

# SPECIALTY AGRICULTURE



## Fruits

Many fruit and nut trees are grown in Missouri. When groups of trees are planted together for food production it is called an **orchard**. Peach orchards

are found in Missouri, primarily in the south and central parts of the state. Peaches grow best in areas where the temperature is warmer. Missouri can have harsh winters and late spring frosts which can destroy the peach crop.

Peach trees grow well in a variety of soil types. For the trees to grow best, the soil should be well-drained to keep the roots from standing in water.

Apples are also a fruit that develops from a flower. Apples are grown in every state in the continental United States. Apples are harvested in late summer and early fall. Because we have storage that can keep the apples the right temperature, apples are enjoyed all year.



Apples, peaches, walnuts and pecans are all produced from the flower of the plant.

Bees are important to Missouri farmers. Nuts, vegetables and fruits need bees to **pollinate** the plant so it will give us food.

Pollination is the transfer of pollen from an **anther**, male part of a flower, to the **stigma**, female part of the plant. Pollination makes the seeds that grow into new plants.

Some plants can self-pollinate, or pollinate themselves. Examples of self-pollinating vegetables are lettuce, cabbage, beets and carrots. Some plants that need pollination are cucumbers, pumpkins and melons.

## Bees

### THE HONEY BEE LIFE CYCLE

A queen bee lays an **egg** in a tiny cell. Next, the egg hatches. The **larva** looks like a worm. The larva grows into a **pupa**, or baby honeybee and when fully grown, the honeybee hatches from its cell ready for duty in the colony where a large number of bees live and work.

Male bees are called **drones**. Their job is to take care of the **queen** bee. Female bees are called **worker bees**. They feed the baby bees, clean the hive, groom the queen bee and gather nectar and water.



Pollen is the fertilizing element of flowering plants, consisting of fine, powdery, yellowish grains or spores, sometimes in masses.

### ACTIVITY

Using one day of the school lunch menu, determine which foods were pollinated by bees or other pollinators.

HINT: Don't forget that animals used for meat also eat food that has been pollinated.



A **Botanist** (Plant Scientist) studies plants, plant growth and environmental interactions.

An **Arborist** specializes in keeping trees healthy, planting trees or landscaping.

**Horticulturists** help farmers plant the right crop and identify new plants.

A **Sawmill Operator** oversees the processing of trees.

A **Forester** manages forested land for economic, recreational, and conservation purposes.

Missouri farmers grow many things in addition to traditional crops and livestock. Fruits, nuts, timber and vegetables are important agricultural products grown on many Missouri farms. Some farmers grow one or more of these specialty crops in addition to other crops or livestock. Some farmers grow these as their main agricultural crop.

Missouri has more than 200 farmers' markets. Farmers grow vegetables and fruits and sell them at these markets. Some farmers sell meat and eggs too. Families can purchase local products to feed their families and also purchase plants.

## Farmers' Markets



The **eastern black walnut** is the official state tree nut in Missouri. Missouri is the top producer of black walnuts, which are used in many baked foods or can be eaten raw. Hammons Products Company of Stockton, Mo., is known as the *Black Walnut Capital of the World* and largest commercial buyer and seller of black walnuts.

## Nuts

Black walnut trees grow throughout Missouri. The nuts are harvested in the fall. The walnut is covered with a green, rounded outer covering called a hull. It's removed by a hulling machine so the nut can be cracked to get to the kernel we eat. The outer coating on walnuts that protects the nut meat is called the shell. The shells can be ground into a powder and used for many purposes such as cleaning equipment. Mature trees can also be harvested for timber.

Another nut tree common in Missouri is the **pecan**. Pecan trees grow best in the moist bottomland soils near rivers. Pecans are harvested in the fall. Pecans are cylinder-shaped nuts that can be cracked and used in cakes, pies and other foods.



## Fun Facts!

- \* Bees, butterflies, bats, birds, moths and ants can pollinate.
- \* Peaches and apples are the flowering part of the tree.
- \* Without pollinators you would not have one of every three bites of food you eat.
- \* Honeybees can flap their wings 230 times every second.
- \* One tree makes about 8,333 sheets of paper.
- \* A newspaper can be recycled up to 7 times.

## Timber



Missouri has more than 14 million acres of trees, called forests. That's 32 percent of the 44.7 million total acres in our state. Most of these trees are hickories and red and white oaks.

Trees are used for lumber, paper, rayon, charcoal and firewood. **Bark**, the rough outer coating of trees, can be used to make cork, dyes, mulch and medicines. The **sap**, juice from some tree varieties, is used to make paint thinner, rubber and sugar.

Newspapers are printed on newsprint, an uncoated lightweight paper made of ground wood **pulp**. Today, more than 72 percent of all old newspapers in the United States are recovered and recycled and are the largest component by weight and volume of curbside recycling programs. The average amount of recycled-fiber content in newsprint used by U.S. newspapers is almost 30 percent. Old newspapers also are recycled into cellulose insulation materials, cereal boxes, egg cartons, grocery bags, pencil barrels, tissue paper and more.



Agriculture starts with growing and harvesting food and fiber. It ends with almost everything we eat, wear and use every day. For more information on agriculture in the classroom, visit [www.mofb.org](http://www.mofb.org).