

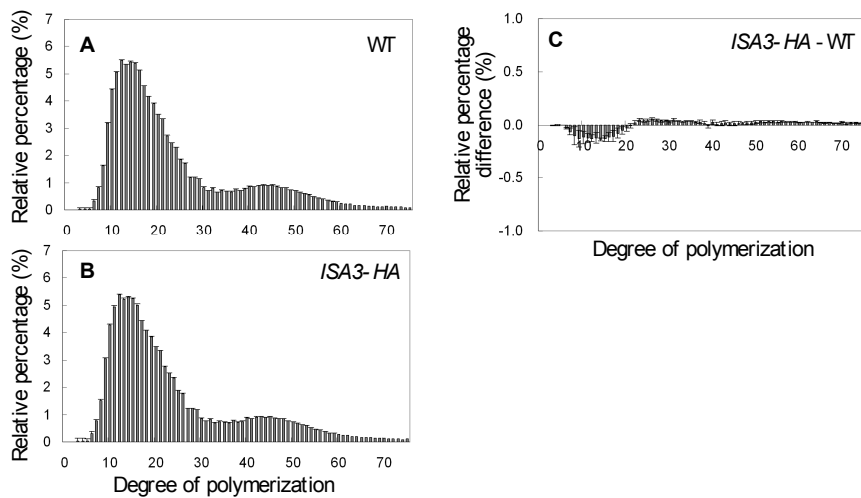
Supplementary Figure 1. Chain length distributions of amylopectins extracted from the leaves of wild-type and *isa3* plants.

Starch was extracted at the end of the day (ED) or at the end of the night (EN) from the flag leaves of three individual plants grown in the field. The wild-type leaf did not contain sufficient amount of starch at the end of the night for the analysis of chain length distributions.

(A-C) Relative percentage of the chain length of amylopectins purified from the flag leaves.

(D) Difference plots derived by subtracting the relative percentage values of the wild-type ED (A) from those of *isa3* ED (B).

(E) Difference plots derived by subtracting the relative percentage values of the *isa3* ED (B) from those of the *isa3* EN (C).



Supplementary Figure 2. Chain length profiles of transgenic plants expressing *ISA3-HA* in the endosperm.

(A, B) Chain length profiles of the amylopectins purified from the seeds of wild-type (WT) and transformant expressing *ISA3-HA*. Starch granules were purified individually from three mature seeds. The means and S.E. of three replicates are shown.

(C) Difference plots derived by subtracting the relative percentage values of the wild type (A) from those of *ISA3-HA* (B).