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The Place of Dwarf Apple Trees in Commercial Orchards

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A recent story from Oregon on "Hedgerow Apples" has prompted the writing of this article in order to present our views en the place of dwarf apple trees in commercial orchards. The hedgerow system of growing apples as described consisted of planting dwarf trees which had been budded on Mailing IX rootstocks. The trees were planted in rows 12 feet apart while the distance between trees in the row was 4 feet. The trees were supported by a three-wire trellis. Pictures of the hedgerow showed that the trees were allowed to develop into a thick, dense row of shoots and foliage. Yields of 1,690 boxes per acre at the end of 7 years were reported for Rome Beauty. Advantages claimed for this system of culture were ease of harvesting, spraying and pruning along with high acre yields.

We have been testing and evaluating Mailing rootstocks at the University for the past 25 years. While we have never grown trees on Mailing IX in hedgerows, we have had considerable experience with their performance under Massachusetts conditions. In light of this experience, we should like to point out some serious disadvantages in the "hedgerow system" as it applied to Massachusetts conditions.

Our experience with Mailing IX has shown that the trees will not tolerate the competition of grass and thus cannot be grown under a sod system of soil management. We do not believe it wise to go back to a cultivation system of soil management for apples in Massachusetts as such a system on our hillside orchards would create a serious problem of soil erosion.

The trees on Mailing IX are very shallow rooted and often suffer for water unless irrigation is provided. They are also very easily tipped over unless some method of mechanical support is provided. The need for mechanical support adds extra expense and attention to detail which must be taken into consideration.

While pruning under this system may be somewhat easier, it will be more detailed and may require more man hours per acre. This becomes particularly important as the trees get older, because it is not possible to maintain production without detailed pruning.

The control of apple scab in our humid climate would be extremely difficult in the dense hedgerows, as foliage inside the rows would be difficult to reach with spray materials and it would be very slow in drying.

Dwarf trees on Mailing IX are expensive and difficult to obtain. The initial cost in planting an acre of hedgerow trees could easily be so high as to prevent many growers starting such an enterprise. Even a planting distance of 8x12 feet would require 454 trees per acre. This would represent an initial investment of 900 to 1200 dollars per acre for just the cost of the trees alone.

We do not believe that the "Hedgerow System" of growing apples is practical under Massachusetts soil and climatic conditions. In the next issue of FRUIT NOTES the possibilities of semi-dwarf trees for Massachusetts orchards will be discussed.

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