Biobased Solutions: Advances in Soy Research & Development

The <u>United Soybean Board Newsletter</u> with the latest new "green" products that impact industries such as automotive, construction and recreation for soybeans

<u>The Ohio BioProducts Innovation Center (OBIC)</u> is a research initiative that develops renewable specialty chemicals, polymers/plastics and advanced materials

<u>Production Research</u> sponsored by the Ohio Soybean Council improves soybeans in many ways and meets needs in the marketplace; read about researchers at work

Bioproducts & Industrial Alternatives: Inks, Adhesives, Toners, Building Materials

Soy foam in the Ford Mustang

Soy-based plastics

Soy inks and adhesives

Bioproducts: Candles, Crayons, Health & Beauty Products

A list of soy-based consumer products

Biofuels: Energy Crop

How Stuff Works

Bioheat

Sustainability

Innovative Soybean Uses and Biobased Solutions

Soy Ski Wax developed by students

Athletic Turf

Road Treatments/Paving

Related Links for Other Science Fair Project Ideas

- Good science projects start with a question. What interests you? http://www.agclassroom.org/teen/science/idealab.htm
- Experiments with Soybeans http://www.ehow.com/info_8496622_experiments-soybeans.html

Idea Starters:

Scientists have found many food applications and created new industrial products because they questioned and studied the unique characteristics of the soybean. Science Fair topics related to plants, food and new uses of soybeans fit into a broad range of biology and chemistry (plant, food and biocomposite) sciences.

Think of some questions or consider these title ideas as you plan a soy science project.

Agronomy and Genetics

- Can Soybeans Produce Their Own Nitrogen Fertilizers?
- Effects of Soil Compaction, Plant Overcrowding, or Fertilizers on Nodule Production
- Gene Gun Transformation of Soybeans
- How to Breed a Better Bean?
- Revisiting Mendel Using Soybeans

Food and Nutrition

- Animal Feed Using High Energy Soybean Meal
- Aquaculture-A Valuable Use for Soybeans
- Make Your Own Oil: Try as Lubricant and Cooking Oil
- Soy Glycerin and Density
- Soy Ingredients in Functional Foods
- Protein Coagulation: Useful as Glue?
- Baking Technology: Lecithin for Fats and Oils Replacement: Lecithin for Flavor Improvement
- Non-Stick Cooking Sprays: Does Soybean Lecithin Make it Work?

Industrial Uses

- Soy Around the House BBQ cleaner, dust mop treatment
- Soy Solvents in Remove Inks, Grease, Oils and Stains
- Soy as Graffiti Remover
- Effectiveness of Soy-based Skin Creams and Sun Protectors
- Test the Environmental Factors of Soy in/on Newsprint
- Biodiesel Fuel on Golf Courses and Marinas
- Why is NASA Studying Biodiesel Fuel?
- Soy Protein as Plastic Material
- Formaldehyde-free adhesives from soy protein

Related Links for Other Science Fair Project Ideas

- <u>Learn from Real Lab Experiences</u>
- Florida Agriculture.com: List of topic ideas that include engineering

Ohio State Science Day: May 10, 2014