

The 'Delicious' Apple

CARLOS D. FEAR AND PAUL A. DOMOTO

The story of the 'Delicious' apple has been told many times and is almost as well known among apple enthusiasts as the legend of Johnny Appleseed. In Iowa, it represents an important part of our state heritage. From its beginning as a persistent unwanted seedling to its prominence in the U.S. and world fruit industry the 'Delicious' apple, in particular its strains, has risen to become the most widely planted cultivar in the world (1). Never before in the history of pomology has one cultivar been so widely studied. It is appropriate to review the history and contribution of this important cultivar in the Fruit Varieties Journal.

It was in 1872 that Jesse Hiatt of Peru, Iowa discovered a sprout arising from the roots of a 'Bellflower' seedling which had been previously cut down twice because it was growing out of the row. It is said that Hiatt remarked about the sprout which became the original 'Delicious' tree, "If thee must live, thee may." Hiatt realized when the sprout developed into a tree and began to fruit that it was not like the 'Bellflower' parent from which it came. The aroma was different and the fruit had a distinctive shape with prominent calyx lobes. Hiatt was so impressed with the characteristics of the seedling that he named it 'Hawkeye' in honor of Iowa's nickname.

Jesse Hiatt so believed that he had discovered the best apple in the world that he tried for 11 years to convince others of its value by giving samples to friends and exhibiting it at fairs and fruit shows. It was not until 1893 that Hiatt's discovery found an admirer in

Clearance M. Stark at a fruit show at Stark Brothers Nursery in Louisiana, Missouri.

Mr. Stark had been reserving the name 'Delicious' for a variety worth the significance of the name, but not until tasting 'Hawkeye' had he found such a variety. The discovery and renaming of 'Hawkeye' almost failed to occur because the name and address of its exhibitor was lost at the show. Mr. Stark could only wait and hope that the fruit deserving the name 'Delicious' would be exhibited again the following year. Fortunately, Hiatt exhibited 'Hawkeye' again in 1894 and Stark immediately recognized it. Permission to propagate 'Hawkeye' was given to Stark Brothers Nursery and henceforth the variety was known as 'Delicious'.

Development of 'Delicious' as a Variety

Several factors have contributed to the rapid development of 'Delicious' as a leading apple variety. Stark Brothers Nursery accelerated the development of 'Delicious' as a well known variety by including trees of it as a free gift with nursery orders. The enthusiasm C. M. Stark had for the cultivar and the response of customers who had received free trees no doubt had a significant effect on stimulating extensive planting. By 1922 the annual value of the 'Delicious' crop was estimated at 12 million dollars.

'Delicious' as a cultivar possesses several characteristics which led to its rapid acceptance and planting. First, the apple was an extremely attractive cultivar and its distinctive shape and

prominent calyx lobes allowed it to become easily recognized by consumers. For the grower, 'Delicious' possesses good storage and shipping qualities as well as being moderately easy to grow to high quality. Problems with fireblight, poor fruit finish, and blister canker known to other varieties were unknown to 'Delicious.' Selection of high coloring strains has further enhanced its appearance and has allowed growers to harvest highly colored fruit before it becomes too mature.

As a tree, 'Delicious' and its strains have been accepted by growers because of its hardiness, good vigor, annual bearing tendency, precociousness (although somewhat low by present standards), and its ability to grow satisfactorily over a wide geographic area. Its popularity among consumers has overshadowed its regional problems of bitter pit, internal bark necrosis, dead spur disorder, additional tree training requirements, poor fruit set, variability in typiness, and union necrosis when propagated on certain rootstocks.

Strains of 'Delicious'

Strains or mutants tracing to the original 'Delicious' number over 100. From the beginning, when mutants were first discovered in 1919, strains with better coloring, different color patterns, and spur-type growth have been selected. Most of these have been either whole tree mutants or bud mutations discovered in commercial orchards.

'Richared' was one of the first strains found. It was found as a bud mutation of 'Delicious' in 1919 in an orchard in Monitor, Washington. 'Richared' differed from the parent 'Delicious' by having better fruit color and more blushed red color pattern.

'Starking' was found in 1921 in an orchard in Monroeville, New Jersey. It developed color much earlier than 'Delicious' and was a very significant mutation because it overcame one of

the main faults of 'Delicious', that being a lack of good red color development until late in the season, sometimes when the fruit was too mature for good storage. 'Starking' became widely planted and itself became the parent of more than 25 named strains.

The first spur type from 'Delicious' was 'Okanoma' found in 1921 in Omak, Washington. 'Okanoma' did not find wide acceptance because of its poor coloring characteristics. However, many other spur types followed and are widely planted now. Fisher and Ketchie (1) discussed strains of spur and standard types. Spur types are distinctive in several ways from standard types by having less branching, flower initiation on short spurs instead of side shoots, and their tendency to grow more upright. Spur strains also bear earlier and generally have better skin color.

Although strain mutations of 'Delicious' have been selected for higher color, coloring pattern, and spur type growth, other morphological, chemical, and physiological characteristics of the tree and fruit have occurred among the strains, and are well documented in the review by Fisher and Ketchie (1). Included among these characteristics are differences in fruit set, productivity, and fruit typiness. Due to these differences as well as color and growth habit, studies comparing 'Delicious' strains are being conducted at several sites in the U.S. and elsewhere to determine which strains are best adapted to the various areas. Currently over 40 strains are for sale in the nursery trade.

'Delicious' as a Parent in Breeding

'Delicious' and its strains have been used as parents by apple breeders in many countries. At least 33 named cultivars have 'delicious' or one of its strains as a parent in their background. Some of these varieties involving 'Delicious' directly as a parent (e.g. 'Empire', 'Fuji'), or as a parent further back in their ancestry (e.g. 'Gala')

have achieved worldwide recognition for their fine quality. Several others involving 'Delicious' as a parent are well known and appreciated in certain regions of the country (i.e. 'Chieftain' and 'Jonadel' in Iowa, 'Melrose' in Ohio, and 'Regent' in Minnesota).

The 'Delicious' Tree Today

At the time Jesse Hiatt died in 1898, he and his variety were still unknown to the world. By 1922, however, Jesse Hiatt and 'Delicious' were well known. In August of that year a 50th year anniversary celebration of the discovery was planned and a 6-ton inscribed boulder monument was dedicated and placed in the Winterset City Park, Winterset, Iowa. The original tree was still living but difficulties in purchasing land right-of-way prevented dedicating the monument at the site of the tree.

The original 'Delicious' tree lived until the Armistice Day Freeze in 1940, when temperatures dropped 50°F to near zero in 24 hours after a mild fall. With its incredible vigor, the tree sprouted again after being killed back to the ground and developed two sprouts which eventually fruited like the original tree. One of these trees still stands proudly surrounded by cornfields as the source of one the greatest varieties ever discovered. The world should be thankful that Jesse said of the 'Delicious' seedling, "If thee must live, thee may."

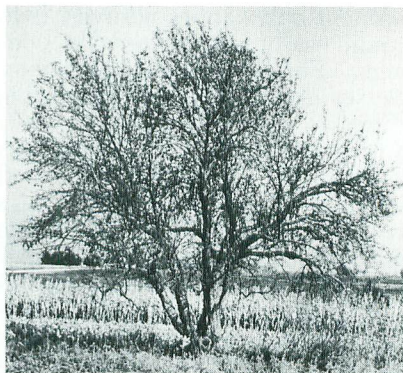


Fig. 1. The 'Delicious' tree today.

Literature Cited

1. Fisher, D. V. and D. O. Ketchie. 1981. Survey of literature on red strains of 'Delicious'. Wash. State Univ. College of Agr. Res. Cntr. Bulletin 0898.

Additional Reading

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New Cover Format

The January 1986 issue initiates a new cover format that features a detailed botanical illustration of an important variety. Each issue will feature a different variety coupled with a short paper describing its origin, history and importance. It is hoped that varieties of a number of fruit crops can be featured and that as new

issues accumulate each member will have an archive of high quality drawings and history of the varieties that are so important to our fruit industry.

Members who would be willing to contribute an article describing an important variety as well as fresh plant material for the artist to illustrate are encouraged to contact the editor.