_SFR_R</i>	-22.91 ± 131.85	-0.174	12.770	<i>p</i> <0.001 ^{***}
<i>MX_Leaf_FLAV</i>	-280.57 ± 701.68	-0.400	2.699	0.105
<i>MX_Leaf_NBI_R</i>	-713.81 ± 1098.79	-0.650	1.746	0.191
<i>Yield (kg ha⁻¹)</i>	-0.87 ± 0.61	-1.416	10.655	0.002 ^{**}
<i>Average berry weight (g berry⁻¹)</i>	-15.63 ± 136.98	-0.114	8.962	0.004 ^{**}
<i>Average skin weight (g berry⁻¹)</i>	-2279.46 ± 1762.70	-1.293	3.466	0.067
<i>Number of seeds (n berry⁻¹)</i>	159.76 ± 91.43	1.747	10.294	0.002 ^{**}
<i>Total soluble solids TSS (°Brix)</i>	32.35 ± 23.69	1.365	8.026	0.006 ^{**}
<i>pH</i>	-635.90 ± 348.96	-1.822	2.053	0.157
<i>Total titratable acidity (g L⁻¹)</i>	-29.63 ± 16.15	-1.835	7.289	0.009 ^{**}
<i>N-OPA (mg iso. equ. L⁻¹)</i>	-0.67 ± 0.39	-1.736	5.341	0.024 [*]
<i>Seed Tannins (mg g⁻¹ BFW)</i>	103.81 ± 78.32	1.325	1.801	0.184
<i>Anthocyanins (mg g⁻¹ BFW)</i>	223.59 ± 166.80	1.340	1.796	0.185

Prediction of tannins concentration in Pinot noir wines [mg L⁻¹] through an MLR analysis and model reduction through a stepwise selection of predictor variables (forward, backward and both). Residual standard error 101.9, R² = 0.601, F = 5.916^{***}; N-OPA: Primary Amino Nitrogen.

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SUPPLEMENTARY TABLE S7. Multiple linear regression analysis for the prediction of berry anthocyanins.

	Variables	Estimate \pm sd	t value	F value	<i>p</i>
	<i>Intercept</i>	1.559 \pm 0.941	1.656		0.102 ^{ns}
<i>X1</i>	<i>MX_Leaf_SFR_R</i>	0.244 \pm 0.094	2.604	9.009	0.003 ^{**}
<i>X2</i>	<i>MX_Leaf_FLAV</i>	-0.218 \pm 0.499	-0.437	25.223	<i>p</i> < 0.001 ^{***}
<i>X3</i>	<i>MX_Leaf_NBI_R</i>	-0.222 \pm 0.779	-0.286	4.954	0.029 [*]
<i>X4</i>	<i>Wood weight (kg ha⁻¹)</i>	-0.004 \pm 0.001	-2.984	50.145	<i>p</i> < 0.001 ^{***}
<i>X5</i>	<i>Yield (kg ha⁻¹)</i>	-0.001 \pm 0.001	-1.653	18.257	<i>p</i> < 0.001 ^{***}
<i>X6</i>	<i>Average berry weight (g berry⁻¹)</i>	-0.430 \pm 0.068	-6.296	63.008	<i>p</i> < 0.001 ^{***}
<i>X7</i>	<i>Average skin weight (g berry⁻¹)</i>	1.899 \pm 1.217	1.560	3.427	0.068
<i>X10</i>	<i>Total soluble solids TSS (°Brix)</i>	0.030 \pm 0.015	1.965	3.7218	0.058
<i>X11</i>	<i>pH</i>	-0.322 \pm 0.149	-2.159	4.662	0.034 [*]

Prediction of anthocyanins concentration in Pinot noir berries [mg g⁻¹ BFW] through an MLR analysis and model reduction through a stepwise selection of predictor variables (forward, backward and both).

SUPPLEMENTARY DATA

Blank, M., Samer, S. & Stoll, M. (2022).

Grapevine rootstocks genotype influences berry and wine phenolic composition (*Vitis vinifera* L. cv. Pinot noir). *OENO One*, 56(1).

<https://doi.org/10.20870/oeno-one.2022.56.1.4459>

SUPPLEMENTARY TABLE S8. Multiple linear regression analysis for the prediction of wine anthocyanins.

	Variables	Estimate ± sd	t value	F value	p
	<i>Intercept</i>	180.63 ± 97.80	1.847		0.069 ^{ns}
<i>X3</i>	<i>MX_Leaf_NBI_R</i>	-141.84 ± 85.13	-1.666	11.744	0.001 ^{**}
<i>X6</i>	<i>Average berry weight (g berry⁻¹)</i>	34.24 ± 34.83	0.983	37.400	<i>p</i> < 0.001 ^{***}
<i>X7</i>	<i>Average skin weight (g berry⁻¹)</i>	-1255.21 ± 62.16	-2.716	1.194	0.278
<i>X10</i>	<i>Total soluble solids TSS (°Brix)</i>	7.25 ± 4.89	1.484	0.130	0.719
<i>X14</i>	<i>Malic acid (g L⁻¹)</i>	-3.33 ± 3.57	-0.931	0.448	0.505
<i>X18</i>	<i>Anthocyanins (mg g⁻¹ BFW)</i>	246.97 ± 46.47	5.314	28.235	<i>p</i> < 0.001 ^{***}

Prediction of anthocyanins concentration in Pinot noir wines [mg L⁻¹] through an MLR analysis and model reduction through a stepwise selection of predictor variables (forward, backward and both).