CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY

Name(s)
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Project Number
J1409

Project Title
The Effects of Human Vitamins and Dietary Supplements on the Growth of Parsley Plants

Abstract

Objectives/Goals
The objective was to determine what effects, if any, the human vitamins and dietary supplements calcium, iron, vitamin C, and vitamin D have on the growth of parsley plants (Petroselinum crispum).

Methods/Materials
15 parsley plants were watered once per day for 14 days (2 weeks). 3 plants were "calcium plants," 3 plants were "iron plants," 3 plants were "vitamin C plants," 3 plants were "vitamin D plants," and 3 plants were watered with only water (the control group). Every day, each plant was watered with 100 ml of water. In their water, each plant was given the respective vitamin/dietary supplement (if any). This vitamin/dietary supplement was dissolved to the greatest extent possible. For example, each vitamin C plant was given 100 ml of water with a vitamin C tablet dissolved in the water every day. The quantities of the vitamins/dietary supplements were as follows: 600 mg tablets of calcium, 65 mg tablets of iron, 1000 mg tablets of vitamin C, 400 I.U. tablets of vitamin
D.

Results
According to the plant height data, the calcium and vitamin D plants outperformed (grew more than) the control group (the water plants). The vitamin C and iron plants still grew, but they both grew less than the water plants. According to plant mass data, calcium, vitamin C, and vitamin D outperformed water while iron grew less than water. According to visual observations, the vitamin D plants performed the best with calcium in a close second. The water plants were still alive, but did not appear as strong, healthy, and bulky as the calcium and vitamin D plants. The iron and vitamin C plants were both dying.

Conclusions/Discussion
In conclusion, the vitamins and dietary supplements calcium, iron, vitamin C, and vitamin D all affect the growth of parsley plants. Calcium and vitamin D stimulate the growth of parsley plants, while iron and vitamin D negatively affect the growth of the plants in relation to water. This experiment shows that those growing plants for aesthetic purposes can and should add vitamin D and/or calcium to the water of their plants. While those growing plants for agricultural purpose (i.e. those growing plants as crops) would still benefit from this experiment, it would not be cost effective to add vitamin D and/or calcium to the plants' water as more crop could be produced for the same expenditure by purchasing additional plants.

Summary Statement
My science project explored the effects of the human vitamins and dietary supplements vitamin C, vitamin D, calcium, and iron on the growth of parsley plants (Petroselinum crispum).

Help Received
My parents and employees at the local nursery assisted in selecting both the species of plant and the individual plants to use in the experiment.