

Figure S1. Correlation between root fresh weight and leaf fresh weight, root fresh weight and stem fresh weight, and root fresh weight and seed petiole dry weight for the 162 *P. quinquefolius* samples. Correlation equation, coefficients and p-value is presented in each graph.

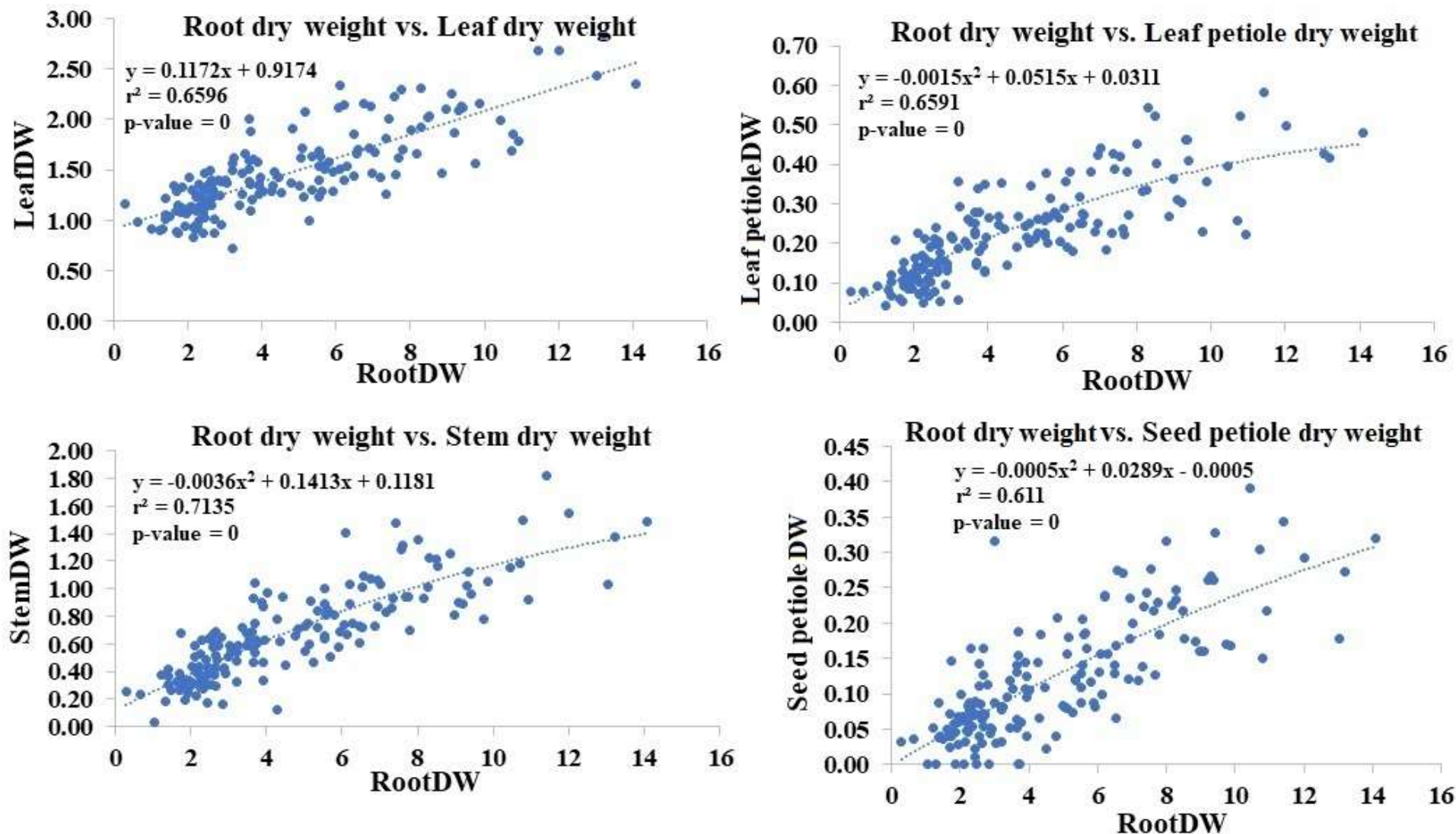


Figure S2. Correlation between root dry weight and leaf dry weight, root dry weight and leaf petiole dry weight, root dry weight and stem dry weight, and root dry weight and seed petiole dry weight for the 162 *P. quinquefolius* samples. Correlation equation, coefficients and p-value is presented in each graph.

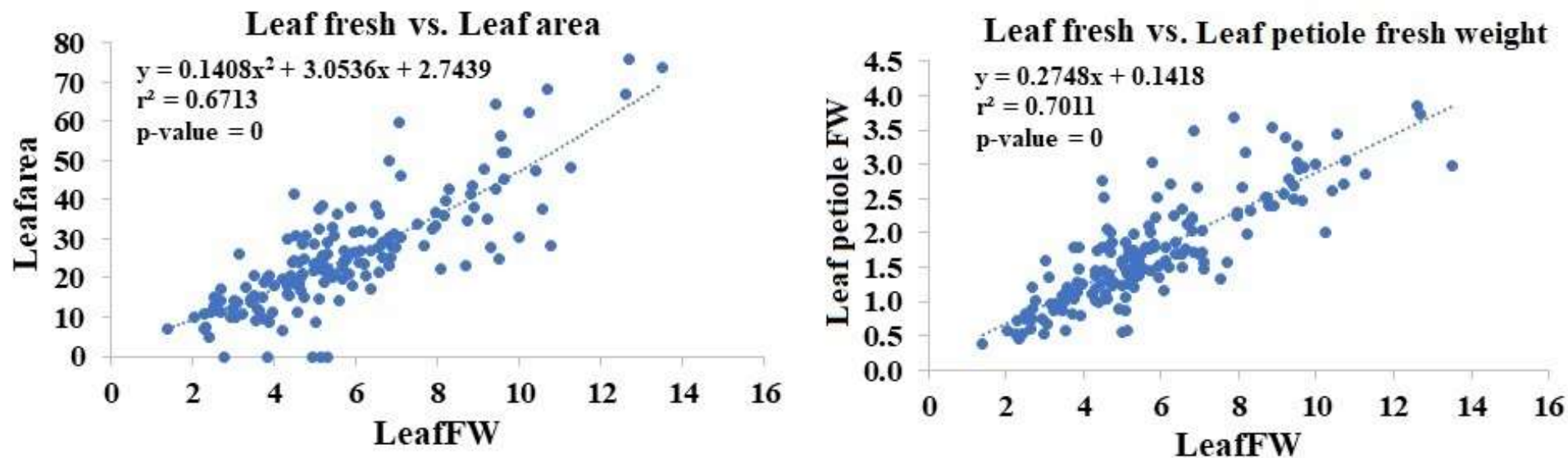


Figure S3. Correlation between leaf fresh weight and leaf area, and leaf fresh weight and leaf petiole fresh weight for the 162 *P. quinquefolius* samples. Correlation equation, coefficients and p-value is presented in each graph.

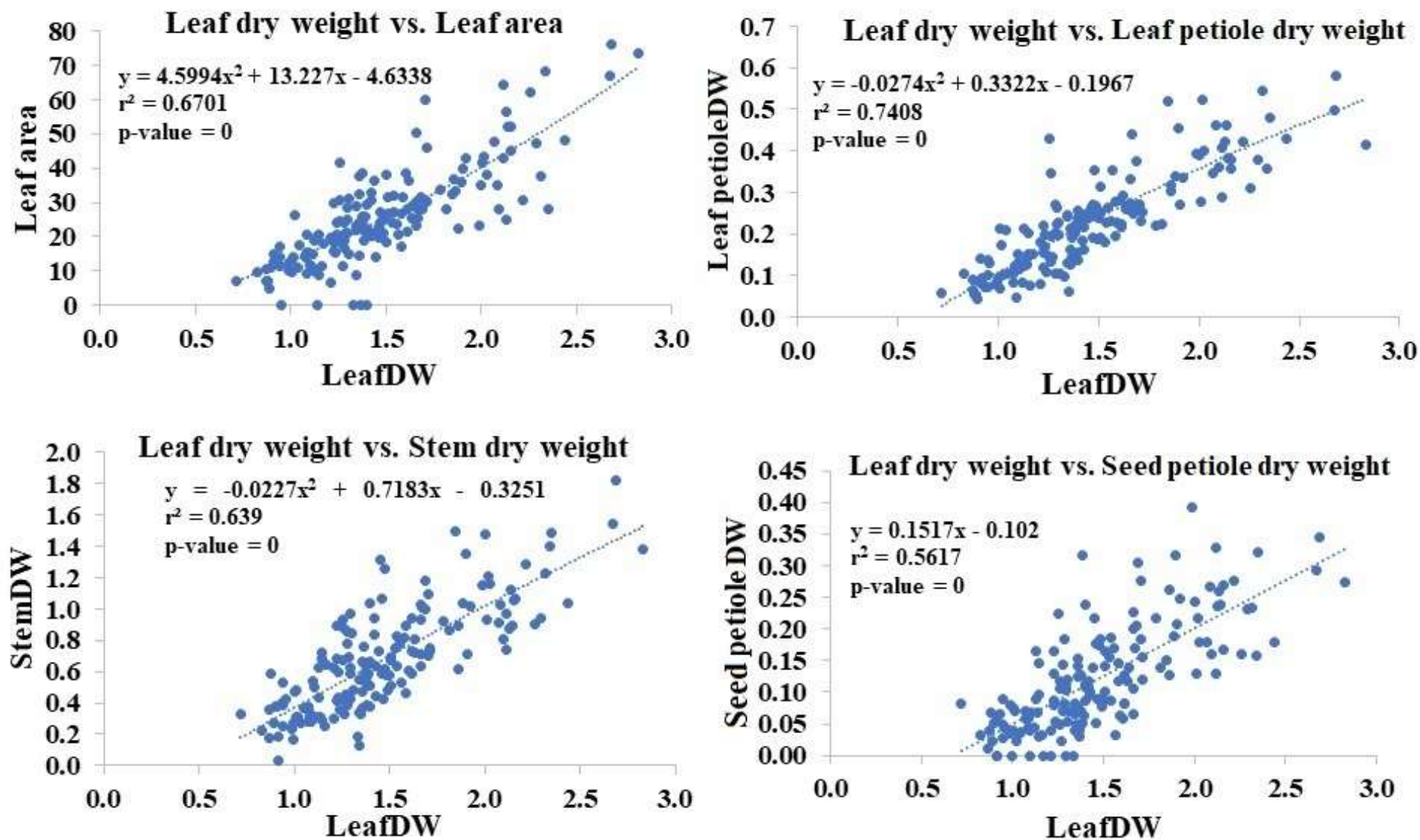


Figure S4. Correlation between leaf dry weight and leaf are, leaf dry weight and leaf petiole dry weight, leaf dry weight and stem dry weight, and leaf dry weight and seed petiole dry weight for the 162 *P. quinquefolius* samples. Correlation equation, coefficients and p-value is presented in each graph.

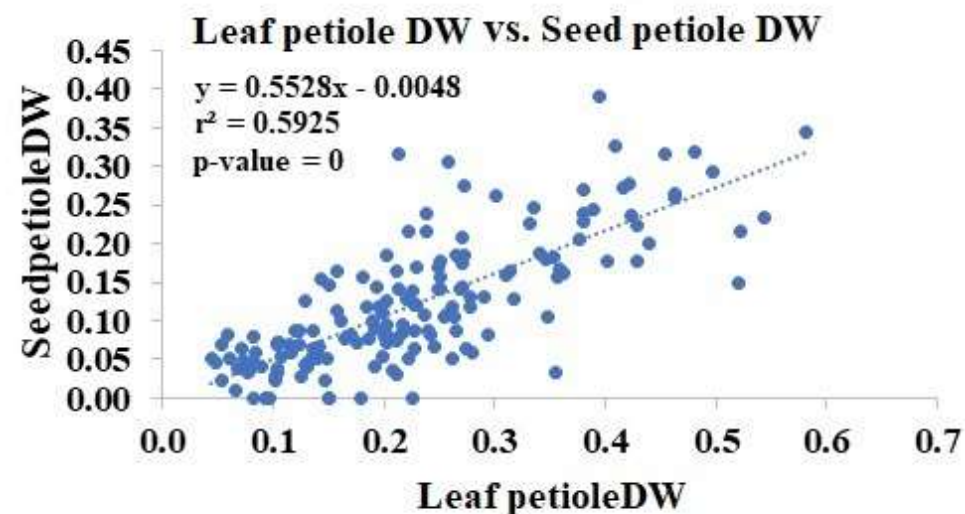
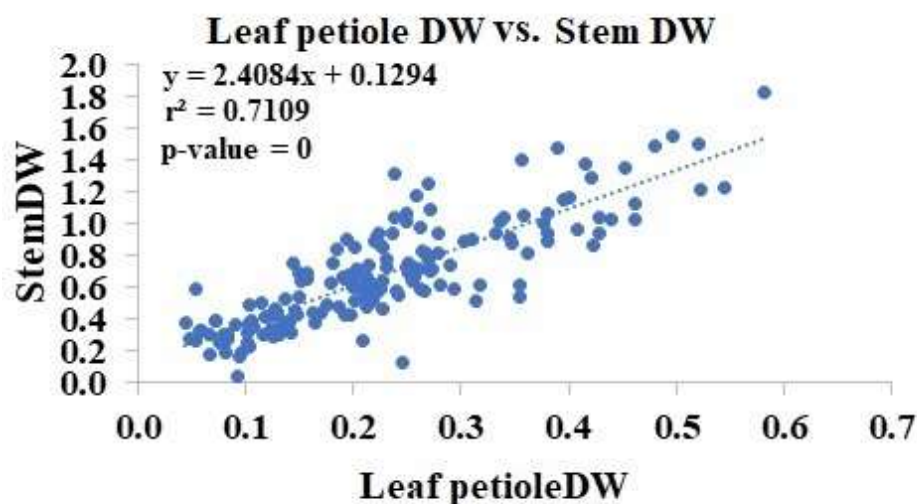


Figure S5. Correlation between leaf petiole dry weight and stem dry weight, and leaf petiole dry weight and seed petiole dry weight for the 162 *P. quinquefolius* samples. Correlation equation, coefficients and p-value is presented in each graph.

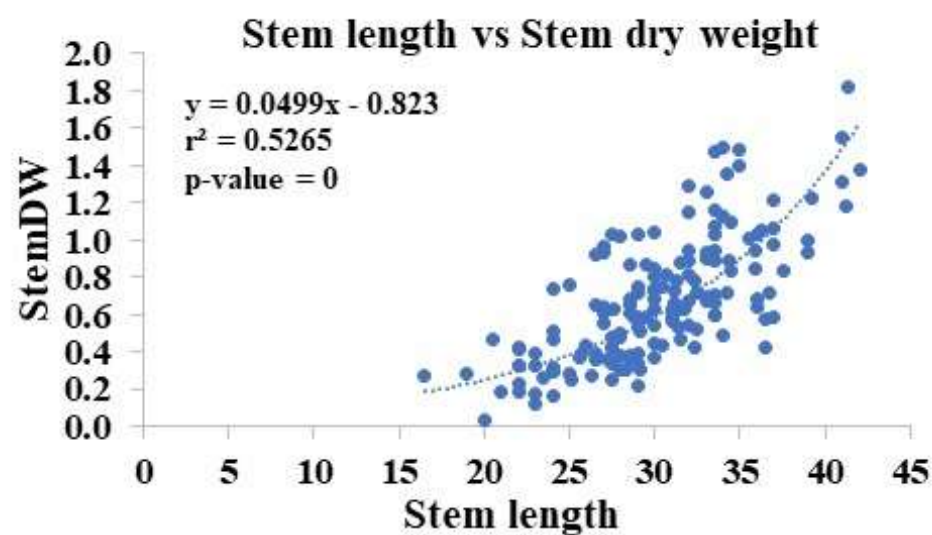
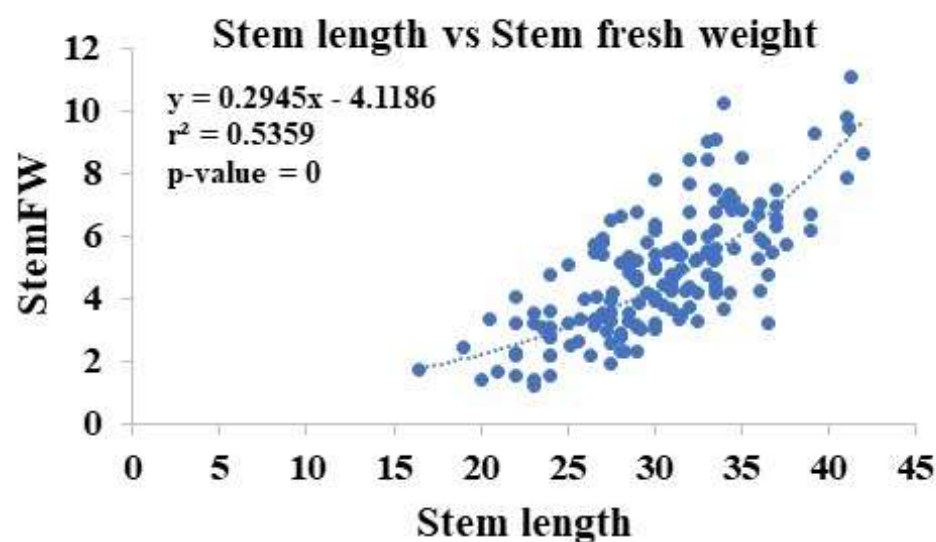


Figure S6. Correlation between stem length and stem fresh weight, and stem length and stem dry weight for the 162 *P. quinquefolius* samples. Correlation equation, coefficients and p-value is presented in each graph.

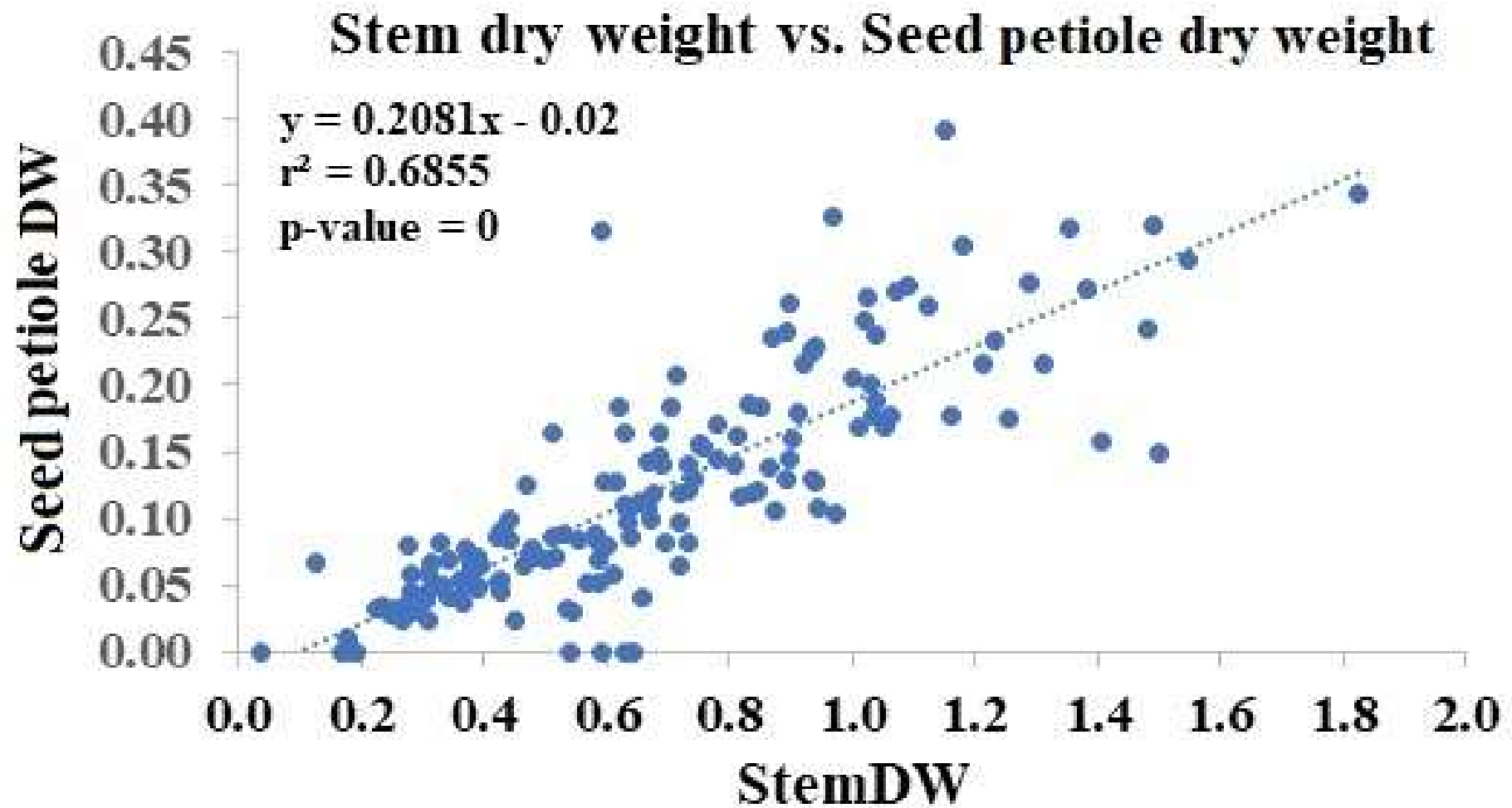


Figure S7. Correlation between stem dry weight and seed petiole dry weight for the 162 *P. quinquefolius* samples. Correlation equation, coefficients and p-value is presented in each graph.

Figure S8. Alignment using MUSCLE of PW16 sequences of 162 *P. quinquefolius* samples from a commercial ginseng garden near Simcoe, Ontario, Canada.

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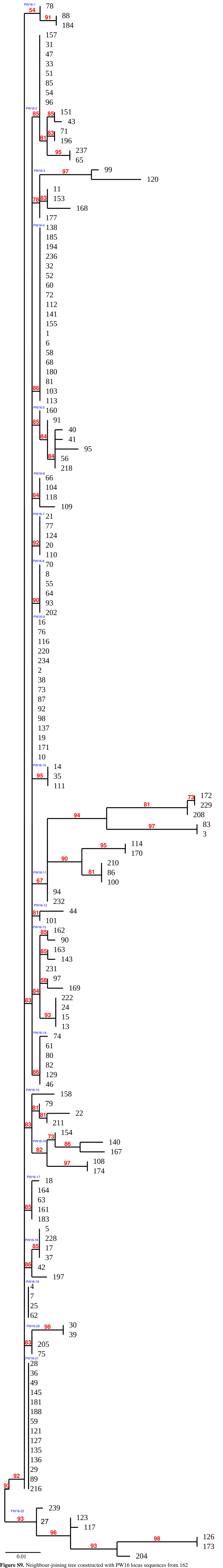


Figure S9. Neighbour-joining tree constructed with PW16 locus sequences from 162 *P. quinquefolius* samples from a commercial ginseng garden near Simcoe, Ontario. Sample number is shown in black, and cluster designation (PW16-1 to PW16-22) is shown in blue. Bootstrap support values from 1000 replicates are shown in red at the nodes. Scale bar is at bottom.

Table S1. Root parameters separated by root grade.

Root grade	Root fresh wt (g)		Root dry wt (g)		Water content (%)	
Pencil	13.50	B ^a	3.85	B	28.17	A
Chunk	18.31	A	5.27	A	29.58	A
Fork	18.78	A	5.49	A	26.66	A
Spider	21.36	A	5.98	A	26.87	A

^a Values within a column followed by a letter in common are not significantly different at $p = 0.05$ according to Fisher's protected Least Significant Difference test (LSD).

Table S2. Leaf parameters separated by root grade.

Root grade	Leaves per plant	Leaflets per plant	Leaf area (cm)	Leaf fresh wt (g)	Leaf dry wt (g)	Water content (%)
Pencil	3.04 A ^a	13.84 B	23.15 B	4.97 B	1.34 B	28.65 A
Chunk	3.00 A	13.56 A	28.81 A	6.47 A	1.60 A	25.80 B
Fork	3.09 A	13.50 A	29.80 A	6.35 A	1.58 A	25.99 B
Spider	3.03 A	13.39 A	29.70 A	6.52 A	1.61 A	26.45 AB

^a Values within a column followed by a letter in common are not significantly different at $p = 0.05$ according to Fisher's protected Least Significant Difference test (LSD).

Table S3. Petiole and stem parameters separated by root grade.

Root grade	Petiole fresh wt (g)	Petiole dry wt (g)	Water content (%)	Stem length (cm)	Stem fresh wt (g)	Stem dry wt (g)	Water content (%)
Pencil	1.45 B ^a	0.19 B	13.14 A	29.23 B	4.16 B	0.58 B	13.50 A
Chunk	2.00 A	0.26 A	12.98 A	32.13 A	4.96 AB	0.71 AB	14.30 A
Fork	1.98 A	0.26 A	12.61 A	31.11 AB	5.53 A	0.78 A	13.87 A
Spider	1.94 A	0.28 A	14.01 A	30.10 AB	5.46 A	0.82 A	14.77 A

^a Values within a column followed by a letter in common are not significantly different at $p = 0.05$ according to Fisher's protected Least Significant Difference test (LSD).

Table S4. Seed parameters separated b root grade.

Root grade	Seed petiole length		Seed petioles fresh wt (g)		Seed petioles dry wt (g)		Water content (%)		Seed petiolules per plant		Total seeds per plant		Seed fresh wt (g)		Seed dry wt (g)		Water content (%)	
Pencil	09.82	A ^a	0.42	B	0.10	B	23.64	A	42.59	A	0.52	A	1.98	A	0.43	A	19.43	A
Chunk	10.89	A	0.52	AB	0.14	A	27.58	A	39.94	A	0.66	A	2.06	A	0.44	A	21.33	A
Fork	11.33	A	0.50	AB	0.14	A	27.52	A	45.54	A	0.63	A	1.97	A	0.38	A	18.71	A
Spider	11.04	A	0.56	A	0.14	A	24.15	A	44.29	A	0.70	A	1.74	A	0.38	A	20.70	A

a Values within a column followed by a letter in common are not significantly different at $p = 0.05$ according to Fisher's protected Least Significant Difference test (LSD).

Table S5. Root, leaves, and leaf petiole growth parameters of *P. quinquefolius*. At 3-year old, root fresh weight, root dry weight, leaves per plant, and leaf petiole dry weight for different groups were recorded.

Group no.	Root fresh weight (g)	Root dry weight (g)	Leaves per plant	Leaf petiole dry weight (g)
1	18.73 A	5.38 A	2.67 A	0.26 A
2	19.27 A	5.44 A	2.79 A	0.27 A
3	18.33 A	5.52 A	2.67 A	0.21 A
4	17.08 A	4.73 A	3.32 A	0.24 A
5	20.32 A	5.88 A	2.86 A	0.30 A
6	18.01 A	4.94 A	3.00 A	0.23 A
7	21.03 A	6.44 A	3.00 A	0.30 A
8	12.50 A	3.20 A	3.33 A	0.21 A
9	14.06 A	3.76 A	3.00 A	0.21 A
10	13.77 A	3.79 A	2.67 A	0.17 A
11	22.14 A	6.60 A	3.42 A	0.29 A
12	17.11 A	5.26 A	3.00 A	0.25 A
13	14.31 A	4.20 A	3.09 A	0.19 A
14	13.24 A	3.40 A	3.00 A	0.18 A
15	12.50 A	3.10 A	3.25 A	0.21 A
16	15.27 A	4.44 A	3.00 A	0.18 A
17	17.61 A	5.44 A	3.20 A	0.22 A
18	15.89 A	4.61 A	3.00 A	0.19 A
19	15.18 A	4.59 A	3.00 A	0.21 A
20	14.98 A	4.14 A	3.00 A	0.20 A
21	17.28 A	4.87 A	2.93 A	0.23 A
22	12.80 A	3.72 A	3.00 A	0.18 A