## 3 Coffee for your plants?

A friend of yours is interested in knowing whether adding coffee grounds to potting soil helps plants grow.

- a) Describe a randomized comparative experiment that attempts to find out. Be brief but specific, and be sure to answer the following in your description:
  - What are your **explanatory** and **response** variables?
  - Identify which variables are **categorical** and which are **quantitative**.
  - What makes your study an **experiment** and not an **observational study**?

- b) As part of your preliminary analysis of the data, you are asked to present a graphical summary of the data.
  - What type of plot will you make?
  - Write down the R command to make this plot.
  - Sketch what it might look like if coffee has a large effect on plant growth.