



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: From the Feild to Fuel

Finalist's Name: Madison Cuckow

School and City: Wiggins Middle School Wiggins,Co

Sponsor's Name: Colby Neeley

Category: Chemistry

Division: Junior (grades 6 - 8)

Abstract (250 words or less):

The purpose of this project was to see at what pressure and temperature does corn turn into alcohol? I think that at 100 ps plus 150 degrees the corn will start to liquify. Or starts to turn into a liquid for. Also I think it needs to be mixed or moved the whole time it is turning into a liquid.

The experiment involved using a fermenter to cook the starch out of the corn and turn it into alcohol. You have to use chemicals to break down the sugars. I used a propane cooker to cook the corn mash and put in AA to break down the sugar because it will start to form dough balls.

The data I collected did not support my hypothesis because I said that you had to have 100 ps and 150 degrees to cook the corn but really all you need to have is the temperature of 195 degrees for an hour and can't go below or above.

These findings lead me to believe that it takes 195 degrees and time. YOu don't need pressure till the distillation process takes about 125 to 150 pounds. Also when the corn is fermenting you add yeast to the corn and you can't have the temperature go below because it will kill and stop the yeast from working.

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.**