**Figure S1.** **The effect of drought and fertilization on stomatal conductance and photosynthesis.** Three genotypes (RAC875, Gladius and Mace) were grown and the following components measured at 52 hours after re-watering (a) stomatal conductance under watered and (b) droughted condition, (c) photosynthetic rate under watered and (d) drought condition (n = 6, mean ± SEM). Statistical significance was determined by Two-way ANOVA with Bonferroni post-hoc analysis (p < 0.05). Graphs without letters indicates that means were not significantly different.



**Figure S2. The effect of drought and fertilization on the fresh weight (FW) and dry weight (DW) of the flag leaf.** The flag leaf of three wheat genotypes (RAC875, Gladius and Mace) at 70 days after sowing was harvested and used for fresh and dry weight analysis (n = 6, mean ± SEM). Statistical significance within a graph is indicated by different letters determined by Two-way ANOVA with Bonferroni post-hoc analysis (p < 0.05). Graphs without letters indicates that means were not significantly different.



**Figure S3. The effect of drought and fertilization on leaf carbon and nitrogen concentration.** The concentration of (a,b) carbon and (c,d) nitrogen in the flag leaf of three wheat genotypes (RAC875, Gladius and Mace) at 70 days after sowing (n = 6, mean ± SEM). Statistical significance was determined by Two-way ANOVA with Bonferroni post-hoc analysis (p < 0.05). Graphs without letters indicates that means were not significantly different.

