SAE

Supervised Agricultural Experience

Supervised Agricultural Experience Fact Sheet
Research SAE

"My Agriscience Fair project has taught me the worth of patience and persistence. Going through the process is often more important than the final answer." - *Adrienne Gentry, Tift County FFA, Georgia*

For scientific-minded students, research-based SAE projects and programs offer opportunities for innovation and new discovery in the growing area of agriscience. This type of SAE allows students to examine an agricultural/scientific issue, question or principle using experimental or non-experimental methods. In an ***experimental*** program, students conduct and develop scientific experiments to solve a problem or gain new knowledge. For ***non-experimental*** SAEs, students assume the role of "detective" to address a problem or answer a question through extensive research. In either case, the use of scientific principles, literature review, experiment/activity planning, data collection and information analysis is applied to arrive at a final conclusion.

The FFA recognizes student research achievements in agriscience through the National FFA Agriscience Fair and Agriscience Student Recognition and Scholarship Program. The fair is open to middle and high school students while the recognition and scholarship program is only applicable to high school students. Both opportunities present a venue for students to earn recognition, scholarships and cash awards. Involvement starts at the chapter level and progresses to the state and national levels. Categories of participation include: 1) Biochemistry/Microbiology/Food Science; 2) Environmental Sciences; 3) Zoology (Animal Science); 4) Botany (Plant/Soil Science); and 5) Engineering (Mechanical/Agricultural Engineering Science).

Examples of Research SAE Projects/Programs

Experimental

- Compare plant growth between hydroponics and conventional methods.
- Compare water movements through different soil types.
- Compare the effects of different nutrient levels on animal growth.
- Research the resistance of organic fruits to common disease.
- Compare various tillage methods for energy efficiency.

Non-Experimental

- Develop a marketing plan or ad campaign for an agriculture commodity.
- Prepare a land use plan for a farm or ranch.
- Determine the safety of water wells in the community.
- Identify sources of pollution in a watershed.
- Research disease control mechanisms for livestock.