An expensive new type of fertilizer is being tested on a plot of land at Schrute Farms to see whether it increases the amount of beets produced. The mean number of pounds of beets produced on this plot with the old fertilizer is 400 pounds. Dwight believes that the mean yield will increase with the new fertilizer.

1. Define the **target parameter** in this scenario.

2. Determine the **null and alternative hypotheses** in this problem.

3. Is this a left-tailed, right-tailed, or two-tailed test?

4. Describe a **Type I error** in context of the problem.

5. What might be a **consequence** of committing a Type I error?

6. Describe a **Type II error** in context of the problem.

7. What might be a **consequence** of committing a Type II error?

8. Which of these types of error might we want to minimize? Justify your answer.