The dataset of crop leaf chlorophyll content observed at our sample regions, including the soil moisture control experimental field at Daman, the EC plots, the super-station, and Shiqiao sample plots at Wuxing village in Zhangye city.

The sketch and experiment details of the soil moisture control experimental field at Daman has been described in the excel file called “Description of soil moisture control experimental field at Daman county”.

**Special explanation**:

The unit of “Crop leaf chlorophyll content” is dimensionless or SPAD.

1. The description of Excel 1 (“Crop leaf chlorophyll content -EC sample plot”)

The first line of the file depicts the rules of how to choose sample crop and the second row of that is mainly the sample sites named after the name of Eddy Covariance (EC), just like EC1, EC2…

After each EC site, the crop plant structure and the crop leaf chlorophyll content observed from the first leaf of the crop sample to the twelfth and more at the EC site were collected in the file.

1. The description of Excel 2 (“Crop leaf chlorophyll content -shiqiao”)

In the excel file, the first line is the information about crop line spacing and plant spacing; and the second row is the name of each quadrat and the third line is the name of each investigation items, including the crop leaf chlorophyll content of each leaf of the sample.

1. The description of Excel 3 (“Crop leaf chlorophyll content - soil moisture control experimental field at Daman county”)

The investigation items mainly contain the observation date, crop sample number and the crop leaf chlorophyll content of each leaf at each field parcel number within each sample area.

1. The description of Excel 4 (“Crop leaf chlorophyll content -superstation”)

The Excel file contains the description of the crop line spacing and plant spacing, the observation date and the sample number with corresponding crop leaf chlorophyll content measured from some leaves of each crop sample.