



The Legend of Johnny Appleseed

The legend states that John Chapman, who was born in Massachusetts in 1774, planted more than 10,000 square miles of orchards. He began in Pennsylvania and while traveling barefoot and using a saucepan for a hat, spread the word about the importance of apples in people's diets. He died in 1845 at the age of 71 in Fort Wayne, Indiana. Everyone called him "Johnny Appleseed."

Apple Production

Thirty-six states grow apples to sell, including Illinois. Apple growers use half-a-million acres of our land to produce apples, and produce 265 million bushels per year. Most of these apple orchards are in our northern states, such as Washington, Michigan, and New York. Washington state has the best climate in the world to grow apples because of its warm days and cool nights. Of all the apples grown in the United States, half are sold fresh and half are made into apple sauce, apple juice, or dehydrated apple products.

The State Fruit: The GoldRush Apple

Do you know all your state symbols? Did you know the newest symbol was inducted on August 21, 2007? State Public Act 95-0328 officially made the GoldRush Apple Illinois' State Fruit. The GoldRush apple is a sweet-tart yellow apple that was developed through a disease resistant apple breeding program. The GoldRush is a cross between a Golden Delicious and a lab variety apple called Coop 17.

The GoldRush apple is a hybrid apple because it is a cross between two different varieties of apples. One significant result from this cross is that the GoldRush has a long shelf life, making it available to store longer.

So how did the GoldRush get its name? Scientist named the apple based on its golden, bronze color and the "rush" of flavor you get from the first bite. The GoldRush is a great apple to grow because it has qualities that make it disease resistant to apple scab, fire blight and apple mildew, all common diseases that can wipe out an apple crop.

Top Varieties of Apples



What's your favorite kind of apple? There are nearly 100 varieties grown in the United States, but 15 popular varieties account for more than 90 percent of production. Listed below are a few Illinois favorites.

Red Delicious – bright to dark red and sweet-tasting

Golden Delicious – golden to light yellow-green, keeps its shape and flavor during baking

Gala – crisp, yellowish-white, sweet flesh with red or golden skin with red striping

Fuji – super sweet, super juicy, super crisp, great for snacking

Granny Smith – green, crisp, great for salads and fresh eating

GoldRush - golden, bronze apple with a sweet flavor, great for fresh eating.



All it Takes is a Bee

Apple blossoms, which are white or pale pink, appear on apple trees in the spring. Unknowingly a bee takes pollen, made mostly of male cells, from the stamens of one apple blossom, and leaves it near the pistils, made of female cells, of another apple blossom. This is called pollination. When the apple blossom is pollinated, it develops into an apple. Since every apple seed is made of its own unique set of genetic material, you can plant 10 seeds from a single apple and get 10 entirely different kinds of apples. Bees are important for pollination, so some apple growers place beehives in their orchards.

Healthy Bites

Apples contain Vitamin A, Vitamin C, Vitamin B6, and Vitamin B12, along with thiamin and niacin. They are rich in pectin which is known to reduce cholesterol. Apples contain as much fiber as a whole bowl of most popular cereals and are also good for diabetics. The soluble fiber in apples works to regulate blood sugar, and prevent its sudden fluctuation.

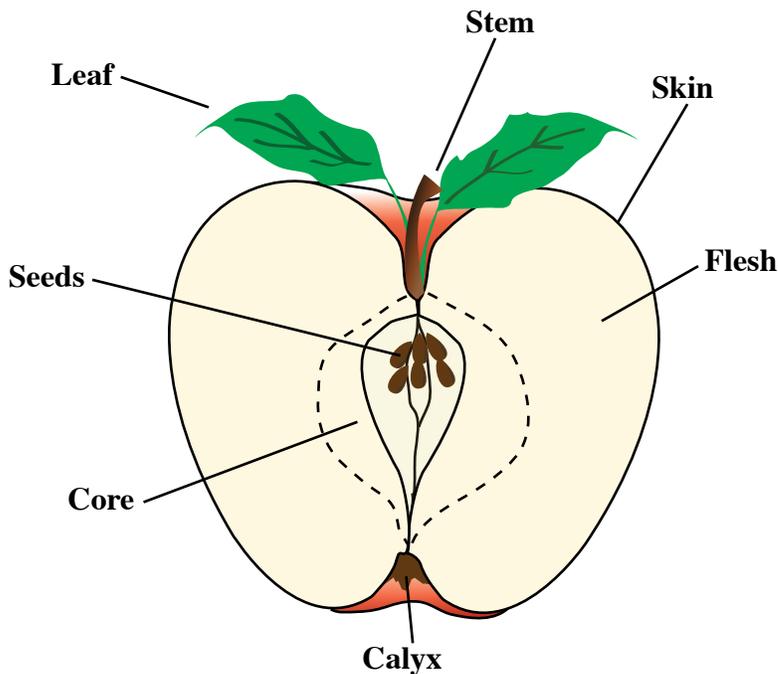


Apples All The Time

Apples are harvested in late summer and early fall; however, we can buy fresh apples from the store all year. This is due to Controlled Atmosphere Storage. Controlled Atmosphere Storage regulates the temperature, oxygen, carbon dioxide, and humidity in the storage room. Each variety of apple requires different conditions so computers help keep the specified conditions constant.



As an apple ripens, the starches change to sugar, and the apple takes in oxygen and gives off carbon dioxide. This is the respiration process of an apple. In Controlled Atmosphere Storage, the respiration process is slowed down so the apples do not ripen quickly. Most varieties of apples can be stored for 12 months or longer. Because of Controlled Atmosphere Storage, we are able to enjoy apples all year round.



A Budding Idea

Apple trees are difficult to grow from seeds. It takes about 15 years for a tree grown from a seed to produce an apple. Most apple trees are grown by grafting or budding onto already existing rootstocks.

There are approximately 7,500 varieties of apples. Growers take the best parts from different trees and stick them together with glue and tape. This is called grafting. Many growers graft the branches of a desired type of apple tree to a rootstock to produce a new plant. The rootstock includes a section of tree roots still attached to a bit of the tree trunk.

Sometimes growers use budding instead of grafting. In budding, one bud is taken from a tree and attached under the bark of the rootstock with tape or glue. New trees created by grafting or budding live in a protected nursery for about twelve months before they are replanted in an orchard.

Growers are always trying to make new and perfect apples. They continue to combine the genetic material contained in the branches, buds, or rootstocks to adjust the taste, color, texture, shape, and growing season of the apple.



Where Did Apples Come From?

The apple was brought to the United States by the Pilgrims in 1620. While the Native Americans taught the early settlers how to grow corn and vegetables, the settlers taught the Native Americans how to grow apples with apple tree seeds, seedlings, and small trees. They used apples to make apple juice, apple cider, dried apples, apple butter, and vinegar. The apples were even food for the pigs, cows, and horses.

During the long, cold winters, the settlers could not grow fresh fruits and vegetables. So, instead they found ways to preserve them. The apples were peeled, cored, and hung out to dry on a big net or string tied to trees or posts. The warm air would evaporate the water inside the apples, and they would be dried in a few days.

Starch It

Apples naturally contain a carbohydrate known as starch. As apples ripen, the amount of starch decreases as it is converted into sugar. Starch turns into sugar near the center of the apple or the core first. The starch conversion works its way out towards the skin of the apple. Apples are ripe when most of the starch becomes sugar. An iodine test is a simple way to see whether an apple is ripe. Try this starch test to see if your apples are ripe. Did you know you can tell how sweet an apple is by how much starch is in it?

Materials: **brown iodine**
 small paint brush
 an apple
 a knife

1. Have an adult cut an apple in half for you.
2. Brush some brown iodine on the cut surface.
3. If your apple turns a dark purple color, then there is still a lot of starch in the apple. If your apple only has a small amount of purple then it has only a little starch. A ripe apple will have less starch because most of it has been converted to sugar.



Apple Vocabulary

Fruit: the edible part of a plant developed from a flower.

Nectar: the juice of a fruit that attracts the insects or birds that pollinate the flower.

Flower: the blossom of a plant.

Petal: brightly colored parts of a flower.

Leaf: green part of plant that helps collect sunlight and nutrients for the plant.

Stem: the stalk that supports a leaf, flower, or fruit.

Pollen: the yellow powder inside a flower which fertilizes other flowers.

Calyx: the stubby brown nub at opposite end from the apple stem that is the remaining parts of the apple blossom.

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