

Experiment Station's successful Empire apple has its 30th birthday

By Linda McCandless

Empire, the most successful apple variety ever released by Cornell's Agricultural Experiment Station in Geneva, N.Y., turned 30 this weekend. Station pomologist Roger D. Way officially introduced Empire to the world on Sept. 15, 1966, after two decades of careful evaluation.

"Empire [a cross between McIntosh and Red Delicious] is arguably the most successful apple variety ever released by the New York State Agricultural Experiment Station," said Ken Silsby, fruit extension specialist with Cornell Cooperative Extension, in an article on "Tree Fruits" in the August issue of *American Agriculturist*.

According to Silsby, Empire has gained a wide acceptance for a number of reasons. It is productive under a wide range of planting systems; it is harvested during the gap between McIntosh and Delicious; it is resistant to preharvest fruit drop and storage scald; it has low susceptibility to fire blight; and it has outstanding fruit quality for both color, firmness and storage.

"It can take 15 to 20 years for a new introduction to gain wide acceptance among commercial growers and consumers," said Susan K. Brown, director of the Experiment Station's apple breeding program. She released the station's newest apple, Fortune, last January. "Empire is an excellent example of just how worthwhile these introductions can be in the long term," Brown said.

Empire originated from the cross McIntosh x Delicious, made in 1945 from open-pollinated seeds collected by Lester C. Anderson, a Cornell fruit nutritionist who used his own orchards in the Hudson Valley for research. Under the directive of then-Station Director A.J.

Heinicke, apple breeders from Geneva went to one of Anderson's orchards in which only McIntosh and Delicious apples grew, harvested 20 bushels, removed the seeds, ran them through the usual after-ripening, dormancy treatment process, and grew out large populations. In 1947, approximately 1,199 seedlings of N.Y. 45500, as the McIntosh x Delicious was called, were planted at the Experiment Station. From these seedlings, further selections were made in 1954 and observed for 12 years in a second trial planting. Roger Way, who came to work at Geneva in 1949, determined N.Y. 45500-5 was suitable for release, and it was officially introduced to the world at the New York State Fruit Testing Association meetings in Geneva in 1966.

In 1996, New York growers will produce 110 million pounds of Empires, representing an increase of 16 percent from 1995 figures. That is roughly half of the total U.S. Empire crop.

Empire is one of five prominent commercial varieties that have been released by the Agricultural Experiment Station during its 116-year history of service to New York state agriculture. The other four are Cortland, Jonagold, Macoun and Jonamac. In 1996 these varieties will account for roughly one-fifth of all New York apple production.