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The 'York Imperial' Apple

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For many years the 'York Imperial' cultivar dominated the apple industry of the concentrated Appalachian fruit production area extending from northern Virginia to southern Pennsylvania. However, more recently it has given way to 'Red Delicious' and 'Golden Delicious' cultivars. While 'York Imperial' is primarily a processing apple, improved red strains are finding gradual increased popularity for fresh late season markets.

'York Imperial' dates back to the early 1800's when it was found on the farm of Mr. Johnson which adjoined the borough of York, Pa. It attracted attention because of its long keeping quality. By the early 1900's it had become widely planted throughout the region for export to European markets which were quite profitable until about 1930 when British import restrictions sharply changed the Appalachian area markets. It became difficult for 'York Imperial' apples to compete on domestic markets with red cultivars where only very top grades were in demand. The expanding apple processing firms throughout the area utilized lower grades of fruit but they were largely salvage-type operations.

As apple processors broadened their product lines, and markets for sauce and slices improved, the 'York Imperial' cultivar became preferred by processors over other cultivars. It is a firm to hard apple with a creamy yellow flesh which provides a desirable colored sauce. The firm fruit texture provided slices that held their shape and produced a canned product favored by pie bakers.

The superior keeping quality of the raw product and its resistance to bruising favors the handling and holding of fruit for processing. 'York Imperial' is characterized by a lopsided shape and is typically flattened with a small core. When peeled, cored and trimmed it results in high yields of processed product from a given weight of raw fruit.

'York Imperial' is a late season cultivar maturing between 'Stayman' and 'Winesap.' Harvest can typically be extended over several weeks. Currently, processors divide the delivered fruit into three categories, one held in the yard for early processing, a second placed in conventional storage, and a third placed in controlled atmosphere storage for later use to extend the processing season.

'York Imperial' is a high yielding cultivar and typically requires chemical thinning. Favorable thinning results can be achieved with either naphthalene acetic acid or naphthylacetamide. It does tend to become alternate bearing unless crop loads are reduced. If set is not reduced fruit tends to "rope" up in clusters and as fruit size increases individual fruits are forced off since stems are short.

'York Imperial' is moderately tolerant of the more common apple diseases in the Appalachian region (apple scab and powdery mildew), however, it is quite susceptible to cedar rusts and fire blight. One of the more serious problems is the susceptibility to the physiological disorder 'York' spot or cork spot. This is characterized by one quarter inch or larger corky areas near

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the surface of the fruit. The use of soluble boron sprays during bloom or early post bloom periods will reduce but not eliminate the problem.

The 'York Imperial' tree is typically large with an upright growth habit. It is a relatively easy tree to grow and to maintain. It is common practice in mature bearing 'York' trees to make only a few large pruning cuts each year and only limited detailed pruning cuts.

The 'York Imperial' is still a major cultivar throughout the Appalachian fruit region, however, the average age of bearing trees is increasing and newer orchards are being more widely planted to fresh market cultivars. As older orchards are eliminated the total production of 'York Imperial' is expected to decline. Where newer plantings of 'York Imperial' are being established the trend is toward smaller than standard trees, more closely spaced and intensely managed. Prices received for fruit for processing will play a significant role in new planting trends and where 'York' trees are planted improved red coloring strains such as 'Commander York' and 'Red Yorking' will likely dominate.

Additional information can be found in Volume 1 of "Apples of New York" by S. A. Beach and "North American Apples: Varieties, Rootstocks, Outlook," Michigan State University Press, East Lansing, 1970.

New Book—Blueberry Science

It has been twenty years since Eck and Childers edited *Blueberry Culture*, the first definitive reference work on the cultivated blueberry. Since then, the commercial blueberry industry has undergone a phenomenal expansion not only in North America, but in Europe, Australia, New Zealand, and Japan as well. In his new book, *Blueberry Science*, Paul Eck has documented this industry development of the highbush and rabbiteye blueberry. In *Blueberry Science* Eck synthesizes and interprets the major research advances which have greatly extended our knowledge of blueberry culture during the last decades. Not only have improvements in management systems been realized, but entirely new technologies and scientific developments have resulted in new cultural practices. He describes, for example, the successful interspecific hybridization of blueberries to provide low chill tetraploid types that can be grown as far south as central Florida; the development of tissue culture as a method of blueberry propagation; and the incorporation of exogenous growth regulators for the control of plant fruit development.

Although the author discusses mainly the advances in the cultivation of the cultivated highbush and rabbiteye blueberry, he draws on studies of the wild lowbush blueberry to explain aspects of plant physiology, plant and fruit development, and nutrition that affect blueberry culture. New cultivars of highbush and rabbiteye blueberry released since 1967 are described in detail. Entire chapters are devoted to plant and fruit development as well as to the nutrition of the blueberry plant. On occasion the author has made reference to earlier research work when it added to the clarity and completeness of the discussion.

Blueberry Science by no means can be considered a second edition of *Blueberry Culture*. It is rather a supplement to the earlier volume, which will take the reader up to the current state of the art in blueberry culture. Together, the two books represent the most definitive reference works available on the cultivated blueberry.