Colorado Science and Engineering Fair

2024 Individual Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: To Grow or Not to Grow

Finalist's Name: Konnor Nicholas

School and City: Craver Middle School, Colorado City

Sponsor's Name: Bethany Bak

Category: Plant Sciences (PLNT)

Division: Junior (6th - 8th grades)

Abstract (250 words or less):

"To Grow or Not to Grow"
Effects of Different Hydration Drinks on Plant Growth
Konnor Nicholas, Grade 8 © 2024

When wanting your plants to grow most efficiently, you want to use the best hydration liquid. Water is the most obvious, but can others help plants grow better? That was the purpose of this project. Since many different hydration drinks are good for humans, could they also be good for plants? The question was asked, when using H20, Powerade, Gatorade, and Prime hydration drinks, which one will make plants grow the most efficiently? The original hypothesis was that the plants given Powerade will grow the best because it has more electrolytes and less ingredients.

In three different trials, sunflower seeds were planted and given different hydration drinks every other day. Drinks included, H2O, Powerade, Gatorade, and Prime. They were then observed and measured for their growth.

It was discovered that the plant given the Prime hydration drink ended up having the best growth overall. Plants given Prime grew three trials, and ended up being the only one to grow in all. In the second trial, it also outgrew the plant given H20. This disproves the original hypothesis. It could be because Prime drinks contain sucralose, an artificial sweetener, rather than table sugar or high fructose corn syrup, but this still doesn't explain why it grew better than H20. Overall, it seems the best hydration drink to give plants to grow is Prime.

I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.

Finalist's Signature: Konnor Nicholas Date: 3/2/24

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES o all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. A signed copy of this form must be included in your notebook.