

from crosses made at Ithaca in 1899 will illustrate this point. Fig. 1900 shows the comparative size of Seckel when pollinated with Kieffer and with Lawrence pollen. Clapp pollinated with Kieffer was also larger than Clapp pollinated with Lawrence or Louise Bonne. Howell blossoms which received the pollen of Clapp gave fruits of nearly twice the size of those which received Bartlett pollen. Bartletts crossed with Angouleme were larger than Bartletts crossed with Sheldon. In some cases no difference could be noticed, yet most of our standard commercial varieties will be likely to yield

Prune, Green Gage, Italian Prune (Fellenburg); Satsuma with Abundance, Burbank, Red June; Miner with De Soto, Forest Rose, Wild Goose; Wild Goose with De Soto, Newman, Miner.

DOES CROSSING CHANGE THE APPEARANCE OF THE FRUIT?

In connection with mutual affinity of varieties which are selected for cross-pollination, there comes the question of the "immediate influence" of pollen. For instance, if Seckel pollen is put on Kieffer pistils, will it impart the Seckel flavor, color and characteris-

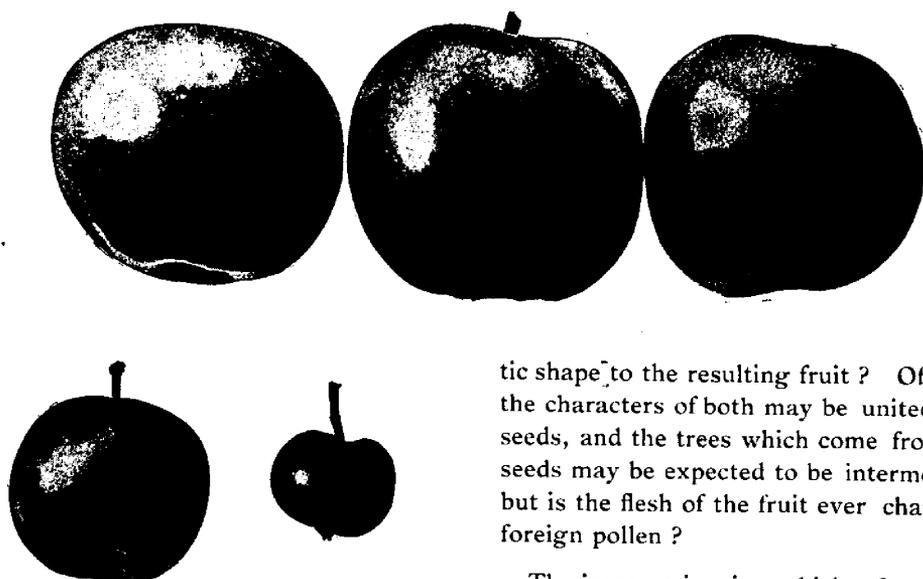


FIG. 1901.—Stark. From Wagener pollen above, from Stark pollen below. Marked benefit from cross-pollination.

enough better fruit when planted with some varieties than with others, to make a study of this point worth the while.

Some of the combinations which have been very successful in the commercial orchards of the country are: Bartlett with Nelis, Flemish Beauty, Easter, White Doyenne; Idaho with Bartlett; Kieffer with LeConte, Garber; Coe Golden Drop with French

tic shape to the resulting fruit? Of course the characters of both may be united in the seeds, and the trees which come from these seeds may be expected to be intermediates; but is the flesh of the fruit ever changed by foreign pollen?

The increase in size which often follows crossing cannot be called a true immediate influence, for the foreign pollen generally stimulates the fruit to be a better growth because it is more acceptable to the pistils, not because it carries over the size-character of the variety from which it came. In 1899, Hyslop Crab pistils which were fertilized with pollen from the great Tompkins County King, grew into fruits of the usual crab size. An immediate influence in size may be possible, for the size of the fruit is nearly as constant a varietal character as is the shape;