

# Many Uses of the Soybean!

Adhesives  
Antibiotics  
Anti-Corrosion Agents  
Asphalt Release Agents  
Automotive Parts  
Baby Food  
Bar Chain Oils  
Biodiesel  
Candles  
Candy  
Concrete Sealers  
Cosmetics  
Crayons  
Degreasers  
Emulsifying Agents  
Fabric  
Fifth Wheel Grease  
Fish Food  
Glycerine

Graffiti Removers  
Hand/Body Lotions  
Hand Sanitizer  
Inks  
Insulation  
Lecithin  
Livestock Feed  
Lubricants  
Mattresses  
Meat Alternatives  
Mosquito Repellents  
Nail Polish Remover  
Paint  
Paint Removers  
Pet Food  
Plastics  
Plywood Glue  
Printing Materials  
Recipes

Rubber  
Shirts  
Silk  
Skateboard Wheels  
Soap/Shampoo  
Socks  
Soymilk  
Spray Foam Insulation  
Sunscreen  
Teddy Bears  
Tofu  
Toilet Cleaner  
Towels  
Truck Bed Liners  
Vegetable Oil  
Wall Boards  
Wall Decorations  
Wood Sealer  
Yarn



For more soybean information, product list, or recipes:

[www.michigansoybean.org](http://www.michigansoybean.org)

[www.soynewuses.org](http://www.soynewuses.org)

[www.soybean.org](http://www.soybean.org)



# SOYBEAN - The Miracle Crop

A soybean is a legume related to clover, peas, and alfalfa. Soybeans are grown in 31 states by some 500,000 U.S. farmers. From a 60 pound bushel of soybeans, we get about 11 pounds of oil, 44 pounds of protein-rich meal, and 5 pounds of hulls.

More soybeans are grown in the U.S. than anywhere else in the world. Recent harvests have yielded about 3.3 billion bushels of soybeans each year. About 50 percent of U.S. soybeans are exported to major markets which include the European Community, Japan, Taiwan, Mexico, and South Korea.

Soybeans are graded, screened, and cleaned. The beans are then cracked, dehulled, and rolled into "full fat flakes." The soybean oil is removed and the now defatted soy flakes are used for animal feed and other products.

Soybean oil and protein are used in food, feed, and industrial products. The soybean is truly an incredible bean and is often called "the Miracle Crop" because of its many important uses. The oil provides us with margarine, vegetable oil, salad dressing, and mayonnaise. Examples of industrial applications include the use of the oil as a carrier in inks and paints. It also provides an environmentally-friendly fuel for diesel vehicles, industrial lubricants, solvents, and hydraulic fluids.

Whole soybeans and protein from the soybean meal are used in products ranging from feeds for poultry, swine, and other animals, to tofu, soy sauce, and soy flour in baked goods. In addition, the protein is used in industrial products such as plastics, wood adhesives, and textile fibers.

## A BRIEF HISTORICAL VIEW

Farmers in China grew soybeans some 5,000 years ago.

### 1804

Soybeans brought to U.S. from China.

### 1829

U.S. farmers first grew soybeans. During the Civil War, soybeans were used as "coffee berries" to brew "coffee" when real coffee was scarce.

### 1880's

Farmers began to grow soybeans for cattle feed.

### 1904

George Washington Carver began studying the soybean at the Tuskegee Institute in Alabama. People no longer thought of the soybean as just a feed crop, but also as a source of protein and oil.

### 1925

The American Soybean Association was organized.

### 1940

U.S. soybean crop had grown to 78 million bushels harvested on five million acres. The U.S. was a net exporter of soybeans and soybean products.

### 1950's

Soybean meal used as a low-cost, high protein feed ingredient helped increase poultry and livestock production.

### 1976

A soybean checkoff program was established in Michigan by its soybean farmers.

### 1991

The United Soybean Board was established and the national soybean checkoff began.

### 1996

First U.S. soy sales to China.

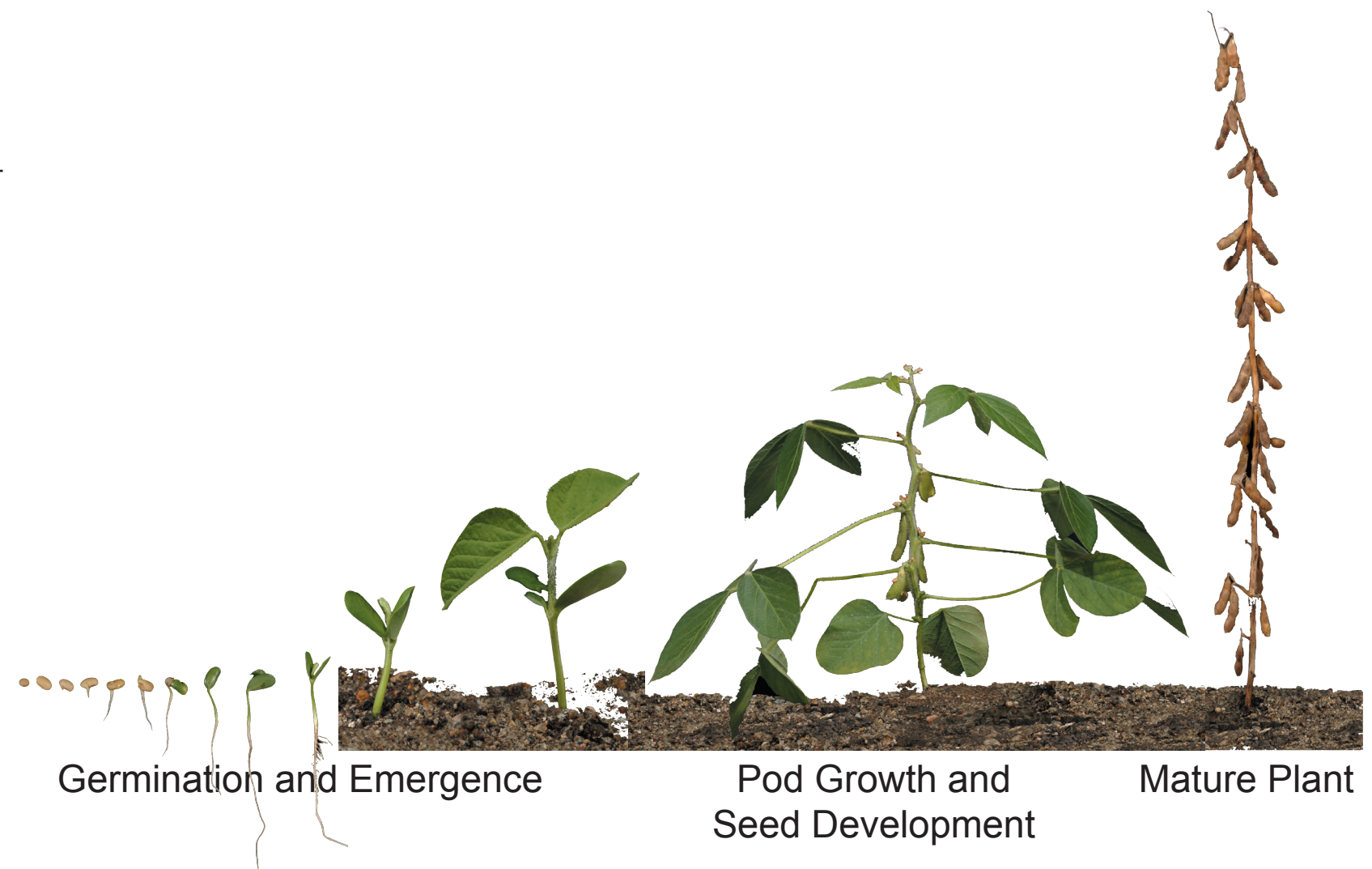
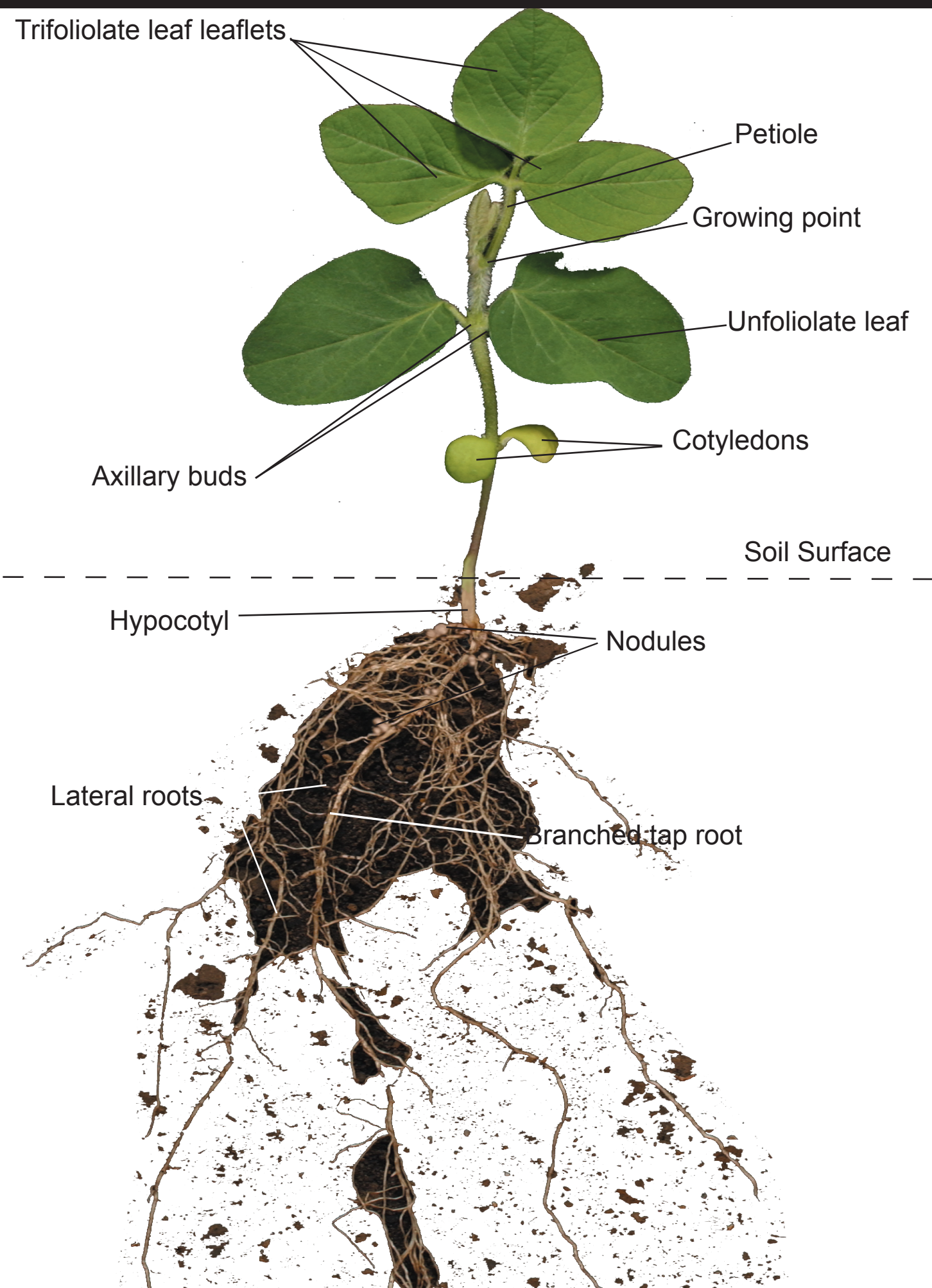
### 2010 & Beyond...

Soybeans are an important contributor to Michigan's agri-food system. It is 2nd only to corn in value of field crop production with a total impact of more than \$1.5 billion.



# The Parts and Lifecycle of the Soybean

Soybeans are an annual plant, completing their life cycle within one year. They are planted in the spring and harvested in the fall. When they are harvested, the leaves and stalks are brown. The bean is the “gold” of the plant and is presently the major plant part sought by farmers. Nearly 2 million acres of soybeans are planted annually in Michigan.



Images provided by Iowa State University Extension from the publication *Soybean Growth and Development* (PM 1945)