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Project 2 Methods

Five hundred milliliters of deionized water was put into two containers and a lid with a hole cut in the lid was placed on each container. Two wicks were placed in the water and the top half of the wicks were laid across the top of the container. Pots divided into four sections with holes in the bottom of each section were used. Diamond-shaped wicks were inserted into the bottom of each pot. Each pot section was filled with vermiculite about three fourths of the way up in each pot section. Two *Brassica rapa* seeds were placed in each pot section. Using a pipet, the seeds in each pot section were saturated with deionized water. Ammonium nitrate with a concentration of 20 grams per liter was added to each container. Zero milliliters of ammonium nitrate was added to the first container and 3 milliliters of ammonium nitrate was added to the second container. The plant seeds received 24 hours of light every day for three weeks. After three weeks, measurements of leaf area were collected.

Results

The plants that received no nitrogen had a range of leaf area from 0.7 cm to 1.0 cm compared to the plants that received available nitrogen that had a range of plant height from 1.2 cm to 1.6 cm (Figure 1). The plants that received no nitrogen had an average leaf area of 0.825 cm which is smaller than the plants that received available nitrogen and had an average leaf area of 1.4 cm (Table 1).

Table 1. The mean, minimum, and maximum leaf areas of the *Brassica Rapa* plants from the available nitrogen (Y) group and no nitrogen (N) group

	Mean	Minimum	Maximum
Y	1.4	1.2	1.6
N	0.825	0.7	1.0

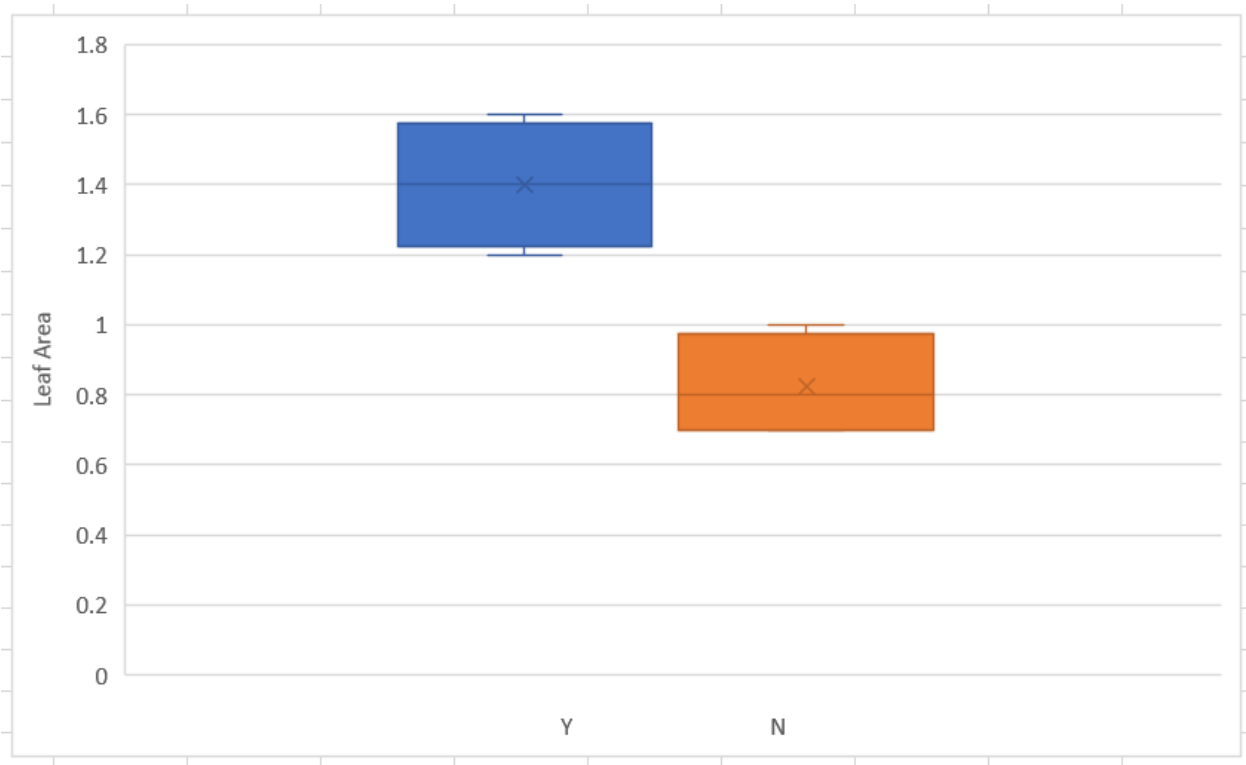

Figure 1. Box and whisker plot displaying the leaf area of the *Brassica rapa* plants that received no nitrogen (N) and available nitrogen (Y). The boxes represent the first and third quartiles, the "x" mark represents the median, and the whiskers represent the range.