The amount and intensity of scald developing in storage in mid-January varied on similarly treated samples from different orchards, so no definite conclusion could be drawn as to the value of any particular period of delay for even the partial control of this disease.

The usual commercial practice in the harvesting of the Granny Smith is to pick and leave the fruit from fourteen to twenty-one days before packing in oiled wraps and despatching to cool store. The experimental samples, as noted above, were picked and packed the same day. In experiments conducted over the preceding three years it has consistently been observed that when the variety has been wrapped in oiled paper within a few hours of picking it has been free from scald in storage, and it seems clear that the common occurrence of scald in commercially stored fruit is due to failure to adopt this practice. It has therefore been recommended to the Marketing authorities that wrapping in oiled paper immediately after picking should be adopted commercially for the Granny Smith variety, even if storage is delayed.

By November, considerable damage was caused in storage by breakdown and core-flush. Although the greatest control of these diseases was obtained by delaying the storage of the fruit for six weeks, this cannot be considered a practical method of control. The long period of delay increased fungus and pit, though damage from the latter was slight, and the fruit itself had become so yellow as to be completely unmarketable. Granny Smith apples begin to turn yellow after fourteen days' delayed-storage treatment, but no appreciable control of either breakdown or core-flush is obtained by this short period of delay.

As a result of experiments carried out over the last four years, it is concluded that no advantage can be derived from the delayed storage of Granny Smith.

Influence of Rootstock and Intermediate Scion on Core-flush in Granny Smith

Further samples of the Granny Smith variety, from both Hawke's Bay and Nelson, were stored this season to ascertain the effect of rootstock and intermediate variety on the incidence of core-flush in cold storage. All samples from Nelson developed more core-flush than in 1944, although taken from the same orchards as in that season. In the Hawke's Bay samples the amounts were practically the same for the two years.

Striking differences in the influence of rootstock and intermediate had been found in 1944, and the season under review provided full confirmation of the previous results. Two features were the severity of core-flush in fruit from trees worked directly on to Northern Spy rootstock, and the great measure of control in fruit from trees worked with Reinette du Canada as an intermediate. All other rootstocks and intermediates produced amounts of core-flush varying between these two extremes. Delicious and Dunn's Favourite as intermediates again gave very high amounts of core-flush. It was unfortunate that fruit from trees on Malling Nos. XII and XVI rootstocks could not be obtained this year, as both these stocks produced fruit almost free from the trouble in 1944.

No definite conclusions can be drawn as to which varieties should be avoided when reworking trees to the Granny Smith variety, but it would appear that, as regards core-flush at least, Northern Spy is an unsuitable rootstock for this variety.

Effect of Fertilizers on Cold-storage Quality of Apples

The season under review was one of light crop in biennial-bearing varieties, and because of the small amount of suitable fruit available for storage experiments it is not necessarily possible to attach great significance to the results obtained with Cox's Orange Pippin and Dunn's Favourite.

Cox's Orange Pippin.—Fruit from trees receiving phosphate (P), nitrogen (N), and potash (K) kept, on balance, as well as that from the untreated control trees. It had rather more internal breakdown, but less storage-pit and less superficial scald.