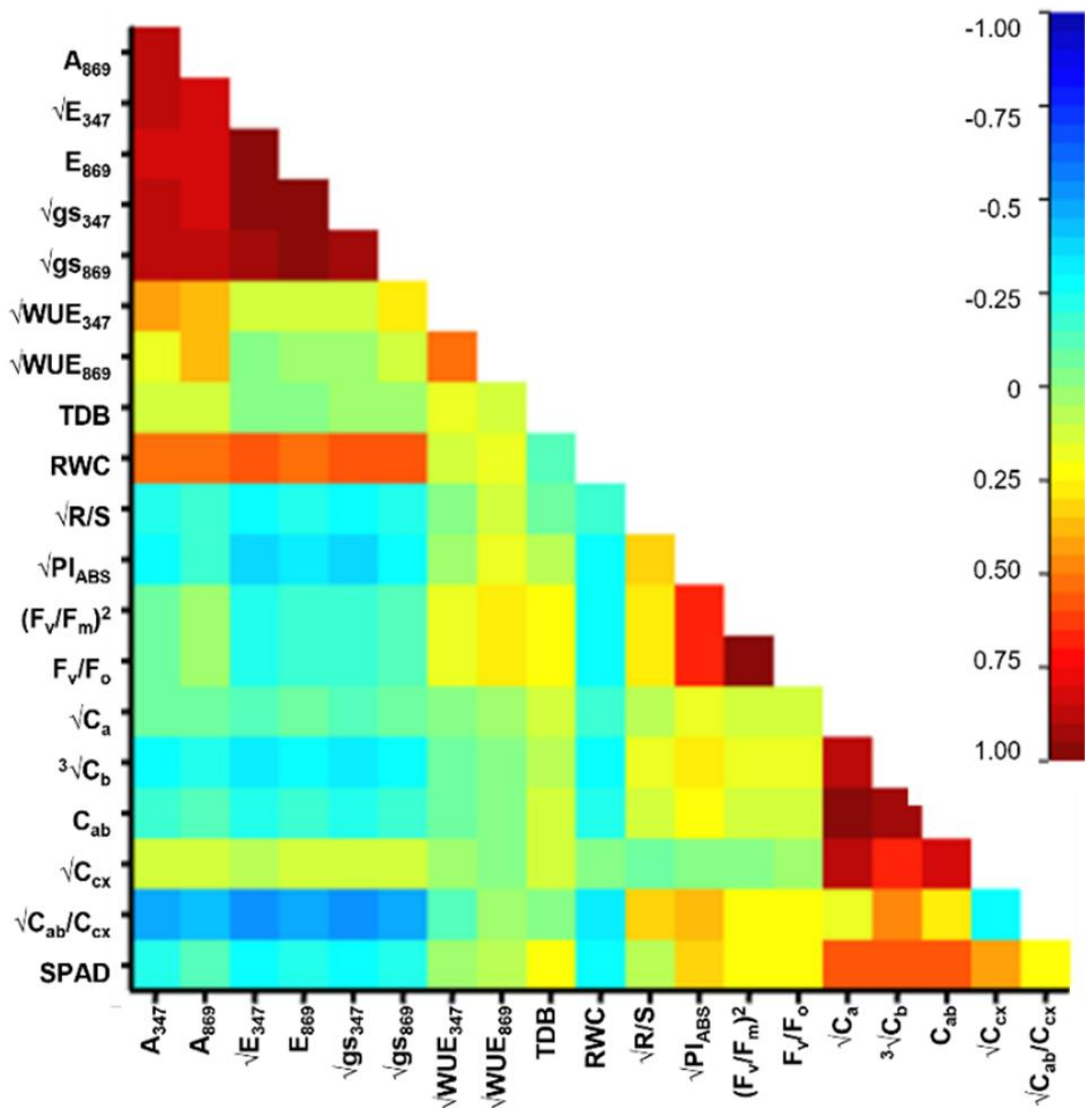




Supplementary Figure S1 – Correlation matrix heatmap with Pearson coefficients based on Best Linear Unbiased Estimators for twenty phenotypic traits measured in 194 grass pea accessions across three distinct water treatments (i.e. Well-watered, Water deficit, and Waterlogging), colored by a spectrum from blue (correlation = -1.0) to red (correlation = 1.0). A₃₄₇: CO₂ assimilation rate at growth light intensity; A₈₆₉: CO₂ assimilation rate at Amax light intensity; E₃₄₇: transpiration rate at growth light intensity; E₈₆₉: transpiration rate at Amax light intensity; gs₃₄₇: stomatal conductance at growth light intensity; gs₈₆₉: stomatal conductance at Amax light intensity; WUE₃₄₇: instantaneous water use efficiency at growth light intensity; WUE₈₆₉: instantaneous water use efficiency at Amax light intensity; TDB: total dry biomass; RWC: leaf relative water content; R/S: root to shoot ratio (dry biomasses); PI_{ABS}: performance index on absorbance basis; F_v/F_m: maximum quantum yield of photosystem II; F_v/F_o: actual quantum yield of photosystem II; C_a: chlorophyll a content (spectrophotometrically measured); C_b: chlorophyll b content (spectrophotometrically measured); C_{ab}: chlorophylls a+b content (spectrophotometrically measured); C_{cx}: xanthophyll + carotene content (spectrophotometrically measured); C_{ab}/C_{cx}: greenness ratio based on spectrophotometrically measured pigment contents; SPAD: greenness index given by SPAD-502 instrument.