



**Figure S1. Predicted shoot growth trajectories from the WSI-Gompertz model with varying model parameters.** Model parameters estimates and soil water content in control and drought conditions were obtained for a representative accession. Shoot growth trajectories were generated using the WSI-Gompertz model and soil water content measurements from the second experiment. Panels A to C show predicted shoot growth trajectories based on model parameter estimates and soil water content in control conditions, while panels D-F show predictions based on parameter estimates and environmental covariates in drought conditions.