

the soil was real fertile and in good condition, five pecks would be enough. I would not sow more than six pecks under any consideration and would much prefer to have any quantity over the bushel and a half thrown away than put it into the soil, since if sown too thickly the heads are

short and the yield is lessened.

Where there is more than usual danger of winter-killing one is ill advised to sow wheat on land where water and ice will stand. The up-lying land, and soil of a limestone nature is the ideal for fall wheat.

MODERN AIDS TO MARKET EXTENSION FOR OUR FRUIT

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Our Fruits to a Great Extent can be laid down Successfully in Distant Markets. Fruit to Carry Properly must be Precooled. Some Facts set forth Concerning this Important Question.

IT is significant that the factor which, more than any other, is influencing the development of Ontario's fruit industry is neither



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supply nor demand, but distribution. This province possesses every natural facility for the production of a great variety of choice fruits, and a careful survey of the situation leads one to the conclusion that horticultural crops are destined to occupy a place of increasing importance in our agricultural economy. It can scarcely be charged that we do not produce enough fruit to supply our local markets, but it can be truthfully stated that production is not increasing nearly as fast as conditions would warrant.

The reasons for this too slow development of the fruit trade are to be found in certain conditions which from time to time are very strongly in evidence on our local markets. Every fruit grower is familiar with the disastrous results that invariably accompany what is known as a glutted market. That this unfortunate condition is to a very large extent preventable is the firm opinion of the writer, as it must be of anyone who will study the subject with reasonable thoroughness.

MARKETS OTHER THAN AT OUR DOORS

One hears the statement regretfully yet sincerely made that certain localities capable of producing large quantities of fruit are unable to dispose of it at a profit because "the market is always overstocked at the time our fruit is ripe." It is undeniable that production is often entirely out of proportion to the needs of local markets. Some of us have never thought, however, of endeavoring to secure other markets than those immediately at our doors, and while our wide-awake competitors appropriate to themselves markets which rightly belong to Ontario, we foolishly allow our fruit plantations to fall into neglect and turn to some other line of farming which seems to hold out better financial inducements.

EXTEND OUR MARKETS

Our most progressive shippers have hardly begun to realize the extent to which our fruits can be laid down successfully in distant markets. It may interest some to know that Ontario peaches (which are said not to ship well) sold in London, England, last season for 10 cents each, having landed there in excellent condition. It is some years since Niagara district peaches were first placed in Winnipeg market in perfect condition after a lapse of eight days, and it is regrettable that more attention has not been given by Ontario shippers to this phase of market extension.

Many Ontario fruit men still express doubt about the feasibility of placing our pears and even fall apples on the British markets, while the same classes of fruit are being continually and successfully disposed of in that market by British Columbia, Oregon and California shippers. These fruits are also deposited safely in English markets from points as far distant as New Zealand, Tasmania and Southern Australia, from which

countries they are carried in cold storage for an ocean voyage of seven weeks' duration. In the face of these and of many more similar facts, can it be denied that Ontario producers have magnificent opportunities in the markets of our North-West and in Britain? Shall it be said that Ontario's fruit men are behind the times and unable to cope with problems which other countries are solving to their own very great satisfaction?

WHAT MARKET EXTENSION INVOLVES

This question of the extension of markets constitutes probably the most important problem facing us to-day. Its solution involves the planting in any given locality of special varieties selected with reference to their suitability for the market in question, as well as for profitable production in the said locality. It involves the planting of these varieties in quantities sufficient to guarantee bulk shipments. If growers are to reap for themselves the largest percentage of profit, it involves also the handling of the crop through a district selling organization controlled by themselves.

The key to the situation remains, however, to be discussed, and if recent unfortunate experiences can furnish any lessons which may point the way to better success in the future, it may be profitable to discuss them here. Poor weather conditions of the fall of 1909 hastened the ripening of the apple crop. Apples were picked, packed and shipped in unusually warm weather. As a consequence, fruit which under normal weather conditions would have reached Old Country markets in good condition, was received at Montreal in a slack and wasted state. Needless to say, ruinous prices were received when this fruit was finally disposed of in trans-Atlantic markets.

IMPORTANCE OF PRECOOLING

It is pointed out by Dominion fruit inspectors and others who examined the shipments, that the damage was done before Montreal was reached, and although cold storage facilities on the steamships were in very many cases taken advantage of, it was then too late to save the consignments. When one realizes that the temperatures taken at Montreal of the interiors of barrels ranged in some instances higher than 80 deg. F. and in very many cases over 70 deg. F., it will be plain that the statements made are correct. Many shippers suffered very seriously, and if their experience helps us to realize what handlers of perishable food products have long known, this lesson may be of value to us in the end.

It is an established fact that the most important period in prolonging the "life" of fruit, vegetables and flowers is the first few hours after picking; in meats, the first few hours after killing, and in dairy and poultry products, the short space of time immediately succeeding their production or manufacture.

PROLONGING THE "LIFE" OF FRUIT

Realization of the perishable nature of food products has led to very great changes in methods of handling these materials. Experienced shippers of this class of goods affirm most emphatically that immediate cooling is absolutely necessary in order to secure the greatest possible degree of keeping quality. High temperatures

favor the development of disease, as well as detrimental chemical and physiological changes, which result finally in decay, and the up-to-date shipper of perishable products simply proceeds to extract the surplus heat as quickly and economically as possible. Low temperatures prolong the "life" of fruits by retarding the progress of these diseases and the processes of decomposition. California fruit growers have set many a splendid example to their fellow horticulturists, and in this matter of "precooling" they are again far in advance of most others. Large plants equipped with mechanical facilities for cooling air and circulating it through loaded cars are already in operation.

PRECOOLING IN CALIFORNIA

Some of the newer plants under construction in California will be capable of cooling from 20 to 40 carloads of fruit in four hours. They are located at central assembling points, from which whole train loads of fruit are despatched to eastern markets. Some of them are owned by the growers, who find that through the possession of such facilities they are able to ship very much longer distances and their fruit arrives in better condition. Iceing charges, which approximate \$75 a car from California to New York, are also largely done away with, as in moderately cool weather the cars cover the entire distance, requiring from 11 to 15 days, without requiring to be re-iced in transit. The railways, too, are interested in the problem, and the Santa Fe and Southern Pacific roads are each establishing two large plants at different centres. They find that in addition to increasing the total quantity of business, the new system also permits of very considerable increase in the carrying capacity of cars.

APPLY THE SCHEME IN ONTARIO

If we are to take our proper place as a fruit producing province, it is certain that some such system as has been evolved in the west must be adopted here. The establishment of an efficient system of pre-cooling plants will do more than any other one thing to place Ontario's fruit industry on a safe and prosperous basis. The application of the scheme to Ontario's conditions will of necessity be slow and difficult, but it must come. In connection with the apple industry alone, it is beyond question safe to state that many thousands of dollars could have been saved in 1909 by the intelligent use of cold storage and pre-cooling plants. Valuable experimental and demonstration work has been and is being done with tender fruits, notably in connection with the St. Catharines (cooperative) Cold Storage and Forwarding Company's plant, and occasionally small shipments of pre-cooled products have been made from other points as well. There would seem to be great need for more work of this nature, and it is hoped that the near future will see considerable advancement in our opinions respecting long-distance shipment of perishable materials and in our knowledge respecting the same.

It would be interesting to enter into a discussion of the influence which would be exerted on local markets by the development of the system above described. We have much yet to learn regarding the holding of produce over a glutted period. Strawberries are said to have been held in cold storage for 21 days without apparent deterioration in any length of season over which it would be possible for them to extend their operations on such fruits. Customers generally would receive a more evenly distributed supply and dealers and growers would be saved from the too frequent losses occurring under our present system of non-storage.

Enough, we hope, has been said to awaken interest in the use of cold storage and pre-cooling as a means of distributing our fruits over a wide area.

Potato blight is out Ontario this season varieties have been the early crop is early potatoes in high, as high as 8 places. The tops of blight and will not structure long enough crop of tubers. The short of a calendar in view of that blight is concerned.

During the first wats of Farm and Durham, Northumb and while there obses the yield from by the destruct blight. While at r Hope, our represente observed on experimental plots connection with the local branch of the Ontario Department Agriculture, what has long been known as has been talked about in the columns of Farm and Dairy, th blight can be prevente. The illustration on this page speak ter than words of the possibilities of preven blight by spraying with the Bordeaux mixture.

The Bordeaux mixture for potato blight is wholly a preventative measure. After the blight once gets well started in the vines it is impossible to check its ravages. It must be set, and this may be done with Bordeaux mixture days during the season potato tops. The object the leaves with stone) contained in the vent the spores of the leaves and causing the

The largest illustration the potatoes not affected do the subject justice



The Blight Starts it. The potatoes in this plot were blighted. When photographed they turned quite brown and gave soon be dead. This plot was Paris Green to combat the measure were taken against