

INDIVIDUALITY OF FRUITS

W. T. MACOUN, HORTICULTURIST, CENTRAL CANADA EXPT. FARM.

THE stock breeder has for a great many years paid especial attention to the individual animal in breeding for size, shape and markings, and for flesh and milk. Just as satisfactory results should be obtained in improving the strain of a variety of fruit, and although comparatively little has yet been done by horticulturists in this respect with fruits, much has been accomplished with flowers and vegetables. It is now recognized by the best authorities that each bud of a tree has individual characteristics which separate it from all other buds, and although the differences in buds are in most cases so slight that it is impossible to detect them, yet in some instances they may be quite marked.

Fruit growers have often noticed that one tree or bush is more productive than another, or bears larger, more highly colored or better flavored fruit. Take as an example the Fameuse apple. When this excellent old variety first bore fruit several hundred years ago one tree produced all the Fameuse apples there were at that time. Some apples on that original tree were probably not as highly colored as others, although exposed to the same amount of light. Some branches, probably, were more heavily laden than others, although there was no apparent reason why they should be. On some branches the fruit was larger though as well loaded as others. In time scions were cut from that tree and grafted, and a new generation of Fameuse trees was the result. Were the trees thus produced identical in vigor and productiveness, and was the fruit borne on each of them exactly similar in every respect? We believe that they were not. Every bud on every tree of every generation of Fameuse apple trees had individual characteristics, and although the differences were barely enough marked to see, there were doubtless many fine shades of variation.

It does not need a great stretch of imagination to see that if such changes can be made as have been made in live stock, flowers, vegetables and other economic plants, by careful selection, that if, when that first generation of Fameuse apple trees began to bear, scions had been taken from the most productive tree bearing the finest colored apples of the best size, that in the next generation of trees there would be at least a slight improvement, and if this selection had been carried on down to the present time we should have a better Fameuse than we have to-day. This selection, however, has not been carried out, and about all that has been done, in a few cases, is to graft from trees bearing highly colored fruit, but as yet we have practically no reliable information in Canada as to whether the results have been satisfactory.

In small orchards, where the fruit is intended for home consumption, the individuality of different trees is more noticed than in large orchards, where the record of each tree is not brought so prominently before the grower. The effect of the stock on the productiveness of the tree and characteristics of the fruit is not yet well understood. Whatever may be the influence of the stock there is no doubt that each variety maintains most of its individual qualities.

At the Central Experimental Farm the yields are kept from each individual tree in the orchard, making it possible to tell at the end of a certain period just what each tree has borne. It has been found that trees planted at the same time, and growing under practically the same conditions as other trees of the same variety, vary widely in productiveness. Some trees also bear a medium crop every year, while others bear a heavy crop every other year.

In the following table will be found the yields of trees of four varieties of apples for the past six years, with the total yield per