WLG 157

West Virginia University
EXTENSION SERVICE

An Apple a Day

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Educational Objectives

1. Understand health benefits and nutritional information about apples.
2. Increase the use of apples in diets by incorporating different varieties and new recipes.
3. Encourage learning about the historical and horticultural significance of apples.
4. Promote healthy activities and trips to apple festivals, orchards, or farmers markets.

How Do You Like Those Apples?

Americans have enjoyed apples since colonists began growing trees from seeds and cuttings in Jamestown, Virginia. Although its ranking as most consumed fruit has been surpassed by bananas, United States' consumers still eat more than 50 pounds of apples per year. About one-third of the apple consumption is in fresh fruit, while the other two-thirds are in processed treats, like sauces, juices, and pies. Apples are commercially grown in every state generating approximately 2.7 billion dollars annually. Although 7,500 varieties are grown throughout the world, 2,500 of these are grown in the United States with about 100 commercially grown.

West Virginia has substantial historic ties to apple production, and this is a key agricultural commodity for the Eastern Panhandle of the state. Believe it or not, the legendary "Johnny Appleseed" was a real person named John Chapman who established several nurseries in West Virginia along the Ohio River. Wellsburg, in the Northern Panhandle, was the center of this industry in the early 1800s. The Grimes Golden apple variety was discovered in Wellsburg by Thomas Grimes in 1805. After the Civil War, orchard production moved to the Eastern Panhandle in Mineral, Hampshire, Morgan, Berkeley, and Jefferson counties. Maximum state production rose to 12 million bushels in 1931. Now, West Virginia averages 2.3 million bushels per year, ranking eleventh in the United States in total production.

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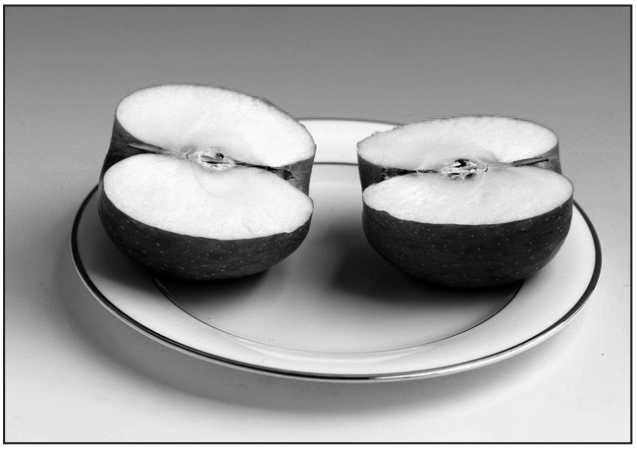
The second, but more well-known, commercial apple variety discovered in West Virginia was the Golden Delicious. Thought to have originated from a Grimes Golden tree, the original Golden Delicious grew from a chance seedling. Anderson Mullins discovered the tree on the family farm in Clay County. Stark Brothers nursery bought the rights to the tree, and now the Golden Delicious is marketed worldwide. Offspring of the original tree are planted on every continent. More than 50 different varieties trace their ancestry to the Golden Delicious, including the popular Gala, Gingergold, Jonagold, Mutsu, Nittany, and Pink Lady. Clay County has been home to the Golden Delicious Festival for 41 years. Since 1995, the Golden Delicious has been honored as the official state fruit of West Virginia.

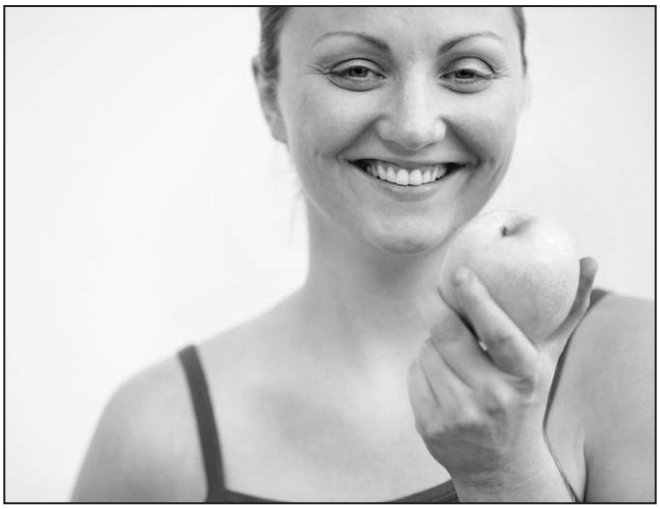
Nutritional Value of an Apple

There is some truth behind the saying, "an apple a day keeps the doctor away" due to the nutritional value of the apple. A medium-sized apple with the skin is packed with nutrients. It provides nearly 20% of the daily requirement for fiber and has no saturated fats or cholesterol. It is also an excellent source of antioxidants, which are the nutrients and enzymes in our bodies that help prevent the development of chronic diseases, such as heart disease and cancer. An apple has 14% of the daily requirement for vitamin C and also smaller amounts (2%) of vitamin A, calcium, and iron. Apples are also low in calories with a medium-sized apple only having around 60 calories.



Eating apples in their raw form maximizes their nutritional value. Apple slices may also be served with peanut butter or used to make a number of delicious desserts, such as muffins, cobblers, and crisps, or they can be used alongside meat dishes, such as pork or poultry. A quick Internet search for creative ways to eat apples provides a wide array of innovative recipes, such as apple cinnamon pancakes, apple cheddar melts, apple and peanut butter shakes, and butternut squash and apple soup, to name a few.

To keep apples fresh longer, it is important to refrigerate instead of keeping them at room temperature. Remember, do not rinse apples until ready to use. Mix one part lemon juice and three parts water to prevent apple slices from browning.



Apple Sayings

The American language has a collection of expressions that refers to apples. Several have an interesting story behind them.

- "An apple a day will keep the doctor away" – this expression is derived from the old English saying, "Ate an apfel avore gwain to bed, make the doctor beg his bread." While the author of this common expression has passed away, the sentiment rings true given the nutritional value of apples.
- "American as apple pie" – pies, pie-making skills, and apple seeds came over with the

Pilgrims and other early settlers. Some of the first apple pies were thin and not as thick as the apple pies enjoyed by Americans today. In the early 1900s, apple pie came to represent prosperity in America. This prompted one newspaper to declare in 1902, "No pie-eating people can be permanently vanquished," thus prompting the creation of this expression.

- "The Big Apple" – this name is associated with New York City and hails from the 1930s and 1940s era when jazz was popular. New York City had numerous jazz clubs and jazz artists like Charlie Parker, who was one of the most influential jazz soloists of his time. As a result, Manhattan was associated with having "lots of apples on the tree" or in other words, lots of places to play jazz.
- Some other common apple sayings include:
  - "A is for apple."
  - "An apple-polisher."
  - "Comparing apples to oranges."
  - "Don't upset the apple cart."
  - "One rotten apple spoils the whole bunch."
  - "The apple of my eye."
  - "The apple never falls far from the tree."

Can you think of more? Conduct an activity with your club. Find out how many apple phrases or idioms they can remember. Have someone research the origins and importance of these sayings.

Apple Activities

Delve a little deeper into the orchard of ideas below:

- Buy a variety of different apples and have a taste test.
- Have an inventive recipe contest for unusual uses of the fruit.
- Challenge club members to think of as many healthy ways to use apples as they can and list them.
- Play a quiz game with apple myths and discern between apple fact, fiction, and folklore.
- Take a fun field trip to an apple-themed festival (e.g., Apple Butter – Berkeley Springs, Golden Delicious – Clay, Mountain State Apple Harvest – Martinsburg, Old Fashion Apple Harvest – Burlington, and Salem Apple Butter Festival – Salem).
- Organize a food drive for students. Donate apple sauces, butters, and juice packs for children.
- Partner with a county Extension Master Gardener Program for a service activity, such as a fruit tree pruning workshop.
- Visit an apple grower or fruit research center.
- Plant a tree. Call your local agriculture Extension agent for detailed planting advice.

Planting Apple Trees

Carefully, select a planting site. Avoid low lying, poorly drained areas and frost pockets. Choose a higher, sloped area where cold air can circulate freely. Take a soil test prior to planting. After receiving results, add amendments 12 to 18 inches below the surface. Buy a one-year-old nursery tree about 4 to 6 feet tall. If the roots are dried out, soak in water for 24 hours. Dig a hole twice the diameter of the roots and 2 feet deep. Cover the roots and firm up soil to remove air pockets. Do not add fertilizer at this time, as roots can be burned. Ensure the graft union is 2 inches above soil. If not, roots may emerge from the scion. Water generously to get rid of air pockets. Plant two or more varieties for successful pollination.

Variety	Harvest	Comments
Empire	Fall	Produces early. Good storage. Cross between McIntosh and Red Delicious. Crisp and creamy. Good for cooking and desserts.
Gala	Early Fall	Sweet. Good for eating fresh. Developed in New Zealand.
Golden Delicious	Fall	Crisp, sweet-tart, and firm. Great in salads, sandwiches, and with savory items like cheeses.
Granny Smith	Fall	Green, very tart, and crisp. Crunch holds up for firm pies. Discovered in Australia by Maria Ann Smith. Long storage life.
Honeycrisp	Early Fall	Good for eating raw. Very popular, but expensive. From University of Minnesota program.
Idared	Fall	All-purpose apple. Trees bear well. Pink-hued flesh.
Johnathan	Early Fall	Susceptible to fire blight disease. Sweet-tart flavor with spicy note. Good all-purpose apple.

Variety	Harvest	Comments
Jonagold	Fall	Cross between sweet Golden Delicious and tart Johnathan makes for a unique flavor. Highly recommended for eating fresh. Popular dessert apple.
Lodi	Summer	Sharp, early apple best for cooking. Good for sauces. Yellow-skinned with tender flesh.
McIntosh	Summer	Juicy and "mealy." Good for sauces/ butters. Don't bake.
Red Delicious	Early Fall	Bland but holds up for hand eating. Not a good cooking apple but used for pies.

Apple recipes found at *http://www.fh.ext.wvu.edu/publications/ceos-lessons*.

Sources

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