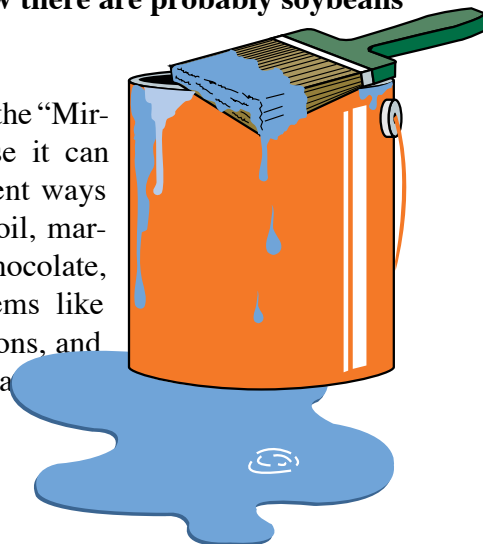




# Make a Splash with Soybeans

**Have you ever wanted to paint your room? What color would you choose? Did you know there are probably soybeans in that paint?**

The soybean is often called the “Miracle Bean.” That’s because it can be used in so many different ways - from food products like oil, margarine, salad dressings, chocolate, and flour, to everyday items like soap, shampoo, paint, crayons, and ink. Soy continues to make a splash, as more uses are being found everyday.



## WISHH Upon a Soybean

We need protein in our diets to stay healthy. Today, about one in seven people do not get enough protein. A group called the World Initiative for Soy in Human Health (WISHH) is trying to change this. WISHH is working to provide more protein to hungry and sick people around the world through soybean products.



### AFGHANISTAN

WISHH is working with the American Millers Association to create wheat flour with soy. This will help raise the protein level in one of Afghanistan’s most popular items - flat bread.

### HONDURAS

WISHH started a new soy nutrition program in Honduras to help build more exports for United States soybeans and encourage the health benefits of a soy protein diet.

### INDIA

Working with Indian universities and local governments, WISHH studied the malnutrition of children in India. Scientists learned that foods with soy protein improved the height, weight and thinking ability of the children.

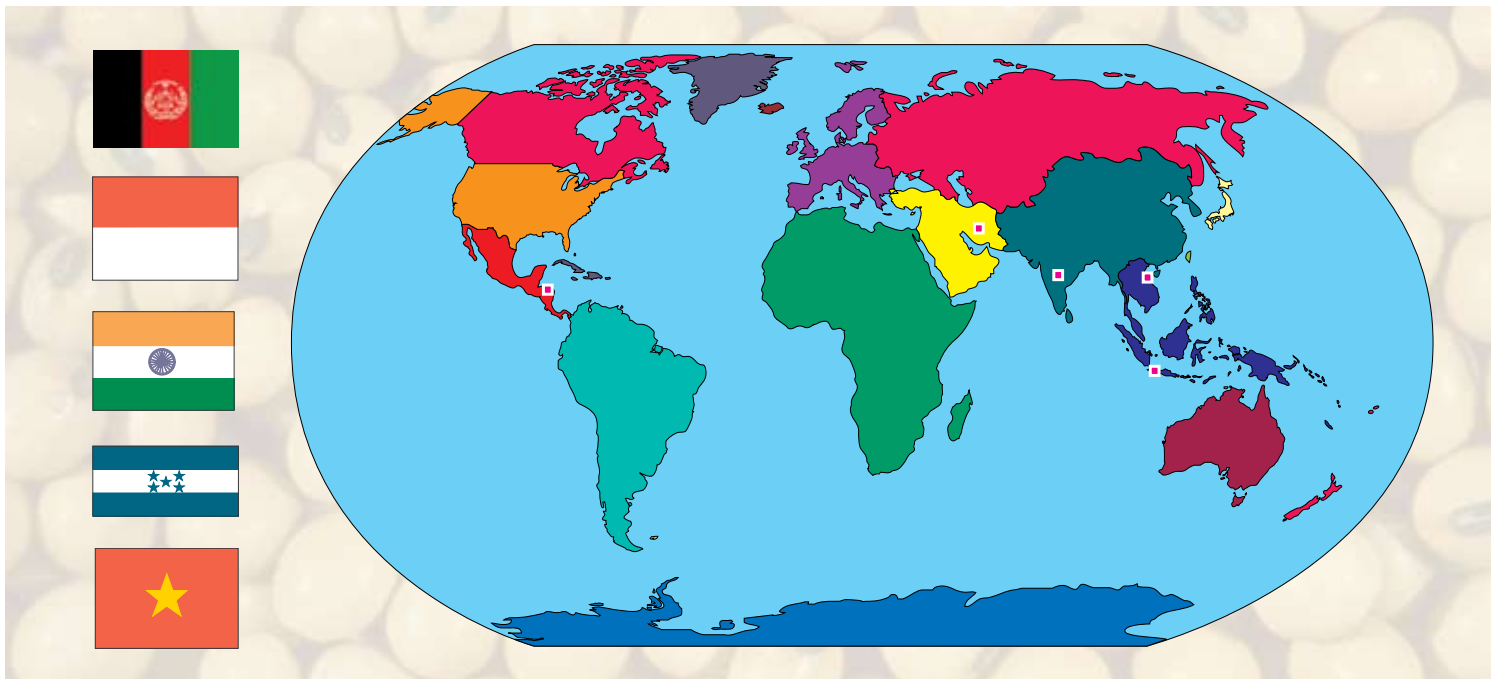
### INDONESIA

WISHH helped develop a new recipe combining soy flour and wheat flour to make soy and wheat noodles. WISHH is now helping to provide food to more than 120 schools in Indonesia.

### VIETNAM

The American Soybean Association, along with WISHH, met with Vietnamese organizations to study the effects of adding soy protein to local diets. They hope to put soy protein in local school programs, community nutrition programs and businesses.

**For more info go to [www.wishh.org](http://www.wishh.org)**



# Flag Matching Game

Draw a line from the flag of the country to the square in the area where the country is located on the map.

## Beanie Baby

Now that you know how a soybean grows, why not grow your own!

Materials needed:

- Jewelry size resealable bag (found in craft stores)
- Crystal soil (Found in nursery or from Flinn Scientific 800-452-1261)
- Hole Punch
- Water
- Measuring spoons
- Soybean (and other seeds)
- Yarn

1. Place a scant 1/2 teaspoon of Crystal Soil into the bag.
2. Add one tablespoon of water.
3. Gently push in two soybeans.
4. Seal your bag.
5. Punch a hole in the top of your bag, above the zipper seal.
6. Insert the yarn to make a necklace.
7. Use the yarn to hang your beanie baby around the room to chart the effect of various exposures to light and heat. You might want to wear it around your neck, under your shirt!
8. Check your Beanie Baby several times a day to watch the process of germination.
9. Record the growth on a chart.



## Did you know?

- Half of all daily newspapers are printed with soybean ink.
- Soybeans were first brought to the United States from China in 1804. United States farmers first grew soybeans in 1829.
- Livestock consume about 22.5 million tons of soybean meal a year.
- The average American consumes 7 gallons of soybean oil each year.
- The soybean plant is a legume related to clover, peas and alfalfa.
- Eating soy foods helps to regulate body temperature and lower cholesterol..
- During the Civil War, when real coffee wasn't available, soldiers would use soybeans as "coffee berries" to brew as a substitute.

# Farmers

## In the Water

A new type of farming - fish farming is growing in popularity. Also known as Aquaculture, it means fish or other aquatic animals are grown for food. The farms specialize in different types of fish, like carp, salmon, and rainbow trout.



Soybean farmers play an important role in aquaculture. They provide the soybean meal used for the fishes' diets. Soybean meal is less expensive than other aqua feeds and it helps keep the water clean.

Different types of fish require different types of diets. For example, a salmon needs more protein than a carp. The amount of soybean meal the farmer uses depends on the type of fish being farmed.



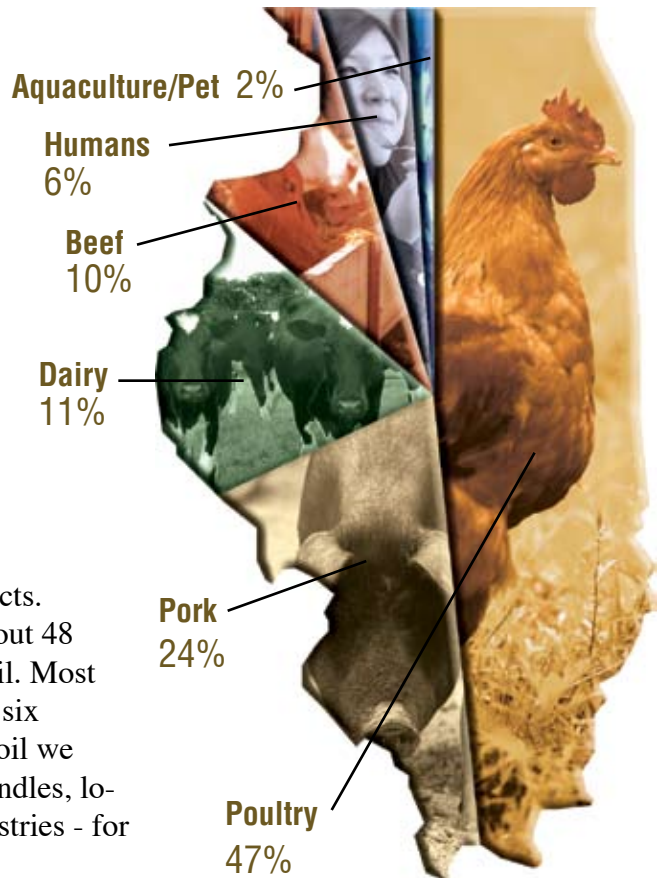
Fish production is growing around the world. Illinois farmers are important to the industry because they produce a less expensive meal that is environmentally friendly.

## In Our State

Illinois soybeans are used for a variety of products. A 60-pound bushel of soybeans can produce about 48 pounds of protein-rich meal and 11 pounds of oil. Most of the meal is used to feed livestock. The other six percent is used in the food we eat. Most of the oil we get from the soybean is used in products like candles, lotion, and food. What's left is used by other industries - for things like biodiesel fuel.

## On the Farm

Soybeans grow on a farm. Farmers plant seeds in the spring and harvest soybeans in the fall. Farmers fertilize the plants as they grow to give them necessary nutrients and to prevent insects and weeds from harming them as they grow. And, oh boy, do they grow!



# Consumers



## In Your Home

After harvest, soybeans are brought to the processing plants, where they are cleaned and cracked. The hull, which is the outer shell of the bean, is removed. The hulls will be used as additives for breads, cereals, snacks, and livestock feed.

After the hull is removed, the soybeans are rolled into flakes. Some of the flakes are used to make food for animals. Some are crushed and the natural oil is removed. The flakes without oil can be ground up into soy flour. Soy flour is high in protein, helps foods like cookies and cakes stay fresher longer, and is used just like wheat flour.

The oil taken from the beans is purified and made into industrial oil, used for soaps, candles, crayons, paint, and fuel, or into oil used for cooking.

## On The Bus

There is a special kind of fuel made from soybean oil. It is called biodiesel. Buses that run on biodiesel have less exhaust and pollution than buses that run on diesel. That's good for us - and our air.

Biodiesel is also good for our environment because it is renewable. That means that we can replace what we use. Ordinary diesel is made from fossil oil. It can't be replaced once it is used. But when we run out of soybean oil, we can



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