

## A Leaf Mutation of the Stayman Winesap Apple

LOREN D. TUKEY

Pennsylvania State University  
University Park, Pennsylvania

A mutation has been observed on a limb of a Stayman Winesap apple tree in the orchard of Pennsylvania State University for more than ten years. This mutation is expressed chiefly in the foliage, although there are indications that the fruit may also be involved. The mutated leaves are very dark green, appearing at times almost black green. They are initially flat, but eventually curl down and back so that the tip of the leaf blade is near the petiole. The foliage gives the branch the appearance of a mass of dark green curls, or of an aphid infestation. Matured leaves are stiff, and appear thicker than Stayman leaves.

Watersprouts from the mutated wood have the curled leaves, while those from the non-mutated wood have typical Stayman leaves. As a matter of fact, the line of demarcation be-

tween the mutated and non-mutated wood is very definite, and the leaf curling tendency has not moved, as would happen if a disease were involved.

In 1959, a bud was taken from the Stayman Winesap mutation and grafted to an E. M. IX rootstock. The growth from the bud was identical to that of the mutation on the mother Stayman Winesap tree. Sucker growth from below the bud union resembled the rootstock, and has failed to show any characteristics of the mutation.

Apples from the mutated wood seem identical to Stayman Winesap, except that they are slightly russeted, the russet being evenly distributed over the surface of the fruit. This russet is very similar to that usually found on slightly russeted Golden Delicious fruit. Evidence is lacking, however, as to the actual cause of the russetting. It is not known whether it is in itself a mutation, or an expression of the foliar mutation.

This mutation may be of some value in fruit breeding, rootstock identification or for ornamental purposes. The fruit appears to be no improvement over the parent variety.



Fig. 1. Foliage of the Stayman Winesap cultivar (Left) as compared to that on a mutated limb (Right). Curling of the leaf, from tip to petiole, is the chief characteristic of the mutation.

### A. P. S. to Meet in Minnesota

The next meeting of the American Pomological Society will be held Dec. 10 and 11, 1964, in Rochester, Minnesota, together with the Minnesota Fruit Growers Association. It should be recognized that many, fine varieties of fruits, outstanding for their hardiness, have originated in that state.