

'GOLDEN DELICIOUS' APPLE — FAMOUS WEST VIRGINIAN KNOWN AROUND THE WORLD

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Perhaps no other West Virginian has touched the lives of so many people in so many places as the 'Golden Delicious' apple. With the pride typical of people from our state, we welcome this opportunity to share the story of the 'Golden Delicious' with readers of the Fruit Varieties Journal.

In the autumn of 1905, on a 36 acre farm in Clay County, West Virginia, Anderson Mullins noticed a precocious seedling with large yellow apples, unlike any variety seen before. Little did this humble hillside farmer realize that his discovery would one day change the course of world apple production. The golden apple tree located on a hill near Porter's Creek has since become the mother of millions of such trees throughout the globe.

For nine years after he first observed the tree, Anderson Mullins harvested an abundant crop annually, even when other trees in the family orchard were barren. The apple kept in good condition in the Mullins' cellar until April. Anderson called his discovery, which was at this time known only among neighbors and friends, "Mullins Yellow Seedling."

In the spring of 1914, Anderson Mullins sent three apples by parcel post to Stark Brothers Nursery, Louisiana, Missouri, modestly describing the observations he had made on the bearing habit of the tree and the quality of the fruit. When Lloyd Stark opened the small package of fruit, he was not very excited because yellow apples had never been big sellers. Nevertheless, Lloyd and Paul decided to sample a slice of one of the apples. The apple

¹West Virginia University.

which had been stored in Mullins' cellar all winter was still firm, but what was even more impressive was the spicy flavor!

Quickly realizing the importance of the discovery, Paul Stark, an aggressive pomologist, set out on a journey that would later be called "The Trail of the Golden Apple." He told of his travels to West Virginia in a story often printed in his catalogs:

... he (Paul Stark) found he could reach Odessa only by a narrow-gauge railroad, and at the end of the line he would have to travel by horseback. Stark rode on through the mountains and finally spotted a mailbox with the Mullins name on it. He knocked on the cabin door, but nobody answered. He was about to give up when he decided to have a look around. There was a small neglected orchard back of the house with gnarly apples, but high up on the side of the mountain back of the house, his eye suddenly caught a glint of golden yellow. He scrambled up the rocky slope, and there was the original tree loaded with big golden apples. He was biting into one when a mountaineer appeared from nowhere. Stark identified himself saying, "That's some apple." "Name's Mullins," the man said, "I sent you some." (2)

Stark found what he was looking for an exciting new apple that would become a gold mine to the fruit industry. "It just grew there," Mullins told Stark. It was a naturally occurring chance seedling. Later research indicated that it grew from a 'Golden Reinette,' which was pollinated by a 'Grimes Golden,' another West Virginia discovery probably planted by Johnny Appleseed (John Chapman).

Stark Brothers paid \$5,000 for the original 'Golden Delicious' tree. For thirty years, the Starks sent Bewel Mullins, Anderson's nephew, \$100 a year to maintain the tree in good health as long as possible. Paul Stark corresponded with Bewel regularly to make sure that the tree was properly fertilized and sprayed. He also asked Bewel to keep accurate written and photographic records of the tree, paying close attention to any indications of a weakness.

When the Starks purchased the Mullins' tree, they also acquired a 900 square foot tract of the hillside on which the tree stood. To protect their valuable real estate, the Starks built a woven-steel cage around the original 'Golden Delicious' tree. The door of the cage was secured by a lock, and a battery powered burglar alarm was attached to a lead-enclosed wire which was strung from the cage to the Mullins' farmhouse. The alarm was activated only once, when the family cow strayed too close to the compound.

Research conducted at West Virginia University by H. E. Knowlton established the fact that the 'Golden Delicious' was equal to the old 'Ben Davis' and the 'Grimes' as a pollinizer for other apple varieties. The female element is equally as virile as the male side. Fruit is born on one-year twigs and terminals in addition to fruit spurs, and record fruit loads are produced two to three years after planting. The tree is easy to manage and is adaptable to a wide range of soils and climatic conditions. These attributes make the 'Golden Delicious' a popular breeding parent. 'Mutzu (Crispin),' 'Jonagold,' and 'Gala' are some of the successful crosses. The original tree bore high quality, heavy crops for 50 years.

The primary weakness of the 'Golden Delicious' is that the skin tends to russet in humid climates. Another West Virginian, Henry W. Miller, Jr., offered a \$5000 reward for the discovery of a russet free 'Golden,' but no claims

were ever made. Evaluations by J. N. Cummins, P. L. Forsline and R. D. Way showed that 'Smoothee' (Gibson) has the least russet of the currently available strains (1).

The new yellow cultivar had all the characteristics of a "winner." The American Pomological Society awarded the Wilder medal to the 'Golden Delicious' in 1921. Fifty years after the discovery of the 'Golden Delicious,' a ceremony was held in commemoration of the introduction of this variety to the rest of the world. United States Senators, the governor of West Virginia, faculty of West Virginia University, ambassadors from foreign countries and representatives of the United States Department of Agriculture paid homage to the tree that was discovered on Porter's Creek. Edwin Gould, Superintendent of the West Virginia University Experiment Farm at Kearneysville and one of the featured speakers, paid his tribute to the 'Golden Delicious' by saying, "Perhaps there have been other areas of greater impor-



Figure 1. Senator Jennings Randolph and Paul Stark, Sr. joined other Horticulture VIP's in planting a 'Golden Delicious' to commemorate the 50th anniversary of discovery. The list of distinguished horticulturists who attended included Paul Stark, Edwin Gould, L. P. Batjer, H. B. Tukey, Bill Luce, A. J. Heineke, and delegates from Italy, France, Belgium, Great Britain, Mexico, Lebanon, Australia, New Zealand, South Africa and Canada.

tance, such as the progress that has been made in the control of our insect and disease problems, but no one single factor has had as great an impact on

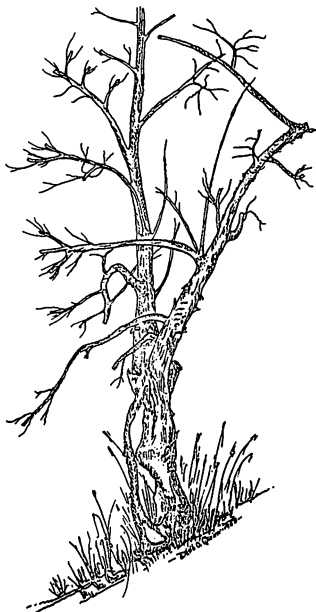


Figure 2. The passing of the original Golden Delicious tree, 1958. Joseph Barrat and David Quinn (WVU) made a pilgrimage to the original Golden Delicious tree in 1958. They were dismayed to find that the tree had died. Prof. Quinn, who is also an artist, made this sketch which appeared on the cover of the 34th Proceedings of the Cumberland-Shenandoah Fruit Workers' Conference.

our industry as the discovery of this one variety of apple" (2).

Unlike the red 'Delicious' which took over a decade to gain renown, the 'Golden Delicious' was immediately acclaimed and soon became a leading cultivar in the United States and abroad. Over 1.5 billion pounds of 'Golden Delicious' are grown annually in the United States, and at least this many are grown in the rest of the world. This multi-purpose apple is popular for both fresh and processing uses.

As humbly as the 'Golden Delicious' originated, so it expired in the spring of 1958. Today, all that remains are a few remnants of the steel cage covered by dense underbrush. However, its millions of progeny are scattered throughout the world wherever apples are grown, as monuments to a great West Virginian.

Literature Cited

1. Cummins, J. N., P. L. Forsline, and R. D. Way. 1977. A comparison of russetting among 'Golden Delicious' subclones. *Hort. Science* 12(3):241-2.
2. Terry, D. 1966. *The Stark Story*. Missouri Historical Society. St. Louis, MO.

Additional Reading

- Maas, V. 1970. Golden Delicious. pp. 69-85. In *North American apples: varieties, rootstocks, outlook*. Michigan State Univ. Press, East Lansing.

WORKSHOP ANNOUNCEMENT

Temperate Zone Fruits in the Tropics and Subtropics

The workshop will be held December 12-16, 1988 in Thailand and is sponsored by the following groups: International Society for Horticultural Science; Horticultural Science Society of Thailand; Department of Agriculture, Ministry of Agriculture and Cooperatives, Thailand and the Horticulture Department of Datasetsart University, Thailand. The topic areas for oral presentations and posters are as follows: 1 - germplasm selection and performance; 2 - breaking dormancy and avoiding rest; 3 - propagation and rootstock; 4 - cultural practices and pest control; 5 - marketing and economic factors. For additional information contact Dr. Suranant Subhadrabandhu, Horticulture Department, Kasetsart University, Bangkok 10903, Thailand.