



Colorado Science and Engineering Fair

2025 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: An Absorbent Advantage: Using Wool Pellets to Conserve Water in Soil

Finalist's Name: Liam Griffin

School and City: Sargent High School, Monte Vista

Sponsor's Name: Rafe Paulson

Category: Earth & Environmental Sciences

Division: Senior (grades 9 - 12)

Abstract (250 words or less):

The importance of water conservation is stressed worldwide. Finding solutions to conserve water, particularly in irrigated agriculture, are increasingly important. Research has shown wool pellets are able to conserve water in soil and allow plants to survive with less water. This project experiments with the water absorption capabilities of wool pellets in varying amounts.

Pots infused with wool pellets and watered with higher amounts of water thrived. Those receiving less water still grew, just at a slower rate. All plants would produce fruit with adequate time. Soil moisture sensors verified moisture retention in each pot. Supplementing testing demonstrated how wool pellets attract and absorb water. The results in this study show wool pellets provide an advantage in horticulture and small plant growth. They are able to conserve water, but would be less effective on a large agricultural scale because of high application rates and cost.

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:

Date:

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 of 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.**