Agronomy 526 Homework

Due: 1/20/22

1. The data in the lab01.xls file are from the ISU alfalfa variety trial that was conducted at the Rhodes Research Farm in Marshall County during 1997 and 1998. The plots were established in 1996. Yield data are in lb dry matter / acre.

   a. Convert the yield data to kg per ha.

   b. Create a summary table for yield (kg / ha) in which the first column heading is entry and the remaining headings are cuttings 1, 2, 3, and 4 of 1997, and cuttings 1, 2, 3, and 4 of 1998, respectively. Use the pivot table feature of Excel to accomplish this.

   c. Create another summary table that presents the yield (kg / ha) of each entry by cutting averaged over years. Column headings for this table should be entry and cuttings 1, 2, 3, and 4.

   d. Make a line graph of yield (kg / ha) by cutting averaged over all varieties. Your y-axis should be yield and x-axis cutting. This graph should have only four points.

   e. What proportion of total seasonal yield did the first cutting represent for the alfalfa varieties evaluated over the two years in this study?

   f. Create another summary table that presents total yield (kg / ha) of each entry by year. Column headings for this table should be entry, 1997, and 1998.

   g. Create a graph of the totals calculated in exercise f.