

The Pre-cooling of Fruit for Shipment

EXPERIMENTS conducted by the departments of agriculture of Canada and the United States show conclusively that fruit should be cooled before shipment. The fruit should be placed in the storage room or in refrigerator cars with the least possible delay after picking. Unless this is done, the full benefits of cold storage facilities on board ship are not secured. At the last convention of the Ontario Fruit Growers' Association, Mr. J. A. Ruddick, Dairy and Cold Storage Commissioner, Ottawa, directed attention to the importance of this point in an address on our export trade in early apples and tender fruits. In the course of the address, he said, "In nine cases out of ten when fruit reaches its destination in bad condition, it is because it had not been delivered to the transportation companies in fit condition to carry safely." On being asked if apples should be placed in cold

had to be removed, and the heat which was generated while the fruit was ripening at that rapid rate had also to be removed.

"The refrigeration of fruit is a very different thing to the refrigeration of butter, where you can put the temperature down as low as you like; but if you put on sufficient refrigeration to put the temperature down quickly you would have the cold air coming into the chamber far below freezing point, consequently freezing the fruit which it immediately came into contact with. The engineer has, therefore, that difficulty to contend with, that he cannot use the full power of his refrigerating machine in a chamber used for chilling fruit. He is aware of the critical temperature, about 32 degrees, and that it is not safe to have cold air coming in at a lower point. If he were trying to chill a chamber filled with butter or meats or any frozen goods, it would not make any difference; he could

apple exporter. Space should be arranged for well in advance. These people can take only 50,000 barrels, and that is a small part of a good crop. Stock should be sent direct from the orchard. Arrange exactly how you want your goods stored, whether by season or the month. Give specific directions as to your stowage, whether on heads, face down, or bilge, or on bottom with heads removed. Parties who have tested the St. John house have only good words for the facilities offered, and good foremen can easily get plenty of help, with one or two years' experience as packers, resident in the winter port. Parties shipping boxed apples will find mills turning out an excellent article right at the storage doors in St. John. As shipments from this house may be routed direct to London, Liverpool, Glasgow, Manchester, Belfast, Bristol, Havre, Rotterdam, Hamburg or Capetown, little is left to be desired as to accommodations. All the Montreal lines run to St. John in winter.

Ontario Horticultural Exhibition

P. W. Hodgetts, Secretary, Toronto

The Ontario Horticultural Exhibition will be held this year in the St. Lawrence Market Arena, Toronto, November 9 to 13. An entire change will be made in the interior plan of decorations and the placing of the various products which go to make up this magnificent show. Present plans are to have a central aisle leading from the main door right through to the rear of the hall, making the arches overhead gradually smaller so as to apparently increase the length of this aisle.

Among special exhibits will be single specimens of our four leading varieties of apples, namely, the Spy, Baldwin, Greening and King, for which the big prize of \$10.00 will be offered in each case. These have been donated by prominent men in the horticultural world in Ontario.

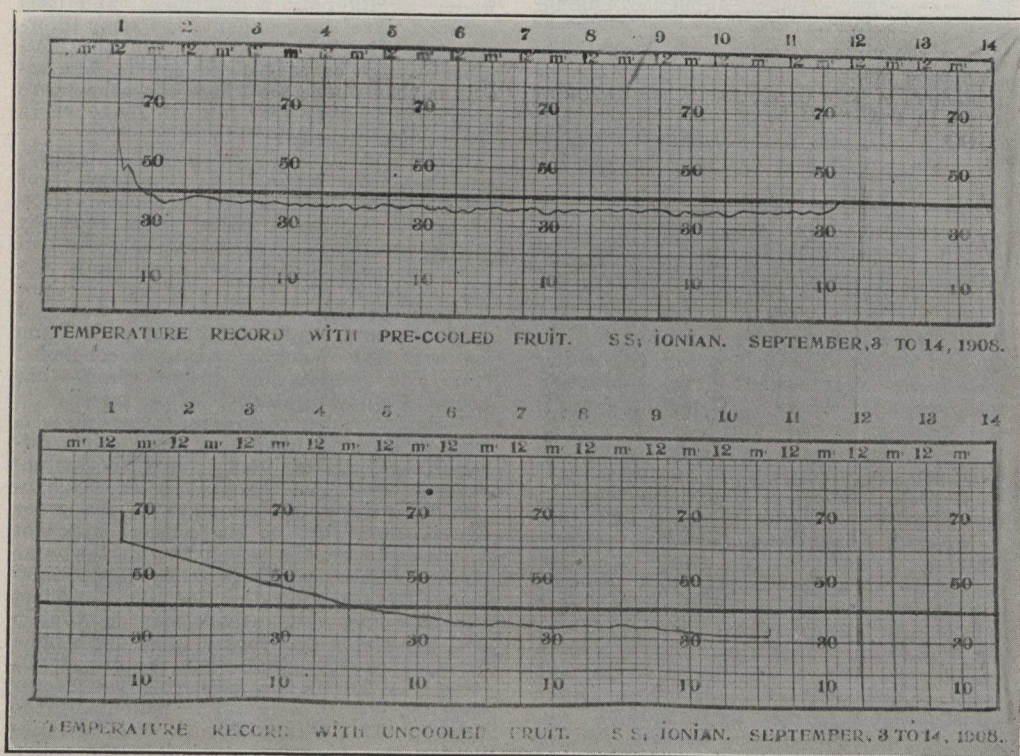
Special arrangements are also being made for a large exhibit of all kinds of orchard implements, spraying mixtures, etc., both from the United States and Canada. THE CANADIAN HORTICULTURIST has kindly donated a full-page advertisement which is to be divided into two prizes for the best new inventions for orchard and for garden use.

With a more favorable year the present season than last, the commercial florists expect to put up one of the best exhibits of mums, roses and other flowers that has ever been seen in Toronto. The floral arches will be a special feature of their creation. Altogether the show promises already to exceed in beauty and also in utility any of the previous exhibitions. The prize lists are now printed and copies may be obtained from the secretary, Parliament Buildings, Toronto.

Photographs of fruit harvesting scenes are wanted for use in THE CANADIAN HORTICULTURIST.

The engravings on pages 192 and 193 were loaned from the report of the Horticultural Societies of Ontario, by Mr. J. Lockie Wilson. The photographs from which they were made were furnished by Rev. A. H. Scott, Perth, Ont.

To harvest the fruit crop easily and rapidly, it is necessary to have strong ladders. It is bad policy to use clumsy ladders, such as usually are made at home. A ladder that will give satisfaction is the "Perfect" fruit step ladder. Read the advertisement of the Stratford Mfg Co., Stratford, Ont., that appears on another page of this issue.



198 Diagrams that Illustrate the Value of Cooling Fruit Before Shipment

storage before being packed, Mr. Ruddick said, "If you pack warm apples in barrels and put them in cold storage, it takes a longer time to cool them down than it would if they were in open packages. Cold fruit does not bruise as readily in packing as warm fruit does, and that is also a consideration."

In his evidence before the Select Standing Committee on Agriculture and Colonization at Ottawa, Mr. Ruddick further emphasized the importance of having the fruit properly cooled before it is placed on board the steamer. He exhibited illustrations of two thermograph records (as shown on this page) of shipments made on the S.S. "Ionian" last September.

In pointing out the lessons to be learned from these records, Mr. Ruddick said, "The temperature of the room in which the fruit was cooled before being put into the chambers, went right down to 36 degrees and ran fairly even throughout the voyage. In the other, the temperature started at 60 degrees, and it was four days before it was down to 40 degrees. The heat in the fruit

then put on the full power of his machine. That is why it is so difficult to manage the chilling of fruit. This shows the importance of having the fruit cooled before it is placed in a chamber like the cold storage chamber on the steamship."

A study of the foregoing remarks and of the accompanying illustrations should convince fruit growers and shippers. No refrigerator car yet constructed can give quick refrigeration and no cold storage chamber on a ship can do so without injuring the fruit. The Dominion Department of Agriculture intends to continue its assistance to fruit growers in this matter and in affording facilities for the ocean carriage of fruit in small quantities. The announcement appears in the August issue of THE CANADIAN HORTICULTURIST.

Cold Storage For Apples.—Attention is directed to the space facing our first reading page, taken by ad. of the New Brunswick Cold Storage Company, Limited, St. John, N.B. There are few businesses which may be expected to appeal so readily to the