CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY

Name(s)

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Project Number

J1524

Project Title

How Does the Level of Salinity with which a Plant Is Watered, Affect Its Growth?

Abstract

Objectives/Goals

Our goal was to see if 50 day artichoke plants would grow with different amounts of salinity in our irrigation.

Methods/Materials

In our project, we started off with making our different percents of salt in water. Next, we watered the plants over a three week period. After, the two of us measured and recorded our data.

Materials: 2 planting trays; 10.5 milliliters of easy dissolving sea salt (refill when needed); 390.5 milliliters of fresh water/tap water (refill when needed); 135 artichoke plants, 50 day old, irrigated with fresh water; 5 spray bottles; Potting soil; 100mL cylinder; 1 Ruler; 1 Jewelers scale.

Results

After measuering our plants and anilizing our data, we found out that as we increased the silinity in our irragation system, the plants decreased in size and lenghth. Also , the two of us found the saltier the water, the heavier the plant.

Goals: In our project, the goal was to see how salt water would affect a plants.

Conclusions/Discussion

After conducting our experiment over the three-week period, we found out (from our four graphs) that the healthiest artichokes plants were in the groups watered with the zero and one percent salinity liquids. Our results were different from our original hypothesis, because we thought that the group we used fresh water on would produce the healthiest, strongest, heaviest, and longest plants. Also, we thought that artichoke plants in groups watered with 2%, 3%, and 3.5% liquids would grow weaker and lighter than the ones watered with fresh water. Surprisingly those groups died within two weeks, and the plants weighting the least were in the fresh water group (according to graph one)! Now we know that plants grown with salty water, can grow heavier. Adding a little salt into the water makes it have an electrical current that makes the plant receive nutrition easier. But too much salt can kill the plant!

Summary Statement

In our project we grew 50 day old artichoke plants over a three week period, with different consertrtuion of salt water.

Help Received

Sasha's dad helped with the artichoke plants and Alexis' dad helped with the picture frames