Apples are grown in all fifty states, but only thirty-six states, including Illinois, grow apples to sell in large amounts. An estimated 7,500 apple growers manage orchards covering 346,000 acres in the United States. 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. There are over 5 million tons of apples produced in the United States per year, all of which are picked by hand! Half of those apples are sold fresh and the other half are made into apple sauce, apple juice, or dehydrated apple products.

Apple Production

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All it Takes is a Bee

Pollination is the process that allows plants to make seeds and reproduce. This happens when the pollen is transferred from the anther to the stigma. Apples, just like all other fruit trees, need a little more than just the wind to help with the transfer of pollen. Honeybees, mason bees, and bumblebees are the main pollinators of apples. The bees get signals from the smell of the flowers that there is sweet nectar inside their blossoms. As bees fly around collecting nectar to take back to the hive, grains of pollen from the blossoms stick to their bristly legs. Pollen grains are brushed off and picked up as the bees fly from blossom to blossom. When the apple blossom is pollinated, it will begin to develop into an apple. Many apple growers place beehives in their orchards to promote pollination.

Apple Anatomy

- **Anther**: The male reproductive part which produces and contains pollen.
- **Filament**: The stalk that supports a leaf, flower, or fruit.
- **Petal**: Brightly colored parts of a flower.
- **Sepal**: The green part of a plant that helps to collect sunlight and nutrients.
- **Sepal**: The stamens.
- **Ovary**: The female reproductive part which collects pollen to be sent to the ovary.
- **Style**: The female reproductive part which produces and contains pollen.
- **Stigma**: The ovule. The female reproductive part which collects pollen to be sent to the ovary.
- **Calyx**: The stubby brown nub at the opposite end from the apple stem which is the remaining part of the apple blossom. This starts as five green, leaf-like structures.

Flower: The blossom of a plant.

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

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

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 and seedlings. They used the apples to make apple juice, apple cider, dried apples, apple butter, and vinegar. The apples were even food for the pigs, cows, and horses! But what was the apple’s journey before and after the settlers?

Prehistory: Carbonized remains of apples have been found by archeologists in prehistoric lake dwellings in Switzerland, dating back to the Iron Age. There is also evidence to show that apples were eaten and preserved by slicing and sun drying during the Stone Age in Europe.

1st Century: In the earliest writings of China, Egypt, and Babylon, records were found that mentioned that man understood the art of budding and grafting fruit trees.

1066: Apple Cider became a popular beverage in England.

1470: Bartholomew Anglicus wrote his encyclopedia, one of the earliest printed books, which contains a chapter focused on the apple.

1560s: It became custom to serve roast apples with a saucer of caraway as dessert. This tradition is kept up in a few European Universities and old-fashioned London Livery dinners.

1622: Because apples are not native to America, early orchards produced few apples because there were no honeybees to pollinate. Shipments of honeybees were later sent to America.

1666: Isaac Newton witnessed an apple drop from a tree in the orchard of his childhood home, causing him to ponder why apples fall straight to the ground and not in other directions. In 1687 he published the Law of Universal Gravitation.

Where Did Apples Come From?
new plant. Budding is a process where growers graft the branches of a desired type of apple tree to a rootstock to produce a new plant. Budding is a process where growers will take a cutting from a tree they want and adhere it to the rootstock to get the cutting to grow and reproduce quickly. Many growers graft the branches of a desired type of apple tree to a rootstock to produce a new plant. Budding is a process where growers take one bud from a tree and attach it under the bark of the rootstock with glue or tape. New trees created by grafting and budding live in a protected nursery for about twelve months before they are replanted in an orchard.

Not only are these processes great for speeding up the apple production process, they are also beneficial for creating new varieties of apples. The combination of branches, buds, and rootstocks creates new genetic material which adjust the taste, color, texture, shape, resistance to diseases, and growing season of the apple.

Apple trees are difficult to grow from seeds. Because of this, most apple trees are propagated by grafting or budding onto already existing rootstocks. Rootstocks are the trunk portion of the apple tree with well developed roots.

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Kuiper’s Family Farm
Apple Producers

Wade & Kim Kuiper
Maple Park, Illinois
Size of Farm: 30 acres, 35 acres being apple trees
Year Established: 1873

Primary Market: Retail direct to customers at the farm

How would you describe your business?
We are a family farm with several crops, but the big difference with our farm is we invite our customers out to harvest our crops instead of doing it for them! Each fall, we open our orchard to our farm to pick their own apples or go out into our pumpkin patch to find just the perfect pumpkin. We also have a small pumpkin patch and people can come to our farm to pick their own apples or go out into our pumpkin patch to find just the perfect pumpkin.

We love seeing our customers and the many families that come to our farm to spend quality time with loved ones so it’s exciting to be able to come back each year to share the places where they got married with their children as their family begins to grow.

How did your family get into the apple business?
Wade started working for the Kuipers straight out of high school. Each fall, people can come to Kuiper’s Farm. The Kuiper children, second generation farmers, are pictured above. Today, we produce apples, pumpkins, squash, gourds, and now sunflowers, too!

What kind of work goes into growing apples each season?
We tend to the orchard all year round. Our youngest son, Will, went to college to learn about caring for apple trees and harvesting apples at Kuiper Orchard. Each winter we spend hours and hours in the orchard trimming the branches back on the trees so they stay small, and the apple tree grows big and healthy.
In the spring when the trees are blooming we bring in honeybees and bumblebees so the bees can pollinate the blossoms. The weather can have a big impact on the crops. Since there are things that can damage the trees and cause them to not bear any fruit. Very cold temperature can freeze the blossoms and the hot weather can make the fruit split. We also plant new apple trees every fall to ensure we have a strong supply of fresh apples for the future.

Rendleman Orchards
Apples Producers
Wayne & Michelle Rendleman
Alto Pass, Illinois
Size of Farm: 187 acres, 100 acres being apple trees
Year Established: 1873

Primary Market: Wholesale to food distributors, retail at family farm market

How would you describe your business?
Rendleman Orchards is a 6th generation family orchard. We are nestled in the hills of Southern Illinois’ Shawnee National Forest. Since 1873, Rendleman Orchards has been committed to growing the highest quality apples, pears, peaches, nectarines, plums and vegetables to the commercial produce markets throughout the Midwest. We are one of the few wholesale apple orchards left in the state of Illinois that is Globally Food Safety Certified. This prestigious food safety certification gives our farm the ability to sell our product to schools, grocery stores, and other institutions such as hospitals, restaurants, prison systems, food distributors, and food banks.

Rendleman Orchards is fortunate to have great buying partners. We try to stay in continuous contact with our buyers to keep them up to date on our apple crop. Each growing season is different and we like to let our buyers know about how many apples they can expect to get from us each season.

Our apple buyers plan far in advance with the schools so they can have that good supply throughout the fall. We truck fresh picked apples weekly to our food distributors and we have the freshest produce possible for our customers.

During our harvest season, which runs from June through October, Rendleman Orchards offers our best quality farm fresh, tree ripened peaches, nectarines and apples along with a wide selection of other fruits and vegetables, as well as jams, jellies, and sliced pickled items. Our most popular items are our, cider, honey, snack mixes, candles, linens, and apple cider donuts in our Farm Market. We have several value-added products made from our apples such as three different kinds of apple butter, three different kinds of apple sauce, apple cider, apple pies, and apple pie ice cream. For these items, we select certain apple varieties for specific products we are making because some apples are sweeter and some are more tart. We often mix varieties in products to create a depth of flavor! An online store featuring products like our freezer boxes and holiday gift boxes are available throughout the months of November and December!

Rendleman Orchards also offers on-farm experiences such as hand-picking from the pick-your-own fields and apple picking in the fields, playing with our farm goats, visiting the American flag mural wall, taking unique photos with our heritage farm implements, and various other special events.

How did your family get into the apple business?
With each subsequent generation, the farm grew and evolved. John and Isabell Grover, grandson of the founder, John Rendleman, assumed the farm in 1906, raising asparagus, rhubarb, sweet potatoes, and corn for his truck farm operation. Grover also began to develop a fruit farming business with the strong influence of his family who were prominent area fruit farmers at that time.

Union County was known for being the largest peach producing area in Illinois. Rendleman Orchards could be found at least one side of the road all the way from Bald Knob Cross to Anna, Illinois – a distance of 18 miles. As Grover’s children grew, he and his son James (Jimmy), formed Grover Rendleman and Son, and by the late 1930s had expanded the original farm to include 540 acres. Despite the fact that many local fruit growers discontinued growing peaches all together, Grover Rendleman and Son continued operating as they had for the previous twenty years with peaches as their mainstay and summer apples as merely a support crop.

New apple varieties were also then planted in anticipation of the future market demands, and a new apple grader was implemented to package the fall apples with more accuracy and ease.

The farm’s first cold storage facility was added. The harvest was then handled by large bulk bins and forklifts rather than by simply manpower.

The best part about being a farmer is that we know we are having a positive impact on the world! We are growing fresh, healthy food for our community and support a lot of other families at our farm. The favorite type of food to do is talk about our apples in our farm market and give our customers an idea of what it is like to be an apple farmer!

Curtis Orchard
Apples Producers
Randi & Debbie Graham with Jeremy & Rachel Covington
Champaign, Illinois
Size of Farm: 80 acres, Year Established: 1878

Primary Market: Retail direct to customers at the farm and some to local distributors

How would you describe your business?
Curtis Orchard is an 80-acre apple orchard and pumpkin patch where we produce between 2-3 million apples and about 200-250 tons of pumpkins each year. Our farm also offers entertainment and activities for the whole family.

We are open each year from July 20th through October 23rd. Our orchard country store and bakery offer a wide variety of gift items and souvenirs, jams, jellies, pies, fritters, apple crisp donuts, award winning cider, preserves, pop corn, and gift items. Outdoor activities include seasonal apple and pumpkin picking, kids play structures, a petting zoo, and a toddler play area.

In September and October, we offer weekend activities that include pony rides, an orchard wagon tour, a giant inflatable slide, jumping pillow and obstacle course, two mazes including a corn maze and free live entertainment. Curtis Orchard also offers educational tours, birthday parties, corporate picnics, and weddings!

How did your family get into the apple business?
Curtis Orchard is part of an Illinois Centennial farm established in 1878 when George Curtis moved to Champaign, Illinois from Indiana. The family raised grain and livestock until Paul and Joyce Curtis planted the first apple trees in 1977. They planted the first 700 trees even though they didn’t know much about growing apples! Today, my wife Debbie, Paul’s daughter, and I own Curtis Orchard with our kids and extended family.

What type of products do you make from your apples?
We offer many apple-based products at our orchard that are available throughout the fall.

Everything from apple cider and applesauce to apple donuts, apple fritters, and apple pies. It takes about 30-35 apples to make a gallon of cider, but only about six or seven to make a quart of applesauce. For apple cider, we also requires about six apples. For sweet treats like pie, we use a tart apple like Jonathan or Rome and for sweet treats like donuts, we use more apple flavor when paired with the sugar in the pie. For applesauce we use a combination of Golden Delicious and MacIntosh with no sugar added. This makes a nice, balanced, flavorful sauce that is not too sweet and not too tart. However, if you prefer a lot of apple flavor, we can use a combination of six to twelve varieties commonly. Apple cider making requires a consistent taster to maintain the desired balance of flavor throughout the batch. The skill for this job is in the balance of the sweet and sour.

Of course, we offer pies and things made from other fruits as well, and our pumpkins make the best pies and pumpkin bars you’ve ever tasted. We are also famous for our honey and in 2014, Curtis Orchard honey was voted Best Tasting Honey in the World at the International Black Jar Honey Contest.

What do you enjoy most about your job?
Paul Curtis still lives on the farm and has watched his vision of reconnecting people to the soil and passing down his widest dreams. We are grateful to see families with members of all ages visit and explore together. It amazes us to watch the fascination people experience picking their first apple or pumpkin. Remarkably, Paul has been able to maintain a farm that could not sustain one family increase revenue to the point where it now supports five families and 100-120 farm families throughout the fall busy season.