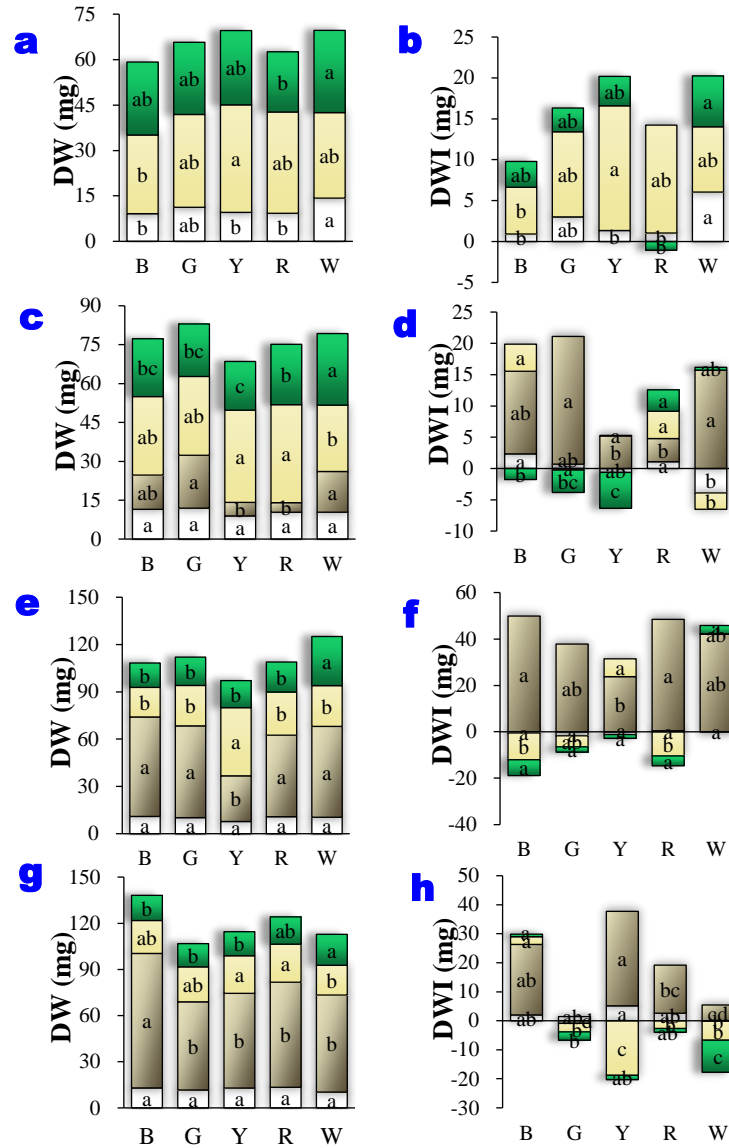


**Figure S1.** Leaf number of potato plantlets grown under different monochromatic lights at different stages. R, red light; B, blue light; Y, yellow light; G, green light; W, white light.



**Figure S2.** The effects of different lights on the dry matter accumulation in various organs of potato plantlets. Dry weight in different organs at 15 d (a), 30 d (c), 45 d (e), 60 d (g) after light treatment; dry weight increment in different organs during 0-15 d (b), 15-30 d (d), 30-45 d (f), 45-60 d (h) after light treatments. DW, dry weight; DWI, increase in dry weight. Different lowercase letters on the bars indicate statistically significant differences ( $P \leq 0.05$ ). Abbreviations of light treatments were as described in Figure S1.

**Table S1.** Estimation of the error in measuring solute consumption in the culture medium using the drying and weighing method.

Content (g/L)			Medium (mL)	Dry weight (g)		Relative deviation (%)
Sucrose	Agar	Other nutrient		Theoretical	Measured	
40	8	4.74	10	0.53	0.55	3.77
80	8	4.74	10	0.93	0.97	4.30
120	8	4.74	10	1.33	1.38	3.76
160	8	4.74	10	1.73	1.82	5.20

**Table S2.** The primer sequences of target and reference genes used in RT-qPCR analysis

Gene name	Forward primer	Reverse primer
<i>StSUT1</i>	TGAACTGGATCGCGTGGTTT	CATAAGTGTGCCGCTGGG
<i>StSUT4</i>	TGTGGACCGCTTTCAGGTTT	ACTGCTCCGGCGACAATAAA
<i>Efl<math>\alpha</math></i>	ATTGGAAACGGATATGCTCCA	TCCTTACCTGAACGCCTGTCA