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Joseph Young wins 2021 Arkansas Soybean Science Challenge Award at the Virtual Ouachita Mountain Regional Science and Engineering Fair

Joseph Young, age 16, a junior at Mountain Pine High School in Mountain Pine, Arkansas, won the Soybean Science Challenge at the 2021 Virtual Ouachita Mountain Regional Science and Engineering Fair held in Hot Springs, March 5.

Young received a \$300 cash award provided by the Arkansas Soybean Promotion Board. His science project titled “Water energy usage” also placed first in Environmental Science at regional and was awarded ‘Best of Fair,’ plus the ISEF Finalist spot. Young placed second in Environmental Science at the State Science Fair on March 30.

Bobby Young, Young’s teacher, won the \$200 Soybean Science Challenge Teacher-Mentor Award. Young noted that while he is new at science fair, he immediately picked up on the value of the Soybean Science Challenge. “Last year I attended my first regional science fair in Arkansas and learned about the Soybean Science Challenge. I thought it was an interesting initiative so when I started my local science fair, I encouraged students to participate in it,” he replied.

Joseph said winning the 2021 Soybean Science Challenge was a proud moment for him. “I am proud to be the 2021 Soybean Science Challenge winner. I may not have completed a soybean-based science fair project, but I sure did learn a lot about soybeans in the online course. Having that knowledge to change my community and the world is awesome, and the prize is just the cherry on top,” he explained.

Bobby Young, Joseph’s father, was extremely proud of his award. “I am very proud of the hard work my son has put into this project and the Soybean Science Challenge. It was a lot of hard labor, but he persevered and now he is better equipped with knowledge about soybeans that he can use to improve the world around him,” he replied.

The part of the Soybean Science Challenge course that appealed most to Young was learning about how important soybeans are to the soil. “One of the most interesting things I learned in this course is that soybeans return nitrogen to the soil. I didn’t realize the soil needed nitrogen to grow plants,” he stated.

Bobby Young, as both Joseph's father and teacher, noted how he has learned about soybeans through his son's taking the SSC online course. "I have gained a few nuggets of soybean knowledge through him. At dinner he would talk about what he learned that day on the Soybean Science Challenge online course. After winning The Challenge, he has a greater drive to improve his project," he replied.

"The Soybean Science Challenge provides an opportunity for Arkansas Junior High and High School students to participate in scientific research that can impact the State of Arkansas as well as the world. Soybean Science Challenge student researchers learn about this important commodity crop and its many uses including feeding the world, development of biofuels and sustainable products. The Soybean Science Challenge helps students develop an understanding of the challenges and complexities of modern farming," said Dr. Julie Robinson, Associate Professor and director of the program.

"The goal of the Arkansas Soybean Science Challenge is to engage students in "real-world" education to support soybean production and agricultural sustainability," said Gary Sitzer, a former member of the Arkansas Soybean Promotion Board. "The program also rewards scientific inquiry and discovery that supports the Arkansas Soybean Industry."

The Arkansas Soybean Science Challenge was launched in January 2014 to 9-12th grade science students. Students who successfully completed the online course were eligible to have their original soybean-related research projects judged at the 2021 ISEF-affiliated Arkansas Science and Engineering Fairs.

Information on the 2021-2022 Arkansas Soybean Science Challenge will be available in summer 2021. For more information, contact Dr. Julie Robinson at jrobinson@uada.edu or Diedre Young at dyoung@uada.edu.

The Cooperative Extension Service is part of the University of Arkansas System Division of Agriculture.

Joseph Young, Mountain Pine High School, Mountain Pine, Arkansas; Teacher, Bobby Young

Category: Environmental Science

Project Title: Water energy usage

Abstract:

Why is it when taking a shower, it's never easy to find the perfect temperature? This could be due to the height of the person taking the shower. Using a self-constructed apparatus, the temperature was measured (dependent variable) in increments of 15 cm (independent variable) starting from the head of the shower (0 cm) to 135 cm down the apparatus. The hypothesis states that if an individual is farther from the showerhead, then they will use more energy to heat their water reserves. Analysis of the data shows that the hypothesis is proven. Further analysis indicates as the bathroom air's access to the outside temperature, the water's

temperature decreases significantly in comparison to when it had no access to the outside atmosphere. In conclusion; the shorter the individual is, the more energy they will use when showering.