

N disastrously increased breakdown and fungus, but somewhat reduced pit and scald. Incidental to the fertilizer trials, an experiment on the date of picking gave results differing in several respects from those obtained in previous years. Breakdown dropped to a minimum and pit rose to a maximum in early March, at about the third and fourth weekly pickings, with a late picking showing results rather similar to the earliest two.

Ammonium sulphate caused much more breakdown and fungus than did dried blood, so this finding has now held for two years. Since equal weights of each fertilizer have been used throughout the experiment, it has taken eleven years for the rather higher nitrogen level of the ammonium-sulphate trees to be reflected in the storage quality of the fruit. It is now proposed to increase the application of dried blood to bring all trees to a uniform level of nitrogen.

Dunn's Favourite.—The untreated control fruit kept decidedly better than N or PNK fruit, between which there was comparatively little difference this season. The nitrogen caused a substantial rise in breakdown and superficial scald. The sample from a nitrogen application-rate experiment was too small to give data of any significance beyond indicating that in a season of light crop the storage quality is adversely affected by N, as indicated above. In a lime v. no-lime experiment the breakdown, fungus, and pit were not affected by treatment, but scald was rather higher on the limited sample.

Jonathan.—This variety yielded a heavy crop and consequently the fruit kept very well in storage. Fruit from trees receiving 2 lb. ammonium sulphate in addition to a basic dressing throughout of P and K kept as well as that from trees with no nitrogen. With 4 lb. ammonium sulphate, however, there was an appreciable increase in breakdown, fungus, and lenticel spot.

In an experiment in which potash is used in addition to a base treatment of P and N, the only marked difference was in respect of breakdown incidence, which continued to be less in fruit from potash-treated trees, despite the larger size of this fruit.

Delicious.—The only loss in this variety was through fungous rots and wilt, and neither was significantly affected by the manurial treatment of the trees from which the storage samples were taken.

Sturmer.—The outstanding feature was again the high incidence of breakdown and fungus in fruit from trees receiving nitrogen only. Most of the fungus was of a secondary nature on tissues damaged by breakdown. When the N was balanced by P or P and K, the storage quality was equal to that of the untreated controls.

COLD-STORAGE QUALITY OF COLOURED STRAINS OF APPLES

Cox's Orange Pippin.—The results with three samples of Bledisloe Cox and three described as Red Cox were again somewhat variable, and with one exception proved inferior to the standard type of Cox. The exception was a Red Cox, taken initially from Hawke's Bay, and this showed a rather marked resistance to breakdown, although it had not done so in the previous season.

Jonathan.—This year the relative performances of the red and pink types were reversed from their position last year, although differences were small. On balance, neither showed any superiority over the standard type, and at least with the Pink Jonathan there is a heavy marking-down on the score of external appearance.

Delicious.—A wide variation in storage quality was shown by the eighteen red types of Delicious under test, and this season several were equal or even superior to the standard type. The sample of Hawke's Bay Red Delicious was particularly good. In view of the early stage of this trial, however, no great significance can yet be attached to the results.

Dougherty.—The two red strains this year showed rather better storage-quality than the standard type, but since the latter had to be drawn from a different orchard the comparison is of doubtful value. The most that can be said is that the red types stored extremely well.