Table 1 Suppl. Primer sequences (F - forward, R - reverse).

Gene	Gen Bank No.	Primers 5´-3´
EF-1α	AB061263	F: ATTGGAAACGGATATGCTCCA R: TCCTTACCTGAACGCCTGTCA
P5CS	XM_006346765.2	F: CGATCCACAATCAGAGCTAATTC R: GCAGTCATACCACCTCTTCCA
OAT	XM_006355348.2	F: TGAAATACAAAGTGGCTTGGCACG R: GACTCCACCACCTAATGCTTTTCCC
P5CR	XM_006364987.2	F: CCAATTCCAGCCGATTCA R: GAAGCAGGCAATATCCCAGA
PRODH	XM_006338233.2	F: GGATTCTGGGTTAAAAGCCATGCTT R: AAACGCCGCAGTACTCTGTTCACA
P5CDH	XM_006354729.2	F: TGGGTTACCTGTGGATGATGTGGA R: AGTCATGCGTGGTTTTGCCTCC

Table 2 Suppl. Effect of water stress induced by polyethylene glycol (PEG) (0, 2.5, 5.0, 7.5, and 10 %, m/v) on fresh mass (f.m.), dry mass (d.m.), and f.m./d.m. ratio in shoots and roots of *in vitro* grown potato plantlets. Means ± SEs, n = **??**, values in a columns with the same letters are not statistically different at $P < 0.05$ by the Duncan test.

Genotypes	PEG [%]	Shoot f.m. [mg]	Shoot d.m. [mg]	Shoot f.m./d.m.	Root f.m. [mg]	Root d.m. [mg]	Root f.m./d.m.
A	0.0	61.10±3.33a	3.17±0.84a	19.27±1.19a	20.53±2.25a	0.83±0.24a	24.73±1.33a
	2.5	12.67±1.12b	1.30±0.11b	9.75±0.90b	5.33±0.99b	0.30±0.09b	17.77±1.06b
	5.0	11.87±1.08b	1.20±0.20b	9.89±0.87b	4.57±1.07b	0.23±0.07b	19.87±1.15b
	7.5	11.50±1.16b	1.17±0.16b	9.83±0.93b	4.10±0.93b	0.20±0.04bc	20.50±1.09b
	10.0	10.33±0.94b	1.10±0.15b	9.39±0.88b	0.73±0.31c	0.07±0.01c	10.43±0.86c
B	0.0	95.37±4.46a	4.17±0.65a	22.87±1.09a	48.03±1.96a	1.70±0.32a	28.25±1.43a
	2.5	36.93±2.67b	2.27±0.34b	16.27±1.11b	24.47±1.09b	0.90±0.11b	27.19±1.27a
	5.0	20.63±1.65c	1.63±0.18c	12.66±0.97c	6.50±0.93c	0.30±0.05c	21.67±1.11b
	7.5	17.53±1.98cd	1.50±0.15c	11.68±0.84c	4.23±0.64c	0.20±0.03cd	21.15±1.23b
	10.0	13.73±1.26d	1.20±0.98c	11.55±0.92c	1.27±0.42d	0.07±0.01d	18.14±1.09c
C	0.0	50.87±3.59a	2.80±0.46a	18.17±1.11a	18.13±2.05a	1.00±0.09a	18.13±1.12a
	2.5	9.93±1.03b	0.90±0.11b	11.03±0.88b	4.83±1.32b	0.33±0.05b	14.60±0.98b
	5.0	10.07±1.19b	0.97±0.09b	10.38±0.90b	3.37±1.19b	0.27±0.05b	12.48±0.74b
	7.5	8.50±0.67b	0.77±0.09bc	11.04±0.76b	2.47±0.68b	0.00±0.00c	-
	10.0	6.53±0.81b	0.57±0.06c	11.46±0.81b	0.50±0.15c	0.00±0.00c	-
D	0.0	40.47±3.78a	2.27±0.85a	17.83±1.23a	15.17±1.78a	0.87±0.08a	17.44±1.14a
	2.5	8.10±1.04b	0.77±0.10b	10.52±0.93b	3.63±0.95b	0.27±0.04b	13.44±1.02b
	5.0	8.03±1.09b	0.77±0.08b	10.43±0.86b	3.10±1.13b	0.30±0.04b	10.33±0.87b
	7.5	5.77±0.65b	0.53±0.05bc	10.89±0.82b	2.13±0.67b	0.00±0.00c	-
	10.0	3.37±0.58b	0.33±0.04c	10.21±0.90b	0.23±0.06c	0.00±0.00c	-

Table 3 Suppl. Correlation analysis between proline content and different parameters studied in *in vitro* grown potato plantlets of four genotypes (A, B, C, and D) under polyethylene glycol-induced drought stress. *P5CS - Δ-1-pyrroline-5-carboxylate synthase, OAT - ornithineaminotransferase, P5CR - pyrroline-5-carboxylate reductase, PDH - pyrroline dehydrogenase, P5CDH - Δ-1-pyrroline-5-carboxylate dehydrogenase*. (** - $P < 0.01$. * – $P < 0.05$).

Variables/genotypes	A	B	C	D
Number of new leaves	-0.923*	-0.748	-0.878	-0.936*
Number of roots	-0.911*	-0.736	-0.872	-0.982**
Maximum root length	-0.951*	-0.985**	-0.906*	-0.975**
Shoot fresh mass	-0.742	-0.586	-0.711	-0.809
Shoot dry mass	-0.769	-0.638	-0.761	-0.858
Root fresh mass	-0.846	-0.610	-0.810	-0.852
Root dry mass	-0.880*	-0.628	-0.841	-0.905*
Shoot fresh mass/dry mass ratio	-0.737	-0.583	-0.604	-0.744
Root fresh mass/dry mass ratio	-0.830	-0.738	-0.885*	-0.962**
Malondialdehyde content	0.902*	0.942*	0.927*	0.987**
Chlorophyll content	-0.748	-0.643	-0.751	-0.833
P5CS gene expression	0.878*	0.879*	0.971**	0.895*
OAT gene expression	0.836	0.377	0.819	0.954*
P5CR gene expression	0.991**	0.896*	0.993**	0.999**
PDH gene expression	-0.987**	-0.887*	-0.991**	-0.983**
P5CDH gene expression	-0.973**	-0.903*	-0.983**	-0.982**

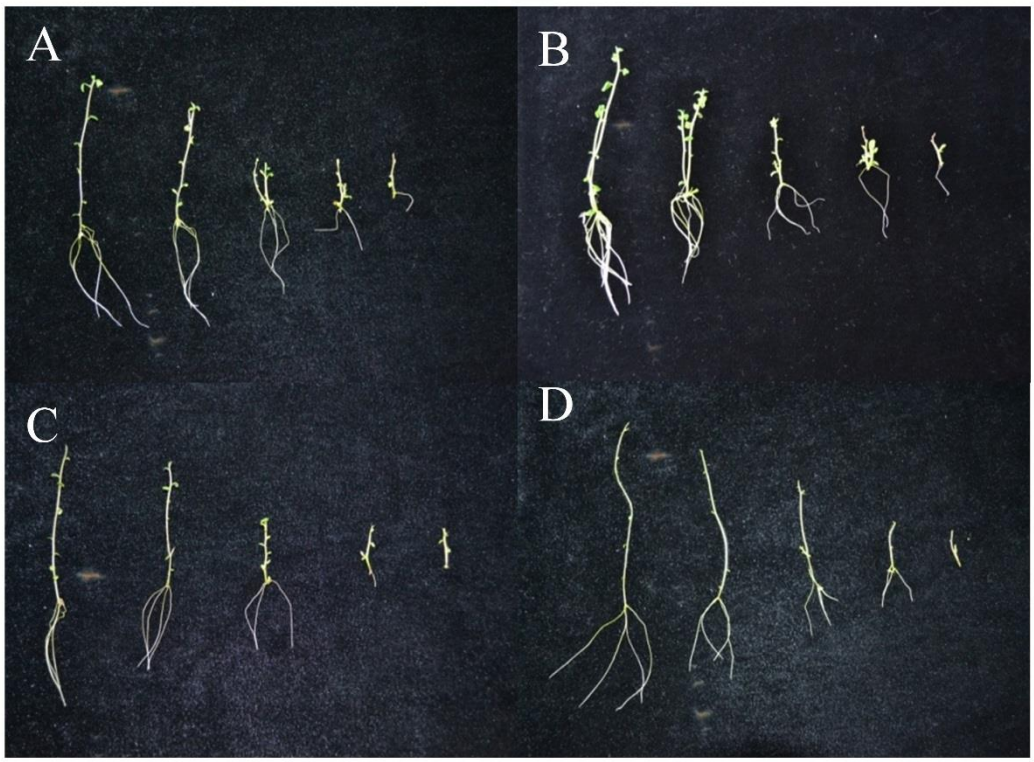

Fig. 1 Suppl. Phenotype characteristics of four potato genotypes (A, B, C, and D) under 2.5, 5.0, 7.5, and 10.0 % polyethylene glycol-induced drought stress (*from the left to the right*).