

Science fair resources

Scientists have found many food applications and created new industrial products because they questioned and studied the unique characteristics of soybeans. Science fair topics related to plants, food, feed, nutrition and new uses of soybeans fit into a broad range of sciences. Consider these ideas and explore the links below as you brainstorm and plan a soy science project.

Idea starters

Agronomy and genetics

Questions to consider:

- What are the benefits to incorporating soybeans into a rotation with other crops such as corn and wheat?
- What are the effects of environmental factors such as soil compaction, plant overcrowding, or fertilizers on soybean production?
- How have soybeans evolved and what role have humans played in their genetic modification?
- How can we breed a better soybean to help feed people and animals around the world?

Food, feed, and nutrition

Questions to consider:

- Why is soybean meal used as a livestock and aquaculture feed?
- Why is soybean oil a popular choice in the food industry?
- How are different soybean by-products used in the food industry and why?
- What is soy lecithin and its applications?
- What experiments can be designed to test soybean by-products, such as soybean oil and lecithin?
- How can soybean by-products be used to improve nutrition and functionality of foods?

Resources to explore:

- [Soybean Research from Ohio Soybean Council](#)
- [Biotechnology from United Soybean Board](#)
- [Biotechnology from GrowNextGen](#)
- [Production Research from United Soybean Board](#)
- [Sustainability from Ohio Soybean Council](#)
- [GMO Answers from Council for Biotechnology Information](#)

Resources to explore:

- [Animal Agriculture from Ohio Soybean Council](#)
- [Animal Ag from United Soybean Board](#)
- [Global Utilization from Ohio Soybean Council](#)
- [Food from United Soybean Board](#)
- [Food Product Innovations Using Soy Ingredients from Journal of Human Nutrition & Food Science](#)
- [Soy in Food: What is that doing in there? from GrowNexGen](#)



Industrial and biobased uses

Questions to consider:

- What components of soybeans allow it to be used as a replacement for diesel, solvents, cleaners, adhesives, inks, and plastics?
- What experiments can be designed to test products containing soybeans with similar products not containing soybeans against consumer desires such as performance and cost?
- Why is NASA and the Department of Defense interested in biodiesel?
- Do products containing soybeans offer environmental and health benefits compared to products made from petroleum?

Resources to explore:

- [Soy New Uses from United Soybean Board](#)
- [Soy Biobased Products & Technology from Ohio Soybean Council](#)
- [Biodiesel from National Biodiesel Board](#)
- [Bioheat](#)
- [Student Soybean Product Innovation Competition from Purdue University](#)
- [BioPreferred Marketing Program from USDA](#)
- [Biobased Activities from OBIC Bioproducts Innovation Center](#)
- [Soybeans As an Energy Feedstock \(Making Biodiesel\) from GrowNextGen](#)

General information about participating in a science fair

- [Contact soybean-related industry, research, and teacher leaders from GrowNextGen](#)
- [Choosing a topic and doing a science fair project from National Agriculture in the Classroom](#)
- [Student Research Projects from GrowNextGen](#)
- [Agricultural Topics for Science Fair Projects from Florida Department of Agriculture and Consumer Services](#)
- [Agricultural Ideas for Science Fair Projects from USDA Agricultural Research Service](#)
- [More Agricultural Science Fair Ideas from USDA Agricultural Research Service](#)
- [Student Information for State Science Day from The Ohio Academy of Science](#)



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