Humidity.

The factor of humidity plays an important part in the preservation of pears by refrigeration, and, while the subject has been discussed widely, very little has been done in investigating this matter. At the present time it is difficult to lay down any hard-and-fast rule regarding the humidity ratio of the atmosphere in a fruit cool store, since this depends on many factors which have to be known and carefully studied. Temperatures and frequency and method of ventilation are factors; then, again, climatic conditions during the production of the fruit and those existing during harvesting have an influence. The class of container is also a factor which influences the relative humidity of a cool-store chamber. If the wood with which the containers are made has been seasoned and is perfectly dry it has a tendency to absorb moisture, often resulting in the fruit becoming wilted. On the other hand, if the package is of a damp nature and the conditions in the compartment are favourable, fungal rots may occur. While a relative humidity of 83 to 85 per cent. may be suitable, this may have to be varied according to the conditions referred to above.

Causes of Wastage.

Overripening: Due to high temperatures, bad distribution of refrigeration, and uneven cooling.

Wilting: Caused by immaturity, high temperatures, and low relative humidity.

Scald: Due to immaturity and susceptible varieties—Beurré Clairgeau, Beurré Capiaumont, and Vicar of Winkfield being among the latter.

Fungal rots in nests: Caused principally by damaged or bleeding fruits, which, when they are attacked by fungi, develop rots which spread and affect all fruit with which they come in contact. This wastage is increased by bad storage conditions.

Very rarely does this last class of wastage come under notice until late in the season, when the grower commences to remove his fruit from store for market. He is then at a loss to understand how these nests of pears affected with fungal rots have occurred, and is generally sure in his own mind that the large number of affected fruits in the nests could not have been damaged before storage. However, this wastage may have been caused by one fruit in the case, and it would be a big contract to examine all the fruit and remove those affected to prevent further wastage. Thus the only effective measure that can be employed is to take all precautions and see that every fruit is in perfect condition before being placed in storage.

Trials with Timothy Grass.—The Agrostologist, Plant Research Station, remarks on this species in his report for 1930–31 as follows: "Twenty-six lines are under trial, sown in the autumn of 1930, from Germany, Scotland, Sweden, Norway, Russia, United States of America, Aberystwyth, and New Zealand. There is some fairly marked variation, but the grass as a whole has given very disappointing results in our trial grounds. For New Zealand conditions, excepting perhaps in country too wet for rye-grass, I am of the opinion that the value of timothy is overrated."