

Supplementary data

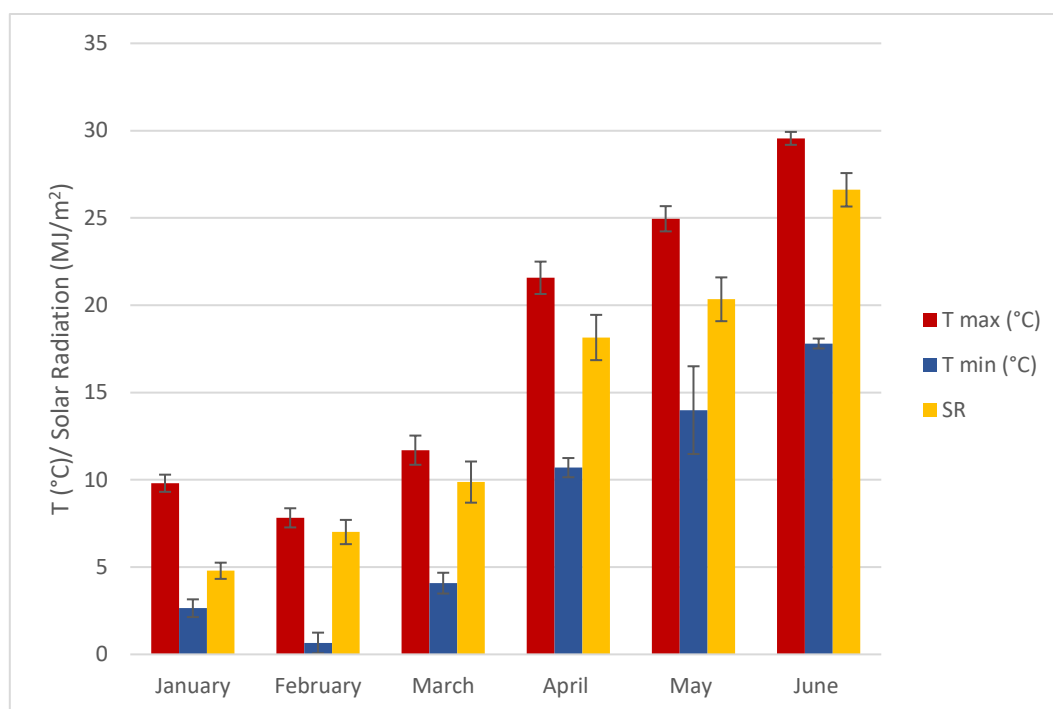


Figure S1. Temperature minimum and maximum and solar radiation (SR) during the cultivation period.

Table S1. Cultivation period including sowing, transplant, sampling and harvesting time, and the total number of plant per each wild population.

CULTIVATION CYCLE	WILD POPULATION	SOWING	TRANPLANT	TOTAL N° OF PLANTS	SAMPLING AND HARVESTING TIME
I	MI	23/01/2018	15/03/2018	9	14/05/2018
	BG			9	
II	MI	02/03/2018	16/05/2018	9	26/06/ 2018
	BG			9	

Table S2. Fertilization levels (100% - 70% - 50%) using a NPK ganular fertilizer (14:7:17).

FERTILIZATION LEVELS	g/pot
100%	4
70%	2.8
50%	2

Supplementary data Multifactor ANOVA LSD post-test

Table S3. Analysis of Variance for Fv/Fm - Type III Sums of Squares

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:Fertilization level	0.000300542	2	0.000150271	1.27	0.2926
B:Wild population	0.000901333	1	0.000901333	7.63	0.0090
C:Cycle	0.0000240833	1	0.0000240833	0.20	0.6543
INTERACTIONS					
AB	2.91667E-7	2	1.45833E-7	0.00	0.9988
AC	0.000179042	2	0.0000895208	0.76	0.4760
BC	0.000234083	1	0.000234083	1.98	0.1678
ABC	0.0000732917	2	0.0000366458	0.31	0.7352
RESIDUAL	0.004253	36	0.000118139		
TOTAL (CORRECTED)	0.00596567	47			

Multiple Range Tests for Fv/Fm by Wild population

Method: 95.0 percent LSD

Wild pop	Count	LS Mean	LS Sigma	Homogeneous Groups
BG	24	0.838583	0.00214307	X
MI	24	0.84725	0.00214307	X

Table S4. Analysis of Variance for PI - Type III Sums of Squares

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:Fertilization level	5.8045	2	2.90225	4.45	0.0188
B:Wild population	7.88698	1	7.88698	12.08	0.0013
C:Cycle	7.39863	1	7.39863	11.34	0.0018
INTERACTIONS					
AB	1.29263	2	0.646314	0.99	0.3814
AC	3.76042	2	1.88021	2.88	0.0691
BC	6.72527	1	6.72527	10.30	0.0028
ABC	1.06513	2	0.532563	0.82	0.4502
RESIDUAL	23.4965	36	0.652682		
TOTAL (CORRECTED)	57.4301	47			

Multiple Range Tests for PI by Fertilization level

Method: 95.0 percent LSD

Fertilization level	Count	LS Mean	LS Sigma	Homogeneous Groups
50	16	2.30863	0.201972	X
100	16	2.94481	0.201972	X
70	16	3.11725	0.201972	X

Multiple Range Tests for PI by Wild pop

Method: 95.0 percent LSD

Wild pop	Count	LS Mean	LS Sigma	Homogeneous Groups
----------	-------	---------	----------	--------------------

BG	24	2.38488	0.164909	X
MI	24	3.19558	0.164909	X

Multiple Range Tests for PI by Cycle

Method: 95.0 percent LSD

<i>Cycle</i>	<i>Count</i>	<i>LS Mean</i>	<i>LS Sigma</i>	<i>Homogeneous Groups</i>
I	24	2.39763	0.164909	X
II	24	3.18283	0.164909	X

Table S5. Analysis of Variance for DIO/RC - Type III Sums of Squares

<i>Source</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F-Ratio</i>	<i>P-Value</i>
MAIN EFFECTS					
A:Fertilization level	0.0190263	2	0.00951315	3.59	0.0379
B:Wild pop	0.0269801	1	0.0269801	10.18	0.0029
C:Cycle	2.34172	1	2.34172	883.29	0.0000
INTERACTIONS					
AB	0.00457129	2	0.00228565	0.86	0.4308
AC	0.0209836	2	0.0104918	3.96	0.0280
BC	0.0320333	1	0.0320333	12.08	0.0013
ABC	0.00355029	2	0.00177515	0.67	0.5182
RESIDUAL	0.095441	36	0.00265114		
TOTAL (CORRECTED)	2.5443	47			

Multiple Range Tests for DIO/RC by Fertilization level

Method: 95.0 percent LSD

<i>Fertilization level</i>	<i>Count</i>	<i>LS Mean</i>	<i>LS Sigma</i>	<i>Homogeneous Groups</i>
70	16	0.599687	0.0128723	X
100	16	0.616562	0.0128723	XX
50	16	0.64775	0.0128723	X

Multiple Range Tests for DIO/RC by Wild population

Method: 95.0 percent LSD

<i>Wild pop</i>	<i>Count</i>	<i>LS Mean</i>	<i>LS Sigma</i>	<i>Homogeneous Groups</i>
MI	24	0.597625	0.0123176	X
BG	24	0.645042	0.0123176	X

Multiple Range Tests for DIO/RC by Cycle

Method: 95.0 percent LSD

<i>Cycle</i>	<i>Count</i>	<i>LS Mean</i>	<i>LS Sigma</i>	<i>Homogeneous Groups</i>
II	24	0.400458	0.0123176	X
I	24	0.842208	0.0123176	X

Table S6. Analysis of Variance for RC/CSm - Type III Sums of Squares

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:Fertilization level	1.01907E6	2	509534.	3.29	0.0488
B:Wild population	1.15586E6	1	1.15586E6	7.46	0.0097
C:Cycle	2.18281E6	1	2.18281E6	14.09	0.0006
INTERACTIONS					
AB	404143.	2	202071.	1.30	0.2840
AC	416904.	2	208452.	1.35	0.2733
BC	1.70524E6	1	1.70524E6	11.00	0.0021
ABC	141015.	2	70507.7	0.45	0.6381
RESIDUAL	5.57872E6	36	154965.		
TOTAL (CORRECTED)	1.26038E7	47			

Multiple Range Tests for RC/CSm by Fertilization level

Method: 95.0 percent LSD

Fertilization level	Count	LS Mean	LS Sigma	Homogeneous Groups
50	16	2111.11	109.478	X
100	16	2379.32	109.478	XX
70	16	2449.15	109.478	X

Multiple Range Tests for RC/CSm by Wild population

Method: 95.0 percent LSD

Wild pop	Count	LS Mean	LS Sigma	Homogeneous Groups
BG	24	2158.01	89.3887	X
MI	24	2468.37	89.3887	X

Multiple Range Tests for RC/CSm by Cycle

Method: 95.0 percent LSD

Cycle	Count	LS Mean	LS Sigma	Homogeneous Groups
I	24	2099.94	89.3887	X
II	24	2526.44	89.3887	X

Table S7. Analysis of Variance for DM (Dried Matter) - Type III Sums of Squares

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:Fertilization level	1.11288	2	0.55644	0.21	0.8086
B:Wild pop	20.9764	1	20.9764	8.08	0.0090
C:Cycle	303.259	1	303.259	116.80	0.0000
INTERACTIONS					
AB	10.8957	2	5.44784	2.10	0.1446
AC	1.37596	2	0.68798	0.26	0.7694
BC	4.60961	1	4.60961	1.78	0.1952
ABC	9.36349	2	4.68175	1.80	0.1864
RESIDUAL	62.312	24	2.59634		
TOTAL (CORRECTED)	413.905	35			

Multiple Range Tests for DM by Wild pop

Method: 95.0 percent LSD

Wild pop	Count	LS Mean	LS Sigma	Homogeneous Groups
MI	18	10.0494	0.379791	X
BG	18	11.5761	0.379791	X

Multiple Range Tests for DM by Cycle

Method: 95.0 percent LSD

Cycle	Count	LS Mean	LS Sigma	Homogeneous Groups
I	18	7.91039	0.379791	X
II	18	13.7152	0.379791	X

Table S8. Analysis of Variance for Anthocyanins - Type III Sums of Squares

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:Fertilization level	1096.99	2	548.496	7.13	0.0037
B:Wild pop	197.726	1	197.726	2.57	0.1220
C:Cycle	2895.79	1	2895.79	37.63	0.0000
INTERACTIONS					
AB	796.653	2	398.326	5.18	0.0135
AC	461.773	2	230.886	3.00	0.0687
BC	4.82168	1	4.82168	0.06	0.8045
ABC	760.372	2	380.186	4.94	0.0160
RESIDUAL	1846.82	24	76.951		
TOTAL (CORRECTED)	8060.94	35			

Multiple Range Tests for Anthocyanin by Fertilization level

Method: 95.0 percent LSD

Fertilization level	Count	LS Mean	LS Sigma	Homogeneous Groups
70	12	36.0341	2.53231	X
50	12	38.6226	2.53231	X
100	12	48.8218	2.53231	X

Multiple Range Tests for Anthocyanin by Cycle

Method: 95.0 percent LSD

Cycle	Count	LS Mean	LS Sigma	Homogeneous Groups
I	18	32.1907	2.06762	X
II	18	50.1282	2.06762	X

Table S9. Analysis of Variance for Total Phenols - Type III Sums of Square

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:Fertilization level	26167.0	2	13083.5	7.48	0.0030
B:Wild pop	10492.0	1	10492.0	6.00	0.0220
C:Cycle	132633.	1	132633.	75.79	0.0000

INTERACTIONS					
AB	21421.0	2	10710.5	6.12	0.0071
AC	17120.7	2	8560.36	4.89	0.0165
BC	9024.02	1	9024.02	5.16	0.0324
ABC	18830.2	2	9415.1	5.38	0.0117
RESIDUAL	42000.2	24	1750.01		
TOTAL (CORRECTED)	277688.	35			

Multiple Range Tests for Total Phenols by Fertilization level

Method: 95.0 percent LSD

Fertilization level	Count	LS Mean	LS Sigma	Homogeneous Groups
70	12	144.267	12.0762	X
50	12	152.61	12.0762	X
100	12	205.172	12.0762	X

Multiple Range Tests for Total Phenols by Wild pop

Method: 95.0 percent LSD

Wild pop	Count	LS Mean	LS Sigma	Homogeneous Groups
BG	18	150.278	9.86016	X
MI	18	184.421	9.86016	X

Multiple Range Tests for Total Phenols by Cycle

Method: 95.0 percent LSD

Cycle	Count	LS Mean	LS Sigma	Homogeneous Groups
I	18	106.652	9.86016	X
II	18	228.048	9.86016	X

Table S10. Analysis of Variance for Nitrate - Type III Sums of Squares

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:Fertilization level	3.16372E6	2	1.58186E6	3.41	0.0498
B:Wild pop	751055.	1	751055.	1.62	0.2156
C:Cycle	2747.94	1	2747.94	0.01	0.9393
INTERACTIONS					
AB	224205.	2	112103.	0.24	0.7873
AC	959279.	2	479639.	1.03	0.3711
BC	1.55081E7	1	1.55081E7	33.41	0.0000
ABC	3.14569E6	2	1.57284E6	3.39	0.0506
RESIDUAL	1.11404E7	24	464183.		
TOTAL (CORRECTED)	3.48952E7	35			

Multiple Range Tests for Nitrate by Fertilization level

Method: 95.0 percent LSD

Fertilization level	Count	LS Mean	LS Sigma	Homogeneous Groups
50	12	2576.05	196.677	X
70	12	2921.1	196.677	XX
100	12	3301.9	196.677	X