

Pocahontas, Vermilion, Bellmar and Starkrimson were rated better than average. Blakemore, Earlidawn, Tennessee Shipper, Erie and Stelemaster fruit were rated acceptable.

Recommendations

Considering season of maturity, commercial yield, fruit uniformity, attractiveness, firmness and quality, the following varieties are recommended for general planting by commercial growers in southern Illinois: Tennessee Beauty, Dixieland, Surecrop, Pocahontas and Earlidawn. Dixieland should replace Blakemore because of superior commercial yield and fruit size. Earlidawn should be used if an earlier season of maturity is desired.

Dixieland or Surecrop are varieties with ratings above average for most of the characteristics considered. Dixieland was more heavily infected by the foliage diseases. Pocahontas is a midseason variety with above average ratings except for cold damage during bloom and for foliage disease infection. Tennessee Beauty is a late variety with above average ratings except for fruit uniformity. Tennessee Beauty was tops in total yield and

shared the leadership in commercial yield.

Blakemore is not recommended for planting in southern Illinois. Although Blakemore is widely planted, it ranked second from the bottom in total and commercial yield, and the berries were very small. Vermilion, Redglow and Albritton are not recommended for southern Illinois because of low total and commercial yield. Tennessee Shipper is not recommended because of poor fruit quality, although it is satisfactory in most other characteristics.

In the 1958 trial, only Tennessee Beauty and Erie had acceptable total and commercial yield. The other varieties yielded less than Blakemore, which also had an unsatisfactory yield. However, Erie is not recommended for southern Illinois until additional information becomes available.

Literature Cited

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Differences in Susceptibility to the Virus Disease, Leaf Pucker, Among Clones of McIntosh Apple

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Morphological variation within a variety of apple is a common phenomenon. Color sports and spur-type sports are familiar examples. However, there have been few records of variability in susceptibility to disease among bud sport clones of an apple

variety. An interesting example of such varying reaction has been found during investigations of the virus disease, leaf pucker, in McIntosh apple.

The leaf symptoms of this disease include putkering, distortion, dwarf-

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ing and light green vein-flecking. The fruits on affected trees have almost always borne small, shallow, skin depressions, and ring patterns of fine russetting.

The disease was first found in 1954, occurring in a tree of striped McIntosh, which was designated "clone A". The only McIntosh trees available for transmission tests were three years old, and included some trees of a clone bearing striped fruits, (but believed to be distinct from clone A), and some trees of the solidly blushed clone now known as McIntosh (Summerland Red). This clone, formerly known as McIntosh (Summerland), is now widely planted in British Columbia orchards. For purposes of this experiment, these two clones were designated respectively "clone B", (bearing striped fruits), and "clone C" [McIntosh (Summerland Red)]. Grafts from clone A were placed on test trees of clone B and clone C.

Characteristically, foliage and fruit symptoms have been severe on inoculated trees of clone C. By contrast, the inoculated trees of clone B have shown no foliage symptoms in some seasons, and only very mild to mild symptoms in the other seasons. Fruit symptoms have not been found on trees of clone B.

The grafts from clone A were allowed to grow, and have formed bearing limbs on the test trees. The degree of symptom severity on these branches has varied according to the kind of test tree on which they were growing. When topworked on the almost symptomless clone B, the foliage symptoms have been very mild to mild, only slightly more severe than those on the rest of the tree. When growing on clone C, however, the limbs of clone A have displayed leaf and fruit symptoms that were moderate to severe, but characteristically not as severe as those on the clone C

limbs of the same trees.

Thus there has been an opportunity to compare symptom severity of leaf pucker disease on three clones of McIntosh, two that bear striped fruits, and one that bears solidly blushed fruits. The clone that bears blushed fruits, (clone C), is affected severely. Clone B, bearing striped fruits, is almost completely tolerant. Clone A, also bearing striped fruits, appears to be intermediate in susceptibility, and the severity of the symptoms appears to be influenced by the clone on which it is topworked.

In an attempt to account for the differences in susceptibility of the three clones of McIntosh, at least two possibilities might be considered. There may be inherent differences between the clones in susceptibility to the virus. Alternatively, there is the possibility that another virus is present in the least susceptible clone (clone B), and that this virus may provide a degree of protection against the virus of leaf pucker. This hypothesis is being further investigated at the present time.



Hardy Persimmons

Members of the Michigan Nut Growers Association are experimenting with selections of wild forms of American persimmon (*Diospyros Virginiana*), and have them growing as far north as Mason and Antrim counties. Some 50 varieties have been named. Grant E. Mudge reports that his earliest variety, Early Golden, is 16 years old, and has produced one bushel or more for the past six years. It ripens from late September to mid-November. Other varieties are Garretson—extra hardy, Ennis—seedless and late, Quinlan—earliest ripening, and Buhrman—highest quality.