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'EARLY CORTLAND' AND 'GENEVA EARLY' APPLES

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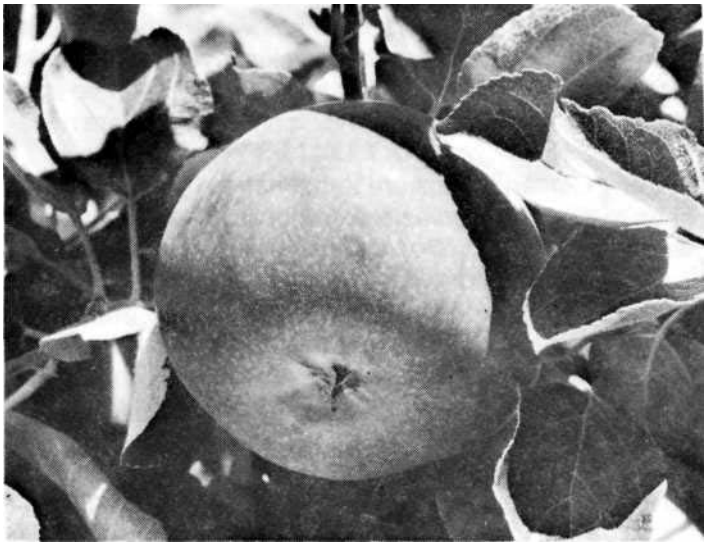
'Early Cortland'



'Geneva Early'

EARLY CORTLAND'

ORIGIN

'Early Cortland' originated from the controlled cross-pollination, 'Cortland' x 'Lodi', made in 1938. It was selected in August 1949 from a progeny of 44 seedlings. During its testing period before introduction, it was identified as New York 49-19.

TESTING

'Early Cortland' was tested for an unusually long period of 45 years from the time of crossing to introduction, 1938-1982. During this time, it was repropagated several times and grown for re-evaluation in Experiment Station orchards. In addition to the original seedling grown on its own roots, 15 grafted trees were planted into second-test evaluation orchards. Nursery trees of N.Y. 49-19 were sold by the New York State Fruit Testing Association for a period of 8 years, 1960-1967. Commercial and home garden growers purchased trees to test it. This Department also used N.Y. 49-19 to graft onto several kinds of stocks to study rootstock effects on tree performance in commercial orchards.

In 1969, 'Early Cortland' was tested by Olaf Einset, Lofthus, Norway. Mr. Eirrset was formerly a pomologist at the Geneva Station. In Norway, he was so favorably impressed with the variety that he gave it a name of his own choosing, 'Mari', and encouraged Norwegian growers to try it.

Beginning about 1970, several hundred bushels of N.Y. 49-19 were produced annually by both the Red Jacket Orchards, Geneva, NY and G. Field Orchards, LaFayette, NY. Both have marketed the variety under the name, 'Early Cortland'.

CHOOSING A NAME

The name, 'Early Cortland', was chosen by a group of 10

Geneva pomologists. In view of the fact that this variety has already been marketed under this name, it is an appropriate choice. However, there is a negativeaspecttothisname.It seems to imply that this is an early ripening mutation of 'Cortland', which it is not. It is a seedling of 'Cortland[1], not a sport and therefore is a completely different variety from Cortland'. Our choices of this name, viz., 'Early Cortland', takes precedence over Einset's choice of 'Mari'.

FRUIT

'Early Cortland' is an early fall, market apple. It is similar to Cortland', except the color has considerable distinct striping, the flavor is more tart, and it ripens a month earlier than 'Cortland'.

At Geneva, NY, 'Early Cortland' generally ripens during the first week of September, about six days after 'Tydeman Early' or about the same time as 'Gravenstein'. Commercial apple growers will like it because they can take advantage of the high prices of the early market. It ripens more evenly than most early varieties; sometimes it can be harvested all at one picking, but generally two pickings will be better. Like 'Cortland', 'Early Cortland' fruits hang well to the tree even after they have fully ripened; no stopdrop sprays are needed.

'Early Cortland' fruits are large, generally 3 to 3 1*12* inches in diameter. Fruit sizes are more uniform than most varieties.

Skin color is 60 to 95 per cent red with distinctly splashed striping. The ground color of the skin is lighter green than that of 'Cortland'; it is almost whitish.

Fruit shape is roundoblate to roundconic. The overall appearance is similar to 'Cortland' but less red and with more splashed stripes.

The flesh is whitish cream colored and semifirm in texture. The flavor is subacid to somewhat tart. It is somewhat less pleasant to eat out of hand than 'Cortland' because it is more tart and it has less of the desirable aromatic flavors. Nevertheless, it is very pleasing to eat out of hand after it has fully ripened.

STORAGE

'Early Cortland' has a much longer storage life than most early ripening apple varieties. Storage life tests at 31 F. in a high relative humidity were conducted for 7 years (1962-1968). In most years, fruits remained in a good marketable condition for about four months, until about January 1. Its storage life is about as long as that of 'McIntosh'.

TREE

'Early Cortland[1] trees are very similar to 'Cortland'. They are above medium in vigor. Trees can be propagated on the full range of size- controlling rootstocks to achieve the desired tree size.

Like 'Cortland', fruits are borne on spurs and on twig terminals. Branches are more willowy than some varieties, and heavy cropping often causes trees to appear somewhat drooping. 2

PESTS

'Early Cortland' has no known resistances to apple diseases or insects. Therefore, a full schedule of chemical sprays will be needed.

Tests conducted by the Department of Plant Pathology showed Early Cortland' to be very susceptible to fire blight *(Erwinia amylovora).* However, in an apple cultivar evaluation orchard where fire blight has been especially severe on other varieties, trees of 'Early Cortland' have suffered very little blight infection.

POLLINATION

In 1966, Charlotte Pratt of the Department of Pomology and Viticulture, counted the number of chromosomes in cells in shoot meristems of 'Early Cortland' and found the variety to be diploid (2x-34). Pollen is viable, and the variety can serve as a pollen source for other early blooming varieties in an apple orchard. 'Early Cortland' has been used effectively as a pollen parent in controlled hybridizations, which proves that it has good, viable pollen.

Twelve years of bloom records, at Geneva (1960-1971) showed that, on the average, 'Early Cortland' bloomed about half a day before 'McIntosh'. Thus, 'Early Cortland' can serve as a mutually effective cross-pollenizer in orchards with most early blooming varieties, such as 'McIntosh' or 'Idared'. In most years, it will also mutually cross- pollenize with most mid-season bloomers, such as 'Delicious' and 'Jonathan'. It should not be depended upon as a pollenizer for late blooming varieties, such as 'Golder Delicious' or 'Rome'. Commercial growers report that the flowers of 'Early Cortland' are hardier and more frost resistant than those of 'Empire'. In cold bloom seasons, it will usually set good crops, even when honeybee flight is poor.

FRUIT YIELDS

Trees of 'Early Cortland' produce good heavy crops. This is one of the special attributes of this new variety. Fifteen-year-old trees on Malling-Merton 106 rootstocks often produce 10 bushels or more of fruit, annually. Yield records of individual trees over a decade show that there is a slight tendency for some trees to crop somewhat biennially, though biennial cropping is much less of a problem than it is with its parent, 'Lodi'.

COMMERCIAL USEFULNESS

Apple varieties which are grown in large volume commercially usually ripen late, after mid-September. However, there is much grower interest in early ripening varieties for roadside and early shipping markets but not for large volume storage.

'Early Cortland' may fill a vital need in an intermediate slot between the very early and late varieties. Although ripens in early mid-season, it is an excellent commercial type. Commercial growers say that trees are precocious

and regular croppers and fruits make good applesauce. The fact that these growers have already accepted and planted this good new variety is one of the reasons we are introducing it.

AVAILABILITY

Limited quantities of nursery trees of the 'Early Cortland' apple can be purchased from the New York State Fruit Testing Association, Geneva, NY 14456. After 1984, it should be available from a few other fruit tree nurseries.

GENEVA EARLY'

ORIGIN

The new 'Geneva Early' apple originated from a 'Quinte' x 'Julyred' cross made in 1964. Initially identified as N.Y. 444, 'Geneva Early' was selected in July 1973 from a population of 173 seedlings grown from this cross.

TESTING

After the original first-test seedling tree had demonstrated good fruiting performance for three years,[1] 1971-1973, N.Y. 444 was selected for further testing. In April 1974, scions were cut from the original tree and topgrafted onto an established 8-year-old tree growing in a second-test evaluation orchard. Later, in July 1974, two irees were budded onto Malling-Merton 106 rootstocks in the nursery. These two were orchard planted in the spring of 1976.

Orchard performance over a 7-year period was very good and the selection was deemed worthy of introduction. Nursery trees of N.Y. 444 were sold by the New York State Fruit Testing Association for 4 years, 1978-1981.

CHOOSING A NAME

A group of 10 pomology faculty and staff members made the decision that the variety should be named 'Geneva Early'.

FRUIT

'Geneva Early' is one of the very earliest ripening apples. It is large, and has good eating quality, and is a very marketable type of apple.

Its special feature is its very early ripening season, usually about August 1 at Geneva, NY but sometimes as early as July 13. It is one ofthe earliest ripening of all varieties and is one of the most acceptable of all the very earliest kinds. Like all early ripening apple varieties, 'Geneva Early[1] ripens unevenly and requires two or three pickings. This uneven opening is an advantage to the home orchardist who wishes to harvest a few ripe apples daily over a period of 2 weeks. But uneven ripening is a disadvantage to the commercial grower for whom it is most profitable to harvest the entire crop at one picking. Birds will sometimes peck into very early ripening apples before they are ready to harvest. Also, 'Geneva Early' fruits will sometimes drop from the tree as they are ripening.

Fruit size is mostly 2 3/4 to 3 inches in diameter. Skin color is 60-100 per cent red. Color pattern is mostly a solid blush, but sometimes with some striping. Fruit shape is round-oblate. The flesh is cream colored but overripe fruits sometimes have a tinge of pink in the flesh.

Flesh texture is semi-firm to soft and careful handling during harvesting and marketing is essential. Although storage life at 31 F. is probably less than a week, very early apples are usually marketed immediately after harvest and not stored for long periods.

Flavor is subacid and aromatic. Eating quality is good to excellent.

TREE

'Geneva Early' trees are of good vigor, neither too vigorous nor too weak. They can be propagated on the full range of size controlling rootstocks, dwarf to very vigorous.

POLLINATION

'Geneva Early[1] blooms early along with 'McIntosh'. Presumably, it is diploid and pollen is viable and it is an effective pollen source for other early blooming varieties. In most years, it will also effectively cross-pollenize with midseason bloomers such as 'Delicious'. 'Geneva Early' generally should not be depended upon as a pollen source for late bloomers, such as 'Golden Delicious[1] and 'Northern Spy'.

DISEASE AND INSECT SUSCEPTIBILITIES

Laboratory and greenhouse inoculations have shown that 'Geneva Early' is highly susceptible to fire blight and cedar-apple rust *(Gymnosporangium juniperi-virginianae)* and susceptible to apple scab *(Venturia inaequalis).* No resistances to any apple insects have been observed. Therefore, a full schedule of chemical sprays are needed.

COMMERCIAL USEFULNESS

'Geneva Early[1] probably will be most useful for small volume apple growers with pick-your-own or roadside markets, so that it can be sold along with other mid-summer, home-grown produce, such as peaches or vegetables. It has special appeal as the very first good marketable apple variety.

AVAILABILITY

Limited quantities of nursery trees of 'Early Geneva' can be purchased from the New York State Fruit Testing Association, Geneva, NY 14456.