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Effects of Lagoon Water on Bean Plants

The purpose of this investigation was to test if lagoon water had any effect on the germination and growth of bean plants. I hypothesized that if I watered bean seeds with lagoon water, they would germinate and grow at a faster rate than those watered with tap water. The experiment involved setting up two sets of planting trays. One tray contained a control group of bean seeds that was watered with tap water, the other tray contained the test group that was watered with lagoon water. Lagoon water is the water obtained from feedlot and dairy runoff and contains a large amount of nutrients, including nitrogen and phosphorus. Both trays were watered daily, and data collected included daily measurements of germination rate and every other day a collection of plant height and leaf count. The data collected did not support my original hypothesis. Although germination did appear to be slightly increased by lagoon water, total plant height and leaf count was slightly higher in the control group. These findings lead me to believe that in the initial growth period of a bean plant's life, the amount of nutrients available to the plant in the potting soil and those provided by the tap water is adequate for its growth. This project could be useful to people in the real world for many reasons. If a farmer were planting a crop and could use lagoon water instead of tap water, there would be no advantage since my plants grew about the same.