

Table 1 Morphological characteristics of four *P. notoginseng* populations: purple-stem, green-stem, erect-type, and natural populations

Populations	Purple stem population		Green stem population		Erect type population		Natural population	
	Mean $\pm$ SD	Cv	Mean $\pm$ SD	Cv	Mean $\pm$ SD	Cv	Mean $\pm$ SD	Cv
Green stem (%)	4.2 $\pm$ 0.8 ^a	34.6	82.5 $\pm$ 2.5 ^c	5.2	25.0 $\pm$ 2.9 ^b	20	24.2 $\pm$ 2.2 ^b	15.8
Green-purple stem (%)	9.2 $\pm$ 0.8 ^a	15.7	10 $\pm$ 1.4 ^a	25	50.8 $\pm$ 3.0 ^b	10.2	45.0 $\pm$ 1.4 ^b	5.6
Purple stem (%)	86.7 $\pm$ 0.8 ^d	1.7	7.5 $\pm$ 1.4 ^a	33.3	24.2 $\pm$ 0.8 ^b	6.0	30.8 $\pm$ 1.7 ^c	9.4
Erect type (App<45 °) (%)	15.0 $\pm$ 0.0 ^b	16.7	20.0 $\pm$ 0.0 ^c	12.5	25.0 $\pm$ 0.01 ^d	10	9.2 $\pm$ 0.0 ^a	15.7
Semi-erect type (60 °> App>45 °) (%)	33.3 $\pm$ 0.0 ^c	11.5	31.7 $\pm$ 0.0 ^b	19.9	51.6 $\pm$ 0.03 ^d	10.1	23.3 $\pm$ 0.0 ^a	16.4
Horizontal spreading type (App>60 °) (%)	51.6 $\pm$ 0.0 ^c	12.2	40 $\pm$ 0.1 ^b	37.5	23.4 $\pm$ 0.02 ^a	12.3	67.5 $\pm$ 0.0 ^d	3.7
Plant height (Ph) (cm)	48.8 $\pm$ 7.5 ^a	15.4	55.6 $\pm$ 6.1 ^b	10.9	48.1 $\pm$ 7.0 ^a	14.5	58.0 $\pm$ 8.2 ^b	14.1
Stem height (Sh) (cm)	34.7 $\pm$ 5.8 ^a	16.7	35.1 $\pm$ 5.1 ^a	14.5	35.3 $\pm$ 5.7 ^a	16.1	42.1 $\pm$ 5.2 ^b	12.4
Stem diameter (Sd) (cm)	0.5 $\pm$ 0.1 ^a	16.7	0.5 $\pm$ 0.1 ^a	9.4	0.5 $\pm$ 0.1 ^a	11.5	0.59 $\pm$ 0.1 ^b	8.5
Peduncle length (Pdl) (cm)	14.2 $\pm$ 4.1 ^{ab}	23.8	20.5 $\pm$ 4.9 ^c	23.9	12.7 $\pm$ 4.2 ^a	33.1	15.9 $\pm$ 5.0 ^b	31.4
Ratio of peduncle length and stem height (Rps)	0.4 $\pm$ 0.1 ^a	23.8	0.6 $\pm$ 0.2 ^b	33.3	0.4 $\pm$ 0.1 ^a	27.0	0.4 $\pm$ 0.1 ^a	26.3
Petiole length (Pel) (cm)	10.1 $\pm$ 1.3 ^a	12.9	10.6 $\pm$ 0.9 ^a	8.5	10.0 $\pm$ 1.4 ^a	14.0	10.8 $\pm$ 0.9 ^a	8.3
Middle leaflet length (Mll) (cm)	12.3 $\pm$ 1.6 ^a	13.0	11.9 $\pm$ 1.5 ^a	12.6	12.3 $\pm$ 0.8 ^a	6.5	12.2 $\pm$ 1.1 ^a	9.0
Middle leaflet breadth (Mlb) (cm)	4.6 $\pm$ 0.7 ^a	15.2	4.3 $\pm$ 0.4 ^a	9.3	4.4 $\pm$ 0.5 ^a	11.4	4.4 $\pm$ 0.4 ^a	9.1
Ratio of middle leaflet length and breadth (Rlb)	2.7 $\pm$ 0.2 ^a	7.4	2.7 $\pm$ 0.3 ^a	11.1	2.8 $\pm$ 0.3 ^a	10.7	2.8 $\pm$ 0.3 ^a	10.7
Number of compound leaves (Ncl)	4.6 $\pm$ 0.9 ^a	19.5	4.7 $\pm$ 0.7 ^a	14.8	4.6 $\pm$ 0.5 ^a	10.9	4.9 $\pm$ 0.6 ^a	12.2

Note: Subscripts a, b, and c indicate means $\pm$ SD that were significantly different based on Tukey's test ($P < 0.05$)