three to four tons per acre. The grain crop will be ready to harvest in a few days.

As a matter to induce you to come, I think I can show you some things that have never been attained in farm practice, i. e., to produce an estimated crop value during this summer of over $5,000, on 120 acres of land, in corn fodder, grain, hay, milk and pork. 70 odd milk cows pasturing on 35 acres, giving 1,500 to 1,800 pounds per day, over 100 tons of hay from 35 acres, a prospect of 700 to 800 bushels of grain from 18 acres, and 700 tons of corn from 30 acres, and 70 pigs pasturing on 2½ acres.

Yours truly,
D. M. Macpherson.

CANADIAN DAIRY NOTES.

Ed. Hoard's Dairyman: — The cheese markets here have been almost at a stand-still during the last few weeks. When the first half of June make was put upon the market from 8⅞ to 8⅞c was bid for it. The factorymen were, however, loth to sell at those figures, and decided to hold for a week or two, thinking perhaps that the severe drouth which was becoming general all over the country would considerably lessen the production and thereby cause the price to go still higher. But this prediction was not fulfilled. Towards the end of June the market took another drop, leaving the factory-men with nearly all the June make unsold and the ruling price for fine goods only 8 cents. All June make is now being sold at this figure with a few special lots selling as high as 8¼ cents.

The market this week is some hat brighter and firmer. Western Ontarion factorymen are now willing to let their Junes go at from 8 to 8¼c, consequently it is expected that a large share of the goods on hand will be sold this week. Reports from the Eastern Ontario markets show that factorymen are selling for from 7¾ to 8 cents. Some of the very fine factories in Western Ontario are holding their Junes for 8½c. They may perhaps get it, as their factory buildings are well equipped for holding cheese for a few weeks. Besides the nights during the dry period have been comparatively cool, making the holding of cheese in the factories less dangerous. The principle of holding cheese in the factories for a very long time is not a good one. Unless there are good prospects of a considerable rise in prices, factorymen will fare better to sell their cheese when ready for shipping.

One peculiarity of the cheese trade this year is the large decrease in the exports. The total exports of cheese from Montreal and New York from the beginning of the season to close of last week (July 13) show the very large decrease of 274,965 boxes.

It may appear somewhat difficult to reconcile this fact with the continued low prices. It would seem as if the dry weather were having a serious effect upon the output, and that these low prices would not continue much longer. It will take sometime, however, before the real cause of low prices will be much effected by the shortage, if this is one. Until the British dealer has unloaded his old stock, he will not be very anxious about securing new goods. It will be to his own interest to keep the price of the latter as low as possible till the old stock is worked off. This he seems determined to do, and to keep up for a while longer, as the reports of old stock still on hand in many places would indicate.

It must, however, be born in mind that, though there has been a considerable shrinkage in the make during June as compared with last year, yet the very large decrease in the export, especially from Canada is due largely to the fact that the larger number of factories have been holding their goods and that a large share of the cheese moved from the factories have gone into cold storage on this side of the water.

Notwithstanding these important factors, there does appear to be a reasonable prospect of higher prices for cheese. They may, however, not come soon enough to give the factoryman the avantage of them for his summer goods.

During the past year or two Canadian dairymen have been watching with considerable anxiety our butter market and the development of that branch of dairying. Prices have been at a very low ebb for several months past, rendering it somewhat difficult for the creamerymen to return a profitable dividend to the farmer for his milk.

The butter market just now, however, seems to have a much brighter outlook than it has had for sometime. Though the prices have not avanced very much, a better feeling prevails and a good steady demand for fine goods continues. Prices this week range from 15 to 16c for fine creamery, with a few sales at 17c, and 13 to 15c for fine dairy.

The cold storage system of transportation, recently inaugurated by the Dominion Government, has probably had a stimulating effect upon the butter market here. By this system our creamery butter will be sent across weekly or fortnightly in a fresh condition. If the quality is good and the shipments are regular and can be depended upon to arrive in good condition there should not be very much difficulty in establishing a market and in creating a demand for Canadian butter. The creamerymen will have to be satisfied for awhile with less than the highest quotations for butter till these goods are known and have acquired the reputation for excellence that Canadian cheese has. When this is accomplished and a regular system of transportation carried out, there does not seem to be any adequate reason why in a few years our export butter trade should not be equal in importance to our cheese trade.

Already two shipments of butter have been made under this new system, and considerable interest is being manifested in the result. If they prove successful, and it is to be hoped they will, the butter industry will receive additional stimulus and will be placed upon a basis that should ensure its success in the future.

The arrangements for this system of cold storage transportation have been under the able management of Prof. J. W. Robertson, the Dairy Commissioner. Several steamships will be fitted up with insulated and refrigerator chambers for the carriage of butter from the cold storage warehouse in Montreal. These steamers will run to Liverpool, Bristol, and Glasgow, and a weekly or fortnightly service will be provided. Refrigerator cars will be run on the main railway lines leading to Montreal, so as to cover the principal butter districts of Quebec and Ontario. This service will be weekly, and arranged so that small lots of butter can be picked up at all the stations and at connecting points with branch lines. Cold storage facilities are provided at Montreal for storing the butter during the interval between the arrival of the train and the departure of the vessel.

The rates for cold storage for butter intended for shipment by the refrigerator steamships are somewhat lower than the usual charges for cold storage. The rates via rail and steamship will be the same as those for butter and cheese shipped in the usual way for the current week. The Government bears the expense of the cold storage facilities on board steamship, and also the expenses in connection with the refrigerator car service.

It is recommended that no butter be shipped from the creamery until 48 hours after it is packed in the boxes or tubs. Square butter boxes holding 56 pounds net each are recommended. These should be made of spruce wood ¾ or 1 inch thick and 12 inches deep, 11 inches wide and 12½ inches long, inside measurement, and should be lined inside with parchment paper.

It must be seen from this necessarily condensed description that ample provision has been provided for the transportation of our butter in good condition. The success of the venture will now depend very largely upon the manufacturer and shipper.

The Quebec Government will give a bonus of 1 cent per lb. as a further inducemment to the creamerymen of that province, on all butter sent forward for shipment to Great Britain, on condition that the creamery sends a stipulated quantity each week.

The long continued drouth has been broken by a number of good rains recently and dairymen are beginning to take fresh courage. In many parts of Western Ontario the effects of the dry weather have been very serious. Many farmers complain of great scarcity of feed, both as regards pasture for the cows, and the prospects for next winter. One farmer states that he will take $10 apiece for his 36 cows next fall. Reports from many localities indicate that cows will have to be sacrificed at low figures because of a scarcity of winter fodder. This will be the case especially in the sections where farmers depend upon the hay crop for the winter's fodder. The rains have not reached us soon enough to help this crop, which is so light in many localities as to be hardly worth the cutting.

As a rule the corn crop in Western Ontario looks very well. The dairyman with a silo and a large field of corn growing to fill it, need not feel anxious about the winter. He can be quite independent of the hay crop and while his neighbors without silos are compelled to dispose of their cows at a sacrifice, he has ample food for his stock and perhaps a surplus that will enable him to purchase a few of his neighbors cheap cows.

This extreme drouth will not be without its bright side, if it has the effect of inducing many dairymen to build silos who have not done so before. No dairyman should be without a silo. It is the most economical method of preserving food for winter feeding, and whether the hay crop be a failure or not is the cheapest means of keeping cows during the winter. By means of the silo cows can be kept milking during the winter. By means of the silo cows can be kept milking during the winter at a profit and will be in as good condition for the summer's work as if they were wintered on hay, and not giving milk.

J. W. Wheaton.

London, Ont.

Mr. Joseph E. Gould, of Ontario, writes.

Pasture and hay are almost a failure. I sowed three-fourths of an acre peas and oats for soiling and one acre of corn for the same purpose. I fed 13 cows on the peas and oats twice a day for twenty-four days before it was done, and then commenced on the corn, and we have now been feeding twenty one days and have corn enough to feed a month yet, all they can eat. I have 13 acres for the silo just coming into tassel, and a silo that will hold 150 tons.

PURE CULTURES OR LACTIC FERMENT IN CHEESE MAKING.

Ed. Hoard's Dairyman.— Since I find that as yet little is known of what may be accomplished with the use of the "Pure Culture Starter," and also seeing that inquiries are being made in regard to it through the columns of your most valuable paper, I will give to those who are desirous of giving it a thorough trial, a brief explanation in regard to the preparation and use, as well as of the cost of the starter.

It can be procured from Creamery Package M'f'g Co., Chicago, Ill., and also from Chr. Hansen's Laboratory, Little Falls, N. Y.

It is usually bought in bottles which contain it in the form of a powder and the directions go along with each bottle, the regular price of which is $2. This may at first thought appear expensive, but it is in reality, very cheap, provided that it is kept at a distance from any sources of contamination, for this starter continually reproduces or repeats itself.

Now, after having repeated the starter according to directions, it is expedient that a suitable apparatus be at hand with which to pasteurize the milk—that is, have an apparatus with which you can heat 100 pounds of milk to 175 degrees Fahr., or, it may be heated to the boiling point without perceptibly injuring it. After having stood at that temperature for about an hour—or, if the milk be heated to the boiling point, several minutes would be sufficient—cool quickly to 86 degrees Fahr., and add your previously prepared starter of which five to eight pounds will suffice.

Introduce this starter into the milk which arrives first at the factory, thereby inoculating it with the desired species of bacteria contained in the starter. It will thus be propagated in the whole of the milk immediately after being received into the vat.

In warm weather when the starter is added as just explained, it is advisable not to heat the milk until it has all arrived at the factory, thus avoiding over-ripeness of the milk.

Now, from the starter which has just been added to the milk, take, say five to eight pounds for inoculating the next batch of pasteurized milk which is to serve as a starter the following day.

In this manner we could use this starter for an indefinite length of time, were it not for contamination, which will finally introduce some undesirable bacteria into the milk, and will call for a newly prepared starter That is, another bottle of lactic ferment must be prepared and used.

Now, Fellow cheese-makers, I can not say too much in praise of the "Pure Culture Starter," and I am not giving it any more than its just deserts when I say that I have not had one pin hole or gassy curd since I began the use of it. This means consi-