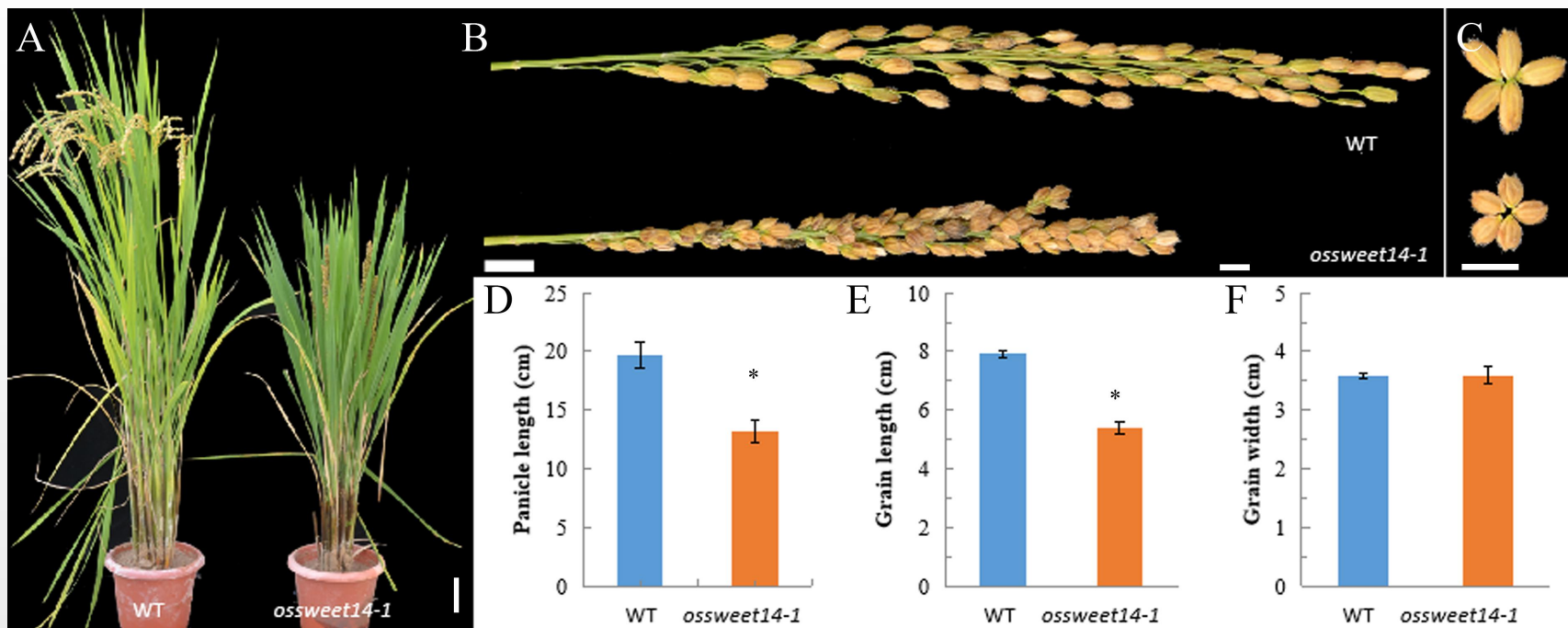


Supplemental Figure 1. Characterization of the *OsDOF11* mutants at the seedling stage under multiple N contents of Yoshida medium with 3% sucrose.

(A-H). Phenotypes of the *osdof11-1* mutant, *OsDOF11-RNAi* plants, and WT under multiple N concentrations of Yoshida medium. (A) Picture of seedling plants at 7 days after germination; (B) Shoot length; (C) Root length; (D) Root number; (E) Ratio of shoot to root length; (F) Fresh weight; (G) Dry weight, (H) Ratio of fresh weight to dry weight; (I) N concentration. 0 N: Yoshida medium without nitrogen, 0.1 N: Yoshida medium with 10% nitrogen, and normal medium: Yoshida medium with a normal content of nitrogen. Scale bar = 1 cm. Error bars represent SE of at least five samples. * $P < 0.05$.



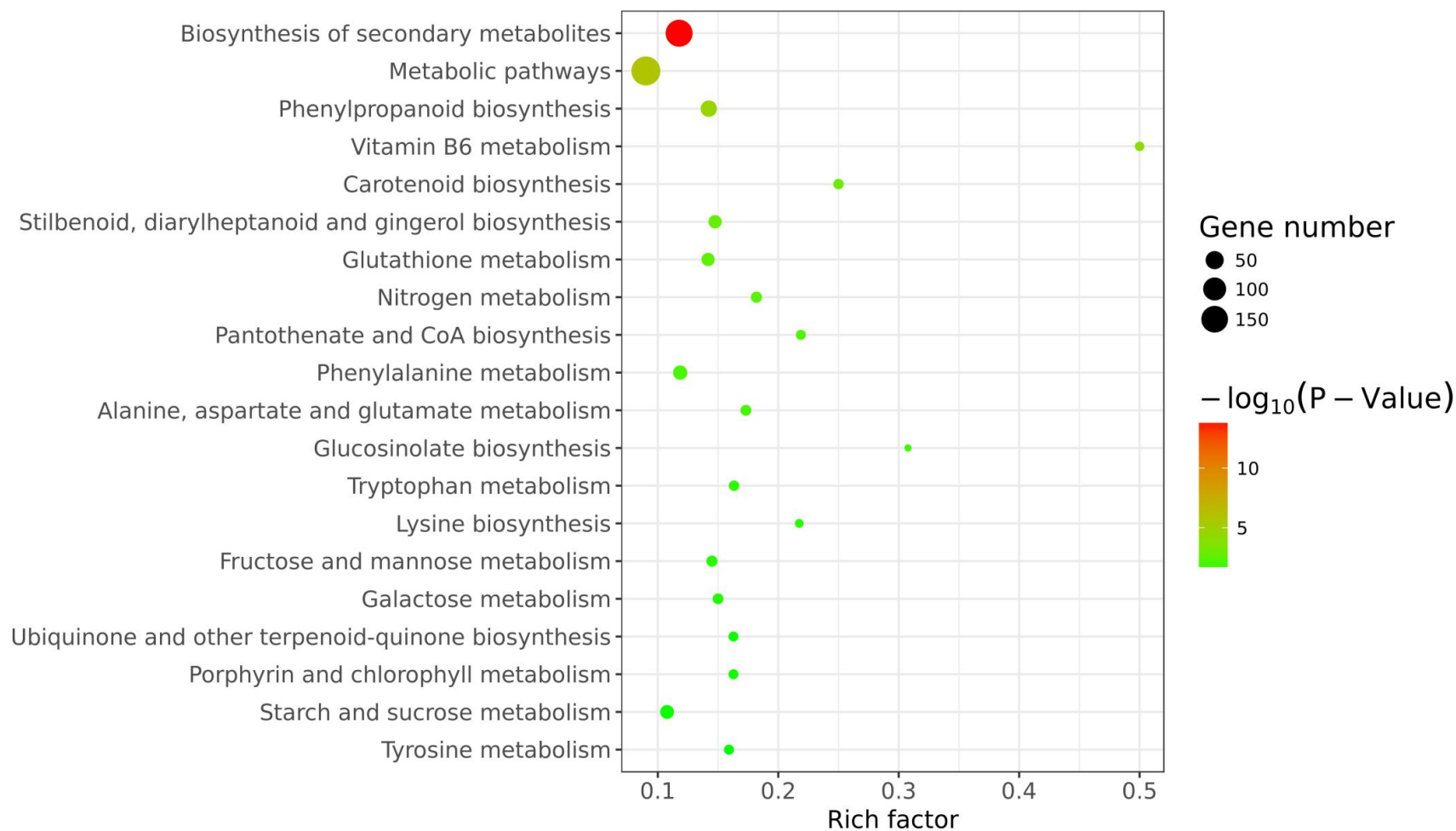
Supplemental Figure 2. Characterization of the *OsSWEET14* Mutant.

(A–F) Phenotypes of the *OsSWEET14* mutant and WT. (C) 110-day-old plants grown in the greenhouse; (B–F) Panicle size and seed size.

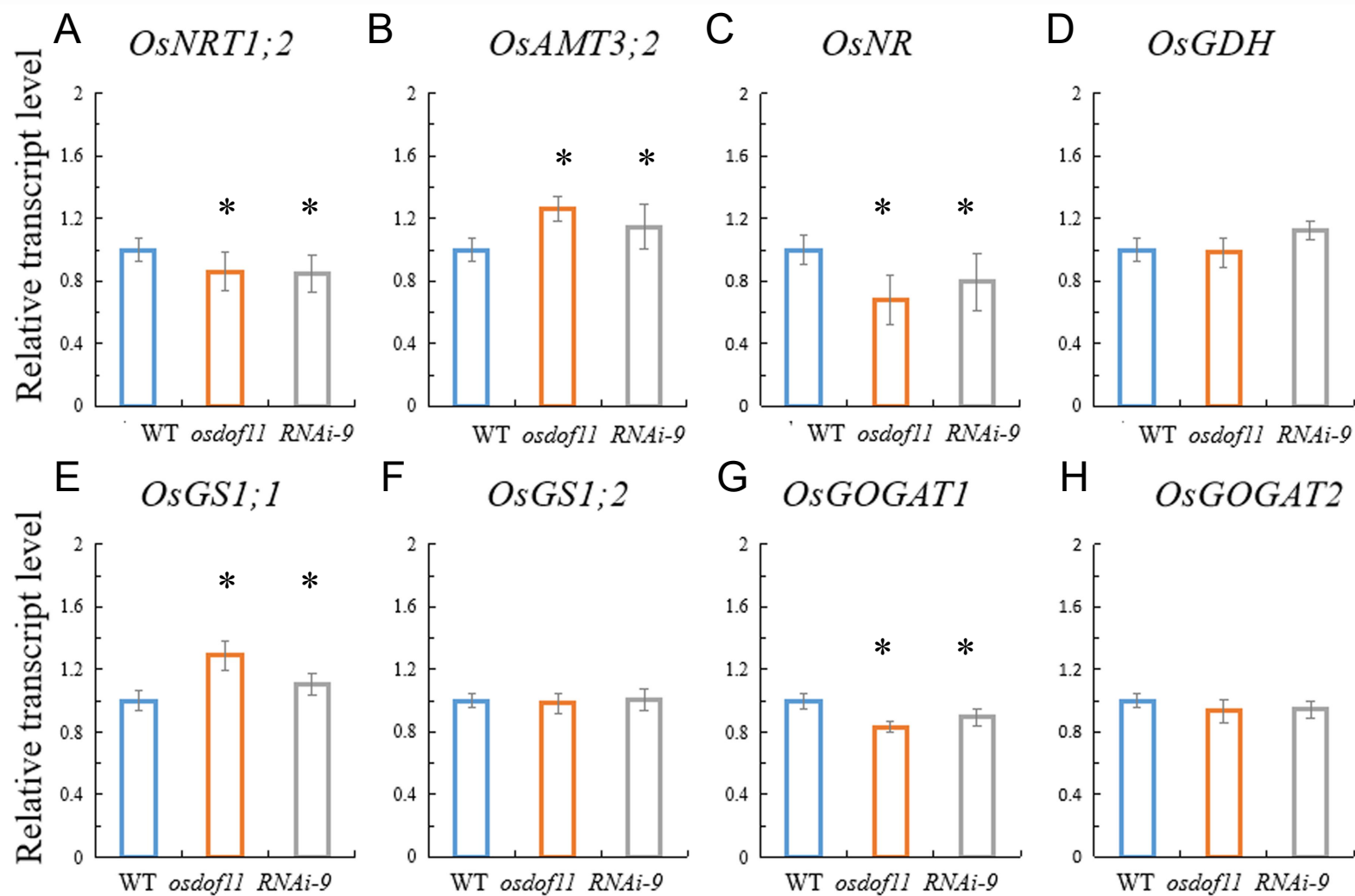
Scale bar, A: 10 cm. B–C: 1 cm Error bars represent SE of at least five samples. * $P < 0.05$.

Supplemental Figure 3. Top 20 of pathway enrichment.

Top 20 of Pathway enrichment

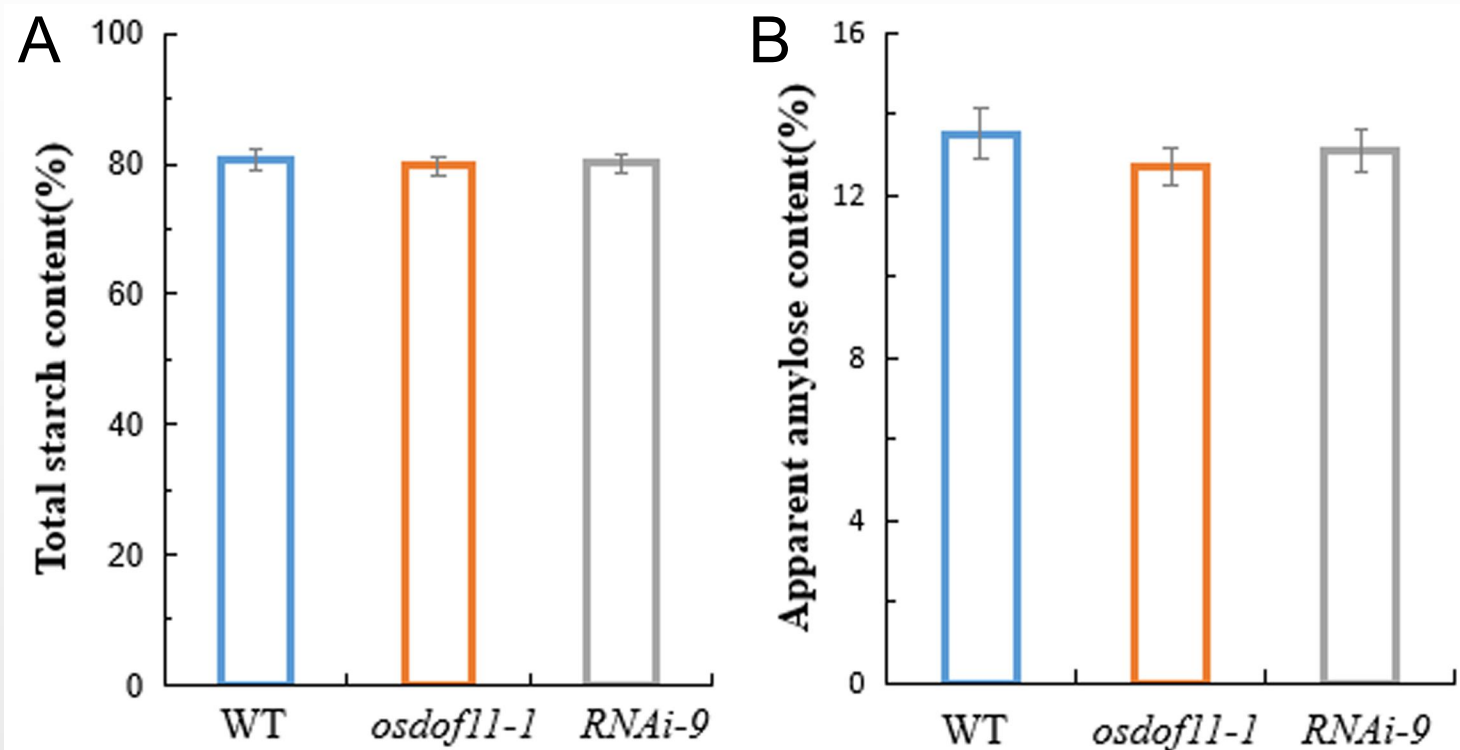


Supplemental Figure 3. Top 20 of pathway enrichment.



Supplemental Figure 4. Expression levels of N assimilation genes relative to *OsUBQ5* evaluated at the flowering stage in the leaf blade.

Transcript levels of *OsNRT1;2* (A); *OsAMT3;2* (B); *OsNR* (C); *OsGDH* (D); *OsGS1;1* (E); *OsGS1;2* (F); *OsGOGAT1* (G); *OsGOGAT2* (H). Each data point represents the mean (\pm SE) from at least four different plants. *, P < 0.05.



Supplemental Figure 5. Sugar contents in *OsDOF11* mutant seeds.

(A) Total starch content based on dry weight; (B) apparent amylose content based on dry weight. Each data point represents the mean (\pm SE) from at least four different samples..