4. Heavy Set of Fruit Buds

This may be a questionable attribute. It undoubtedly is an exhaustion of energy for any plant to produce an over abundance of fruiting buds. Ordinarily, the expended energy could better be utilized in promoting growth in other elements of the tree. However, a variety with heavy bud-setting may lose a great majority of its buds during critical winter temperature and still have enough survive to produce a profitable crop.

5. Shape or Structure of Tree

This may be a new angle but merits consideration. If obtainable through experimentation, it would be of inestimable value. It has been observed that the primary cause of death in mature peach trees, has been breakage of a scaffold limb. Usually due to a sharp angled ("V") axial connection with the trunk of the tree. Scaffold limbs that emanate at right angles from the trunk never break. The Gage Elberta is the one outstanding variety where the scaffold limbs naturally grow laterally from the trunk. The tree, although sprawling, attains good size and most fruits can be picked without the aid of a ladder. Experimentation in attaining this goal in new varieties would be warranted.

Yields of Apple Varieties

A Clew to Profits and Losses

By Albert B. Cole, *grower*
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The keeping of accounts may appear to be a tedious duty to some folks but it is nevertheless an essential job if an agricultural enterprise is to be operated at a profit. If the records are maintained on a relatively simple scale the task is not difficult at all.

For a number of years, careful notes were kept on the yields of various blocks of apples on an orchard farm which I operated in Western Connecticut. These records were of assistance in managing the business and also furnish some interesting comparisons between several apple varieties.

A considerable acreage of trees had been planted on this farm in 1910. Among the apples were several blocks of

McIntosh, Baldwin, and Spy. The yield records for the 10 year period starting in 1933 when the trees were 24 years old are given below.

YIELD OF APPLES, BUSHELS PER TREE
TREES SET IN 1910

Year	McIntosh 504 Trees	Baldwin 156 Trees	Spy 262 Trees
1933	10.2	16.4	8.0
1934	14.9	.8	7.7
1935	9.7	7.9	3.3
1936	17.4	1.9	19.5
	10.8	4.2	.8
1938	14.7	12.8	20.7
1939	14.8	4.4	6.4
1940	12.3	10.3	15.5
	21.0	1.3	7.5
	18.4	13.6	15.6
Total	144.2	73.6	105.0
Yearly Average	14.4	7.4	10.5

Several significant facts can be observed in the yield records of these trees. McIntosh was by far the most productive variety and produced nearly 100 per cent more fruit than Baldwin and nearly 50 per cent more than Spy. There was no tendency toward biennial bearing in McIntosh whereas both Baldwin and Spy possessed this undesirable characteristic to a pronounced degree.

Yields of Younger Trees

In 1923 and 1926 several large blocks of apples were planted. The yield records during the early bearing years of these orchards are given in the table at the right. No Baldwin, Delicious, or Rome trees were planted in 1923 although they were included in the 1926 acreage.

YIELD OF APPLES, BUSHELS PER TREE

Trees Set in 1923

	Ave. Ann. Yield 11th Thru 15th Year	Ave. Ann. Yield 16th Thru 20th Year
McIntosh	2.5	6.8
Cortland	2.1	7.3
Wealthy	2.3	2.3

Trees Set in 1926

	Ave. Ann. Yield 8th Thru 12th Year	Ave. Ann. Yield 13th Thru 17th Year
McIntosh	2.8	7.8
Cortland	2.0	6.6
Wealthy	1.7	3.1
Baldwin	.6	2.7
Delicious	.7	4.0
Rome	1.3	3.6

The records of these young orchards illustrate the ability of McIntosh to start producing at a relatively early age and increase it's yields steadily as it becomes older. Such a characteristic is of real importance if profits are to be secured.

Good Yields From Cortland

The fruitfulness of Cortland compared very favorably with McIntosh in these two orchards.

The data for the Wealthy variety appear to be quite significant. Although this variety produced nearly as well as McIntosh and Cortland during its early bearing years, the yields did not increase as the trees became older. During the 12 to 20 year age period both the McIntosh and Cortland produced over twice as much fruits as did the Wealthy variety. Such a record does not speak well for

the money-making ability of the Wealthy apple.

Baldwin, Delicious and Rome

Baldwin and Delicious were quite slow in reaching bearing age. Rome produced about double the yield of Baldwin and Delicious when 8 to 12 years of age but was only about half as productive as McIntosh and Cortland during this period. The yields of Baldwin, Delicious, and Rome from the 13th to 17th years were about half as great as those of McIntosh and Cortland.

If a commercial fruit grower is to make a reasonable profit, the bearing apple trees in his orchard should average close to 5 bushels per tree. This is certainly a conservative requirement. Under the conditions which existed in the orchards being discussed here, the McIntosh and Cortland varieties were the most productive and should as a rule give the highest return per tree and per acre. Baldwin, Delicious, Rome, and Spy were satisfactory varieties but required a rather long period of investment before they began to show any profit.

Avocado Varieties in Puerto Rico

By Edward P. Hume
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Commercial avocado culture in Puerto Rico has gained little headway. One reason for this is the fact that avocados can be grown in many sections of the island without special culture and still bear fair crops of marketable fruit. Propagation is almost entirely by seeds except for plants distributed by governmental agencies; these are grafted or budded with improved varieties.

West Indian Varieties

The West Indian race is grown in all sections. Avocados of the Guatemalan race are just beginning to appear on the market, coming from the mountainous sections of the central part of the island. Efforts to establish commercial avocado nurseries have all failed for one reason or another, but horticulturists who have worked with avocados have selected and named about 20 varieties, chiefly of the West Indian race. These varieties have not been thoroughly tested, but some of the better types as indicated by limited