10.1071/FP24246

Functional Plant Biology

Supplementary Material

Escape of etiolated hypocotyls of cotton (*Gossypium hirsutum*) from the unilateral high intensity blue light after being pulled out from the soil

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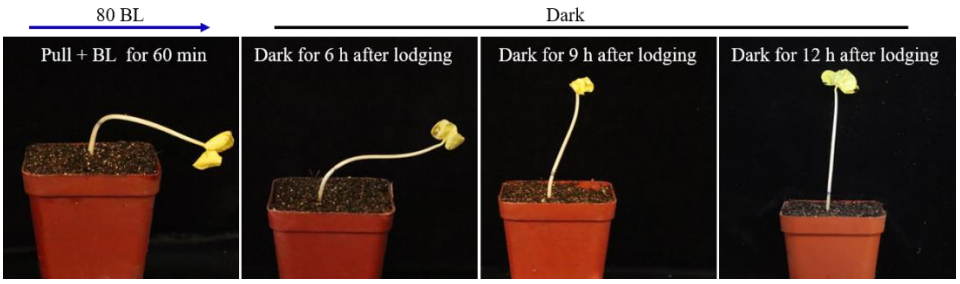
Supplementary Figure：

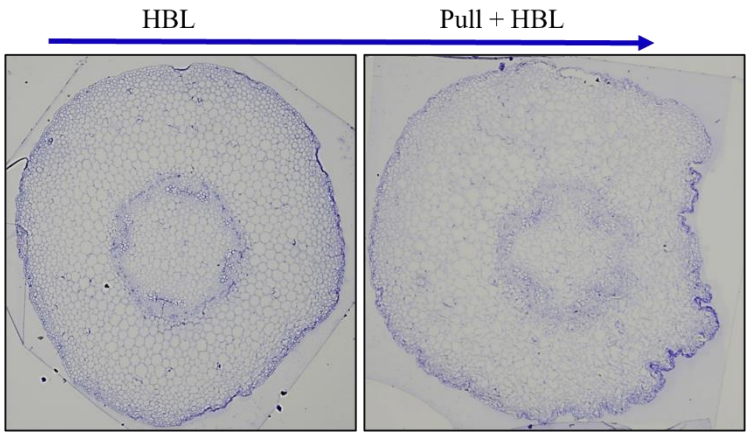
Supplementary Figure S1.



Supplementary Figure S1. Backlit lodged cotton seedlings resumed an upright position after being transferred back to darkness

Phenotype of backlit cotton seedlings was observed after transferring them to darkness for 6, 9, and 12 hours, respectively. Backlit lodged cotton seedlings that pulled out approximately 1.5 cm from soil and irradiated with 80 μmol m^{-2} s^{-1} unilateral blue light for 1 h were used as control.

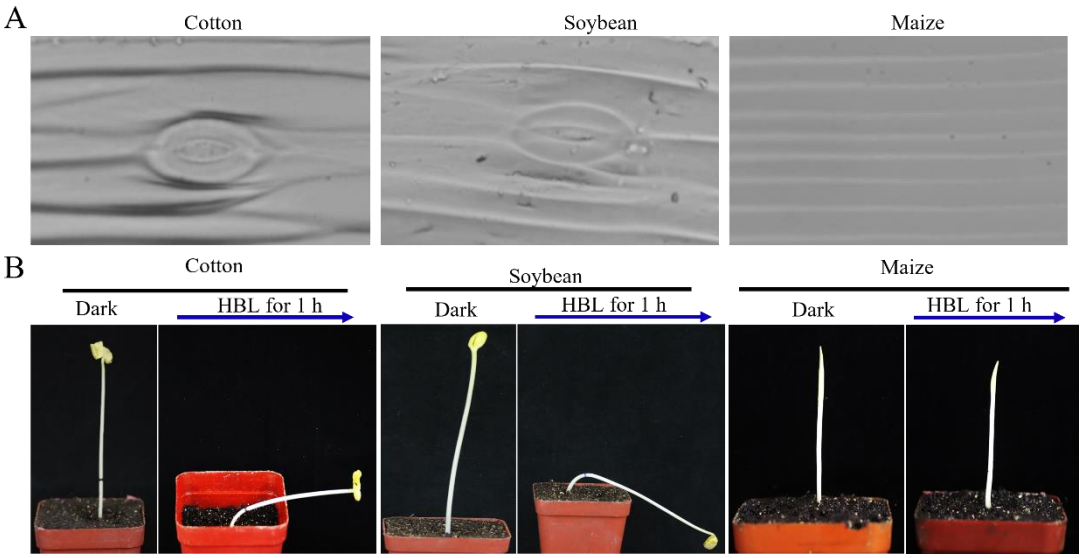
Supplementary Figure S2



Supplementary Figure S2. Effect of high-intensity blue light (HBL) and pulling treatment on cell state in cross-section of etiolated hypocotyls

Cell state of etiolated seedlings either irradiated with high-intensity blue light (HBL) for 1 hours or pulled out approximately 1.5 cm from the soil and irradiated with HBL for 1 hours. The pulled section or the part similar to the pulled section were transverse cut and prepared as a temporary slide. The blue arrow indicates the direction of the blue light. HBL (80 μmol m^{-2} s^{-1}) refers to high-intensity blue light.

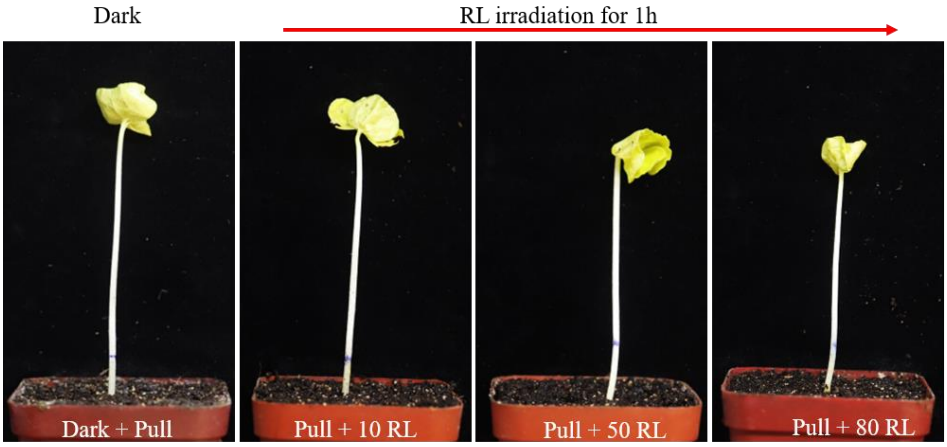
Supplementary Figure S3.



Supplementary Figure S3. Phenotype of stomata and the backlit lodging in etiolated cotton, soybean, and maize.

(A) Stomata phenotypes in the hypocotyls of etiolated cotton, soybean, and maize. (B) The backlit lodging phenotype of etiolated cotton, soybean, and maize seedlings that pulled out approximately 1.5 cm from the soil and irradiated with unilateral high-intensity blue light (HBL) for 1 hour. Etiolated cotton, soybean and maize seedlings that pulled out approximately 1.5 cm from soil and be left in darkness were used as control.

Supplementary Figure S4.



Supplementary Figure S4. Red light (RL) did not induce the backlit lodging phenotype in etiolated cotton seedlings.

Phenotype of seven-day-old etiolated cotton seedlings pulled out approximately 1.5 cm from the soil and irradiated with different intensities of unilateral red light (10, 50, and 80 μmol m^{-2} s^{-1}) for 1 hour. Seven-day-old etiolated cotton seedlings pulled out approximately 1.5 cm from the soil and left in darkness were used as control.