The file ‘VWC\_environment\_data.csv’ contains data for soil volumetric water content (soil H2O%v/v) and the environmental variables that influence soil moisture responses to elevated CO2. The columns contained in this spreadsheet are:

**A: Year**

**B: Air T Planting thru peak LAI:** Average air temperature (°C) during the period of canopy development (from planting date through the date of peak leaf area index (LAI))

**C: LAI % change at peak:** Percent effect of elevated [CO2] on LAI on the date of peak LAI

**D: plantingthrupeakLAIprecip:** Precipitation (mm) during the period of canopy development (from planting date through the date of peak LAI)

**E: peakLAIave70:** % Effect of elevated [CO2] on soil moisture during the period of canopy development (from planting date through the date of peak LAI)

**F: ccave70:** % Effect of elevated [CO2] on soil moisture during the period when the canopy was closed (LAI>3)

**G: dailymaxdeltacanT:** seasonal average increase in daily maximum canopy surface

temperature induced by elevated [CO2] treatment during the period of canopy closure (LAI>3)

**H: gs\_closedcan:** % effect of elevated [CO2] on stomatal conductance during the period when the canopy was closed (LAI>3)

In the file ‘Fig\_3\_soil\_moisture\_regressions.sas’, linear regression and multiple regression are used to explore the relationship of environmental variables and canopy parameters on soil moisture response to elevated [CO2]. Regressions are plotted in Fig. 3:

Figure 3A: Regresses column F against column C

Figure 3B: Regresses column F against column G

Figure 3C: Multiple regression of column E against columns B and D