



**Figure S1.** Frequency distribution of 149 F<sub>2</sub> (S-91 × S-297) lines for plant phenological and morphological traits (green): (A) flowering date, (B) flowering node, (C) node number, (D) internode length, (E) secondary branches number, and (F) plant height. Capsule morphology traits (dark green): (G) capsule length, (H) capsule width, (I) capsule dehiscence index, (J) seed length, (K) seed width, (L) seed perimeter, and (M) seed area. Seed quality traits (orange): (N) thousand seed weight, and (O) seed color. Seed concentrations micronutrients (red): (P) zinc, (Q) iron, (R) copper, (S) manganese, and macronutrients (burgundy): (T) calcium, (U) magnesium, (V) potassium, (W) phosphorus and (X) sulfur. S-91 and S-297 parental lines are indicated above with arrows.