

**Supplementary Table (S1)** Minor amino acids (in  $\mu\text{mol g}^{-1}$  DW) in plants of *Ranunculus asiaticus* L. hybrids MDR and MBO, obtained by three vernalization procedures of tuberous roots, only rehydration (Control, C), rehydration plus vernalization for 2 weeks (V2), rehydration plus vernalization for 4 weeks (V4). Week 8 from planting (vegetative phase). ns, \*, \*\* and \*\*\*; indicate non-significant or significant difference at  $p \leq 0.05$ ,  $p \leq 0.01$ ,  $p \leq 0.001$ , respectively. Different lowercase or capital letters within each row, for specific vernalization procedure, indicate significant differences ( $p \leq 0.05$ ).

<i>Vegetative phase</i>	MDR				MBO				H	V	H x V
	C	V2	V4	Mean	C	V2	V4	Mean			
Arg	0.56 a	0.94 b	1.01 b	0.84	0.69 a	1.13 b	0.63 a	0.81	ns	**	***
Hys	3.33	4.46	5.28	4.36	4.46	5.26	3.53	4.42	ns	ns	ns
Ile	0.98 a	0.78 ac	0.76 bc	0.84	0.95 a	0.90 ab	0.68 bc	0.84	ns	**	*
Leu	0.76 a	0.84 a	0.80 a	0.80	0.93 a	1.69 c	0.40 d	1.01	ns	ns	***
Lys	0.53 a	0.47 a	0.40 ac	0.47	0.37 ac	1.16 b	0.24 c	0.59	ns	*	***
Met	0.24 a	0.26 a	0.46 b	0.32	0.26 a	0.71 c	0.05 d	0.34	ns	ns	***
Phe	0.60 a	0.45 b	0.38 b	0.48	0.68 a	1.17 c	0.28 d	0.71	ns	**	***
Tyr	1.10 ab	0.96 bcd	1.35 a	1.14 A	0.62 c	0.70 dc	1.04 abd	0.79 B	**	ns	**
Trp	0.26 a	0.23 a	0.58 b	0.36	0.30 a	0.38 a	0.24 a	0.31	ns	ns	**
Val	1.39	1.40	1.58	1.46	1.32	1.61	1.21	1.38	ns	ns	ns
Minor AA	9.76 a	10.80 ac	12.60 ab	11.05	10.57 ac	14.71 c	8.30 c	11.19	ns	ns	**
<i>Flowering phase</i>	MDR				MBO				H	V	H x V
	C	V2	V4	Mean	C	V2	V4	Mean			
Arg	0.55 a	0.54 a	0.34 b	0.48	0.29 c	0.41 a	0.65 a	0.45	ns	ns	*
Hys	4.85 a	2.89 b	3.52 bc	3.75	3.12 b	3.02 b	4.07 c	3.40	ns	ns	***
Ile	0.46 a	0.53 a	0.29 b	0.43	0.24 c	0.37 a	1.31 d	0.64	ns	ns	**
Leu	0.27 a	0.32 a	0.17 b	0.25 A	0.40 c	0.51 d	1.17 e	0.69 B	***	ns	**
Lys	0.42 ac	0.27 bd	0.17 bd	0.29	0.21 d	0.36 ab	0.53 c	0.37	ns	ns	***
Met	0.05 a	0.07 ab	0.04 a	0.05 A	0.09 bc	0.14 d	0.11 cd	0.11 B	***	ns	***
Phe	0.49 a	0.24 a	0.14 b	0.29	0.23 a	0.27 a	1.19 c	0.56	ns	ns	*
Tyr	0.57 ab	0.67 ab	0.25 b	0.50	0.42 ab	0.45 ab	1.47 c	0.78	ns	ns	***
Trp	0.35 a	0.38 a	0.09 b	0.27	0.54 a	0.17 c	0.31 a	0.34	ns	*	*
Val	0.92 a	0.79 ac	0.38 b	0.70	0.43 b	0.66 c	1.84 d	0.98	ns	ns	***
Minor AA	8.94 a	6.69 b	5.40 b	7.01	5.97 b	6.36 b	12.64 c	8.32	ns	ns	***