

**Table S1** Morphological parameters of potato plantlets in vitro under different LEDs light spectrum for the first, second and third week

Plantlet ages	Light treatment	Plantlet fresh weight (mg/plantlet)	Leaf number per plantlet	Leaf area (cm <sup>2</sup> /plantlet)	Stem length per plantlet (cm)	Node number per plantlet	Stem diameter (mm)	Root diameter (mm)
the 1st week	RR	51.21±3.12b	0.98±0.011a	5.15±1.21c	2.59±0.47a	2.23±0.39a	0.15±0.01b	0.39±0.01a
	BB	62.23±2.19ab	1.00±0.01a	8.96±1.01a	0.43±0.03c	0.10±0.00c	0.31±0.02a	0.36±0.01a
	RB	80.35±5.20a	1.02±0.01a	6.13±1.49b	1.33±0.17b	1.45±0.48b	0.20±0.01ab	0.39±0.01a
	RBG	83.39±4.18a	1.01±0.01a	7.02±1.04ab	1.28±0.24b	1.39±0.49b	0.22±0.03ab	0.36±0.01a
	CK	81.01±3.68a	1.14±0.01a	6.11±2.17b	1.13±0.16b	1.20±0.52b	0.21±0.01ab	0.32±0.01a
the 2nd week	RR	122.28±6.13c	3.78±0.02a	34.21±2.19c	6.13±1.02a	6.07±1.03a	0.35±0.01c	0.47±0.01a
	BB	165.00±7.23b	3.02±0.01a	59.94±3.16a	1.04±0.23c	1.95±0.29c	0.78±0.01a	0.50±0.01a
	RB	234.49±5.34a	3.98±0.01a	47.37±2.15b	2.15±0.78b	4.01±1.01b	0.53±0.01b	0.48±0.01a
	RBG	259.27±6.27a	4.06±0.01a	51.02±2.05ab	2.34±0.96b	3.51±1.03b	0.55±0.01b	0.49±0.01a
	CK	235.84±5.24a	3.87±0.01a	46.79±1.19b	2.26±0.74b	3.48±0.94b	0.49±0.01b	0.44±0.01a
the 3rd week	RR	251.82±4.13b	7.12±0.01a	60.51±2.19c	9.17±1.99a	8.54±1.26a	0.81±0.02c	0.68±0.01a
	BB	267.64±4.26ab	6.03±0.01a	120.16±6.10a	2.01±0.13c	3.48±1.00c	1.20±0.02a	0.62±0.01a
	RB	335.23±5.09a	7.01±0.01a	106.38±5.09b	6.04±1.63b	6.27±1.03b	0.98±0.03b	0.64±0.01a
	RBG	321.16±3.98a	7.35±0.01a	112.28±5.25b	6.49±2.09b	5.58±1.00b	1.10±0.05b	0.62±0.01a
	CK	309.16±6.34a	6.94±0.01a	109.13±3.19b	5.58±1.96b	5.26±1.02b	0.95±0.04b	0.61±0.01a

RR and BB represent red and blue LEDs light spectrum, respectively. RB indicates combined spectrum with 65% red and 35% blue LEDs light spectrum. RBG indicates combined spectrum with 45% red, 35% blue and 20% green LEDs light spectrum. Values are mean±SE of 20 plantlets. Different letters in each row indicate significant differences ( $P<0.05$ ) according to Tukey's test.