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Supplementary Material

Roles of gibberellins and cytokinins in regulation of morphological and physiological traits in *Polygonum cuspidatum* responding to light and nitrogen availabilities

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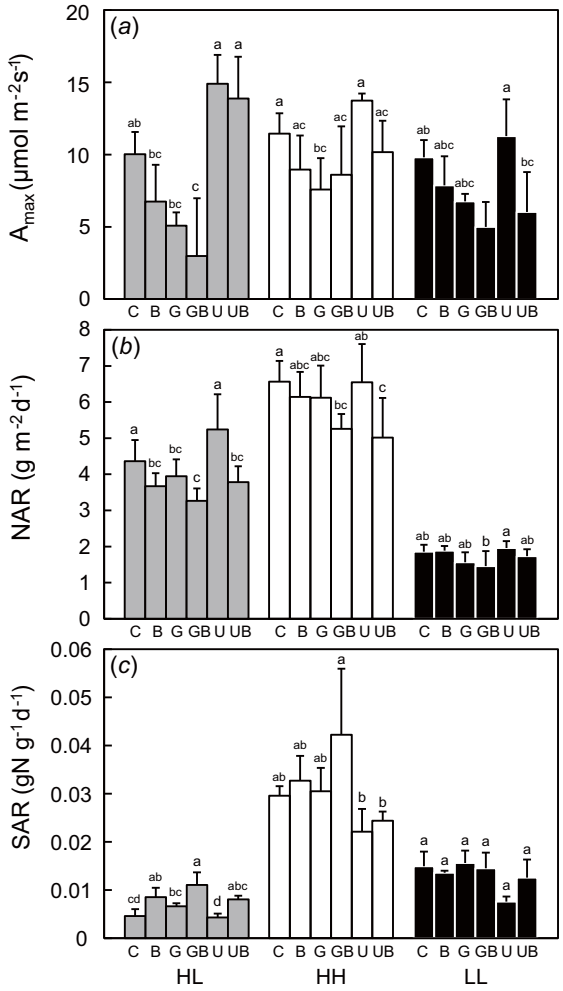

Fig. S1. Effects of the phytohormone treatments on physiological traits in *P. cuspidatum*. (*a*) net assimilation rate (NAR), (*b*) maximum photosynthetic rate (A_{max}), (*c*) specific nitrogen absorption rate (SAR, g N g^{-1} d^{-1}). Grey, white and black bars indicate values of seedlings grown under high light and low nitrogen (HL), high light and high nitrogen (HH) and low light and low nitrogen (LL), respectively. Uppercase letters on the horizontal axes are as shown in Fig. 1. Column values are means ± SD (*n* = 4–8). Different lowercase letters indicate significant differences between phytohormone treatments within growth conditions (Tukey's test, $P < 0.05$).

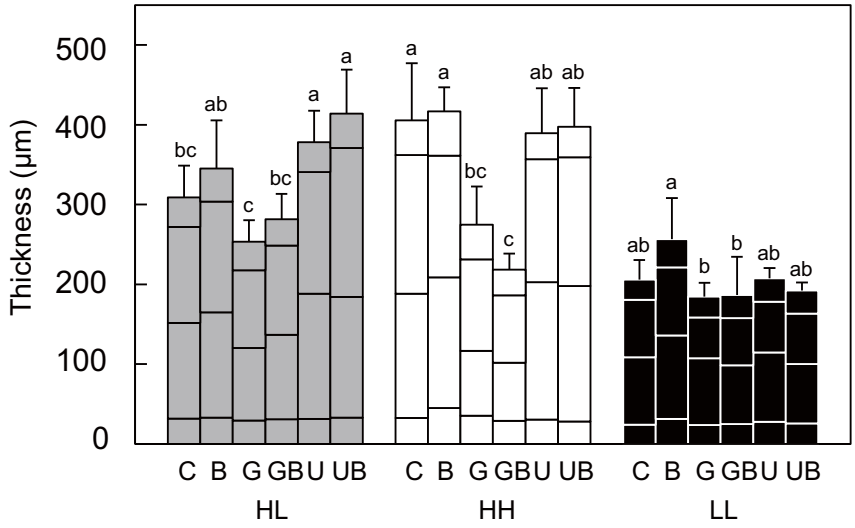

Fig. S2. Effects of the phytohormone treatments on changes in the thicknesses of anatomical components of leaves in *P. cuspidatum*. Bars from top to bottom represent values of adaxial epidermis, palisade tissue, spongy tissue and abaxial epidermis, respectively. Grey, white and black bars indicate values of seedlings grown under high light and low nitrogen (HL), high light and high nitrogen (HH) and low light and low nitrogen (LL), respectively. Upper black, white, grey and lower black portions columns refer to adaxial epidermis, palisade tissue, spongy tissue and abaxial epidermis, respectively. Uppercase letters on the horizontal axes are as shown in Fig. 1. Column values are means ± SD (n = 4–8). Different lowercase letters indicate significant differences in total leaf thickness between phytohormone treatments within growth conditions (Tukey's test, $P < 0.05$).

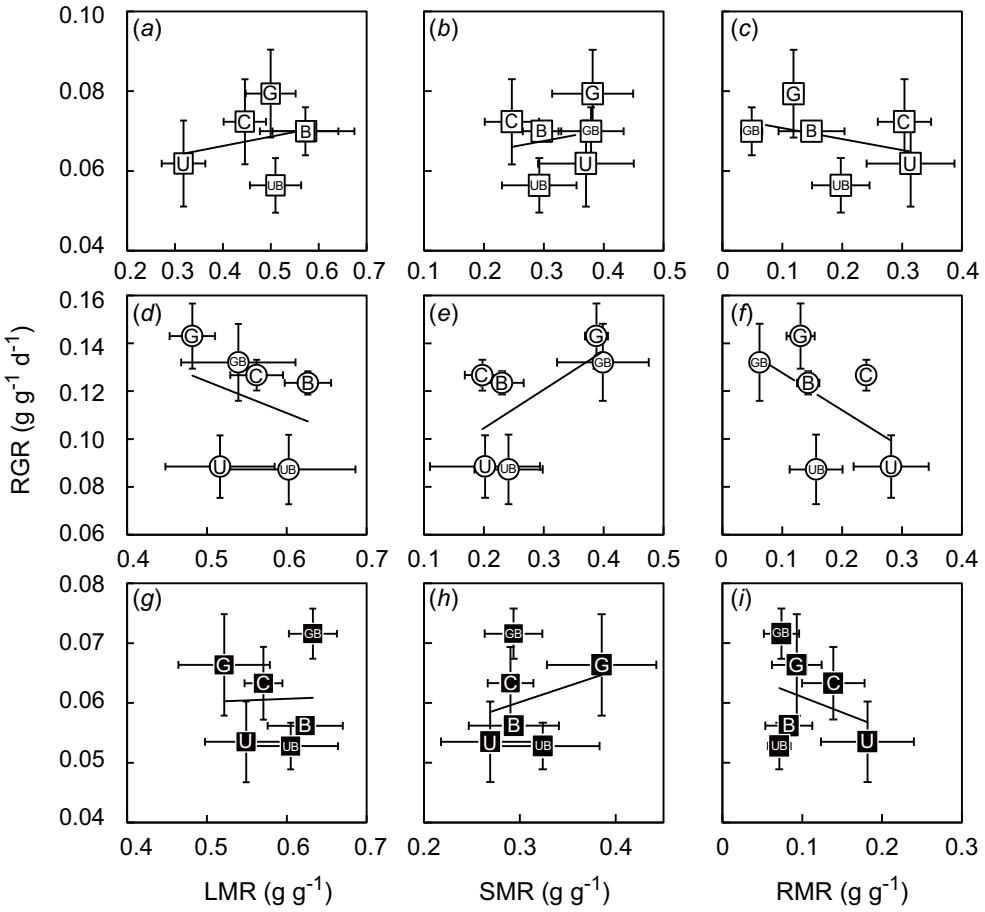

Fig. S3. Relationships between the relative growth rate (RGR) and biomass allocation ratios. RGR is plotted against leaf mass ratio (LMR), stem mass ratio (SMR), and root mass ratio (RMR). Data for seedlings grown in (*a–c*) high light and low nitrogen (HL), (*d–f*) high light and high nitrogen (HH) and (*g–i*) low light and low nitrogen (LL) are plotted. Uppercase letters on the symbols are as shown in Fig. 1. Values of R^2 are 0.08, 0.14 (*a–c*); 0.09, 0.40, 0.28 (*d–f*); 0.00, 0.08, 0.09 (g–i). Solid lines represent regression lines (Values are means ± s.d., n = 4–8.)

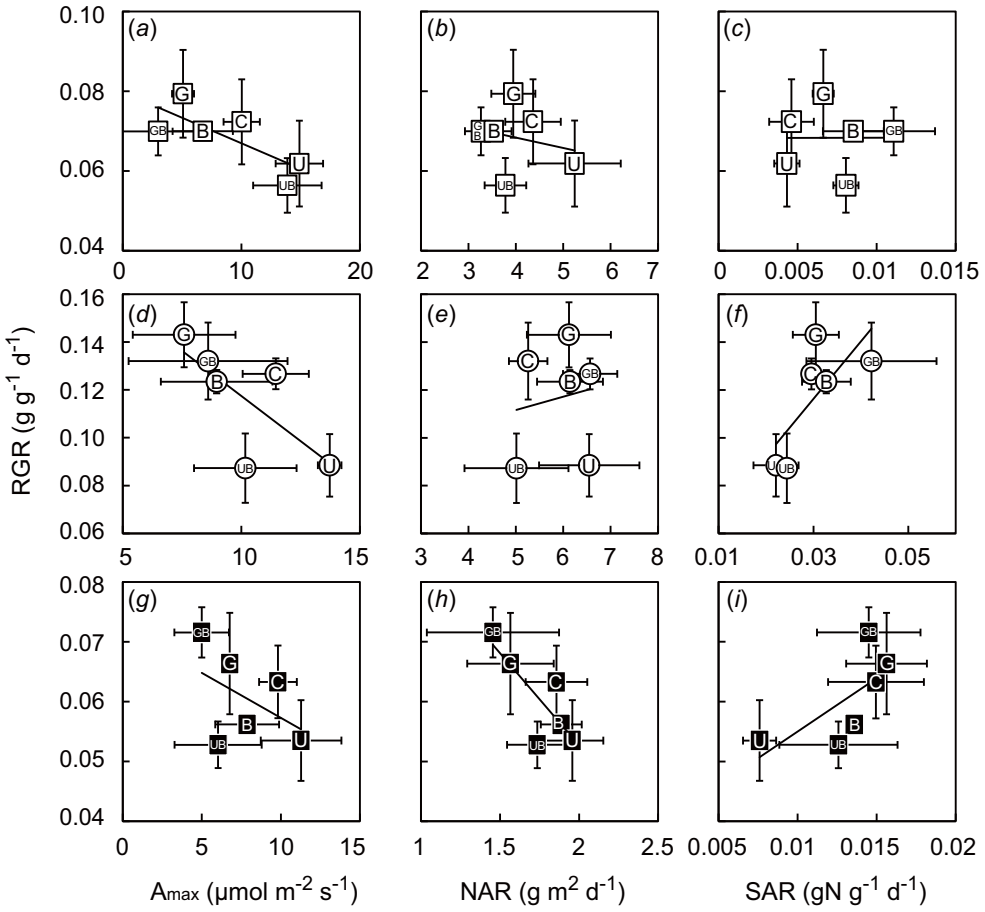

Fig. S4. Relationships between the relative growth rate (RGR) and morphological and physiological traits with lower coefficients of determination (R^2). RGR is plotted against maximum photosynthetic rate (A_{max}), net assimilation rate (NAR), and specific absorption rate (SAR). Data for seedlings grown in (*a–c*) high light and low nitrogen (HL), (*d–f*) high light and high nitrogen (HH) and (*g–i*) low light and low nitrogen (LL) are plotted. Uppercase letters on the symbols are as shown in Fig. 1. Values of R^2 are 0.11, 0.58, 0.05, 0.00 (*a–c*); 0.52, 0.02, 0.53 (*d–f*); 0.22, 0.63, 0.47 (*g–i*). Solid lines represent regression lines (Values are means ± s.d., n = 4–8.)