**Supplementary File 1**

**Table of *emmeans* contrasts, within genotypes from Figure 3-figure supplement 6α**

**Model Contrast Trait t-value p-value**

LME EV in 0% irMPK4(n = 40-44) –

EV in 50% irMPK4(n = 21-22) Rosette Diameter -2.786 **0.0268**

Stalk Height -2.644 **0.0438**

Shoot Biomass -3.859 **0.0009**

Water Content -2.130 0.1475

Total Fitness Correlates -3.825 **0.0010**

LME irMPK4 in 100% irMPK4(n = 31-32) –

irMPK4 in 50% irMPK4(n = 22) Rosette Diameter 3.898 **0.0006**

Stalk Height 1.387 0.5091

Shoot Biomass 5.359 **<.0001**

Water Content 3.819 **0.0010**

Total Fitness Correlates 3.794 **0.0011**

αextracted from linear-mixed effect (LME) models with significant ANCOVA results