Prac #1

1. Download the seed orchard data.   
   Information on this experiment: A field trial was planted to compare a seed lot (i.e. a batch of seeds) derived from a seed orchard (SO) with one collected from a routine plantation (P). Eight plots were planted for each seed lot, and these were thinned when the young trees were seven years of age. Tree diameters at breast height (dbh) were measured at 15 years and plot means calculated.  
   *Visualise the data.*

*Compare the two means using a statistical model, and draw some conclusions with respect to the efficacy of producing seeds using the seed orchard.*

1. Download the pea data.   
   Information on this experiment: Peas were grown under 5 different growth media which differed in the type of sugar used. The different types of sugar (including a no sugar control) were: control, glucose, fructose, g&f and sucrose. The experimenter recorded the lengths of pea sections. Ten pea section lengths were recorded per treatment.  
   *Visualise the data.*

*Compare the mean pea lengths under the different media using a statistical model, and a post-hoc analysis.*

*Draw residual plots and assess the goodness of fit of the model.*

*Draw some conclusions with respect to differences in pea plant growth between growth media.*

1. Describe an experiment that you have done, or might do, that uses one experimental factor. Include in your description the research question, the response variable of interest, the experimental factor and the number of levels in the experimental factor. Produce a mock (or real) analysis, with graphics and an interpretation of the results.