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Version: Supplemental Material

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**Article:**

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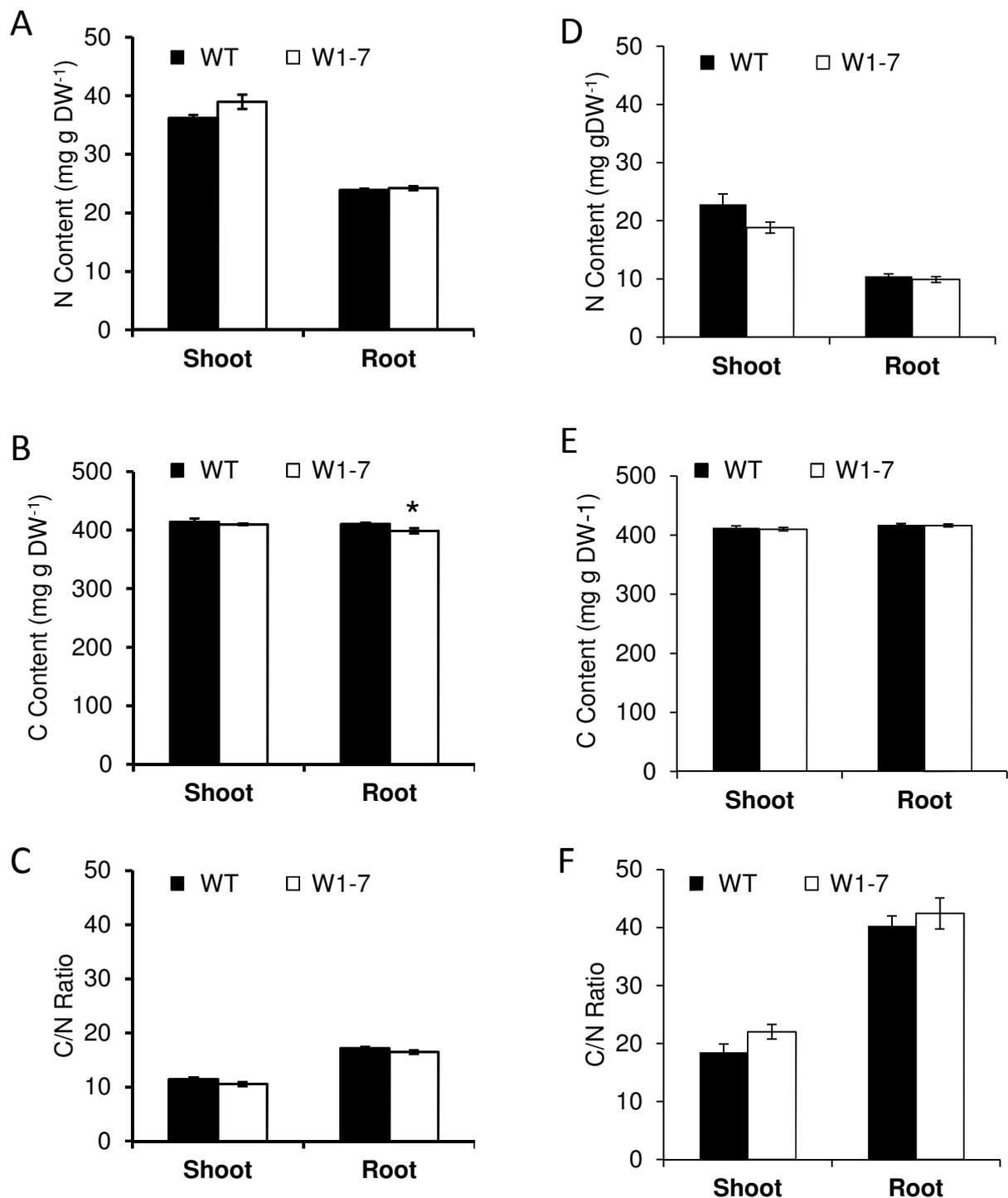
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**Supplemental Figure S1** Comparisons of shoot and root carbon and nitrogen contents in wild-type and WHIRLY-1 deficient W1-7 seedlings grown for 15 days under either optimal (A-C) or limiting nitrogen (D-F) conditions. Data are represented as mean  $\pm$  SE, values ( $n = 5$ ) and indicate total nitrogen (A, D), total carbon (B, E) and carbon to nitrogen ratios (C, F). Significant differences between lines were estimated using the students T-test as indicated by asterisks ( $P < 0.05$ ).

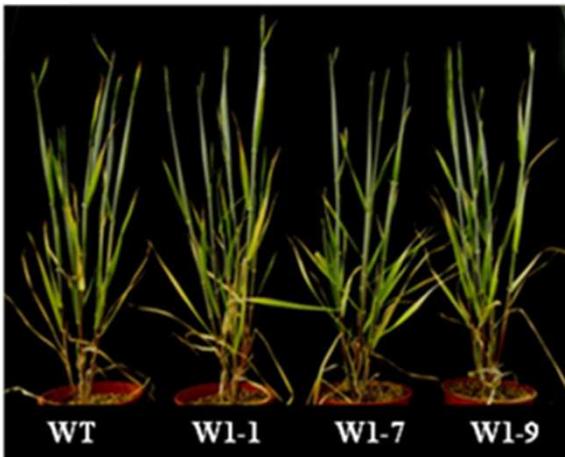
A



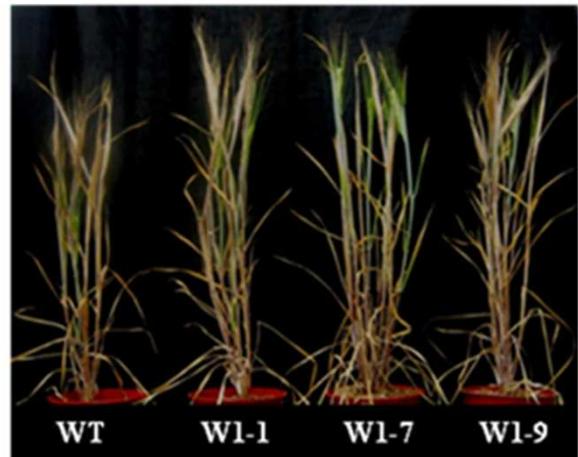
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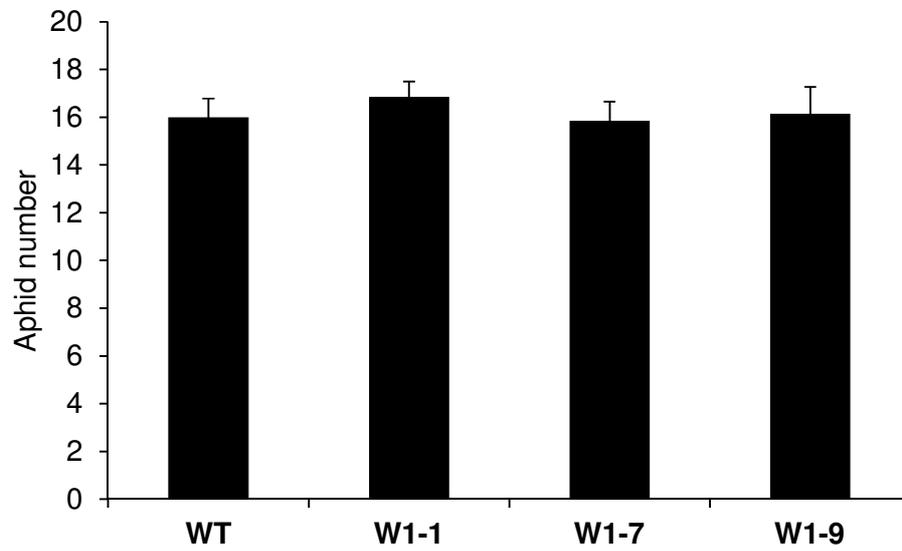
C



D



**Supplemental Figure S2** Appearance of wild-type and WHIRLY1-deficient barley lines grown under optimal nitrogen for 18 (A), 27 (B), 81 (C) and 130 (D) days.



**Supplemental Figure S3** Aphid fecundity on wild-type and WHIRLY1-deficient barley lines. Data indicate the number of aphids recovered from whole plants 15 days after the transfer of a single one day old nymph of *Myzus persicae* and are represented as mean  $\pm$  SE, n = 7.