**Data wrangling in R – 50 pts**

This assignment will let you practice the functions presented in the data wrangling module.

For this assignment you will use the same microbiome dataset we used in class. Please submit this assignment as a rendered .rmd file either word or html and push to github **(10 pts)**

Each question below is worth 5 points.

Q1. Select the following columns.

OTU, SampleID, Abundance, Crop, Compartment, DateSampled, GrowthStage, Treatment, Rep, Fungicide, Kingdom, Phylum, Class, Order, Family, Genus, Species, Taxonomy

Q2. Calculate the mean percent relative abundance across all OTUs by compartment using the pipe operator.

Q3. Calculate the mean percent relative abundance across all OTUs by compartment and fungicide using the pipe operator.

Q4. Restrict the previous analysis to just the fungal class Dothideomycetes.

Q5. Now do the same analysis but for Orders in the genus Dothideomycetes.

Q6. Calculate the standard error for each mean in Q5.

Q7. Select the columns Order, Compartment, Fungicide and Mean from the output of Q6 and Pivot the dataset to wide format so you have Compartment as column headers

Q8. Recreate this plot using your dataset in Q7.

