

that no washing would remove, and if removed by laborious working the grain of the butter is greatly injured in almost all cases.

The granular process saves much labor and performs its part of the process of making perfect butter. The old way of churning the butter to a mass, fastens in the butter milk, which if allowed to remain in—well you know the result; if worked out it is great labor and cannot fail to injure the grain of the butter.

I am aware that some will fail, at first, to succeed in making granular butter in its most approved form, but if they will use a revolving churn without inside machinery, churn until it begins to "swash"—pull out the cork and let the buttermilk run out into a clean vessel—"Oh, my! the butter is all running out with the milk, what shall I do?" Some say strain it through a hair sieve and put it back in the churn. Don't do anything of the kind, but after you get out of this scrape as best you can, sit down and reason the case.

The doctor studies out the cause of the disease, removes the cause and the disease vanishes.

Some time ago I related the case of the pupil complaining of results in deep setting of milk. When I asked if he had followed directions, he replied, "Oh, the old fellow is not here to watch me. I don't need to follow all his scallops."

Now, gentle reader, I started out with the proposition, "Cream in Proper Condition." Heretofore I have often explained that cream in proper condition is a slight and even acidity, just as the cream begins to thicken, and a temperature of 62°. I am aware that many advocate a colder temperature, but I am confident I can churn as exhaustively as need be at that temperature, and get the granular butter that will float on top and not run off with the buttermilk. I am aware that churning at a colder temperature will secure the butter in finer granules, causing a necessity of adding salt to make the liquid portion heavier so as to float the fine granules, and to keep them from running off. But I see no necessity for this colder temperature. It certainly takes longer to churn, and when it is done by hand an unnecessarily cold temperature is objectionable. I have often tested the buttermilk after this method and find very little butter fat remaining in the buttermilk, but I have found butter remaining in the buttermilk when the churning was done at a warmer temperature. Hence the necessity of knowing what you are about. The best little twenty-five cent aid you can get is a glass floating thermometer.

### PROVINCIAL EXHIBITION.

In the Dairy Department There Will be a Special Competition by Order of the Department of Agriculture.

The dairy products and utensils department of this year's exhibition will be one of the most important features to be visited. The buildings appropriated to this display are to be repainted and decorated, new shelves are being added, which will give additional accommodation to exhibitors. The refrigerators, which have been lately erected at great cost, are amply provided, and are wide enough to hold over five hundred tubs of butter or cheese. During the entire time of the exhibition there will be a plentiful

supply of ice, so that the butter and other perishable goods may be safely kept.

There will be a special competition open to syndicates of butter and cheese factories, under the charge of an inspector having one year's experience and upwards, each factory to exhibit one ordinary export cheese, white or colored, made between the 1st and 15th of August, 1895. The total prizes will be as follows:—For the inspector—1st, \$40; 2nd, \$30; 3rd, \$20. For the syndicate—1st, \$100; 2nd, \$75; 3rd, \$50.

There will also be a competition open to syndicates of cheese factories under a new inspector (first year's experience) each factory to exhibit one ordinary export cheese (white or colored) made between the 1st and 15th August, 1895. The prizes offered are as follows:—For the inspector, 1st, \$30; 2nd, \$20; 3rd, \$10. For the syndicate—1st, \$75; 2nd, \$50; 3rd, \$25.

There will be a competition open to syndicates of butter factories, each factory to exhibit a tub, barrel or box of butter, made between the 1st and 10th September, 1895. The prizes offered for this competition aggregate \$315.

The Hon. Commissioner of Agriculture has awarded special prizes for essays. The following are the conditions imposed in the different competitions, which must be strictly carried out. The directors reserve the right to require such further proof, by affidavits or otherwise, as they may deem necessary. All papers prepared in connection with the following competitions must be short and to the point, so as not to exceed one page of the *Journal of Agriculture*. These essays must be written by practical farmers; those on butter and cheese making by makers, directors or proprietors of cheese and butter factories.

Entries in this department close on the 26th August, 1895. It has been agreed that any subsequent entries that may be made will have to be put on a separate entry form and pay the regular fee. No entries will be accepted after the opening of the exhibition. A written declaration will be required from each prize-taker that the cheese shown was made in the factory named. This rule applies also to creamery butter. Any exhibitor misrepresenting as to dates or otherwise will forfeit any prize that may be awarded. Any factory or manufacturer can compete in all sections, but no factory or manufacturer can compete in the same section under different names. Exhibitors in this department who do not intend to come with their exhibits can address them to the superintendent of the Dairy department, Exhibition grounds, Montreal, from whom they will receive every care and attention. Instructions can be given to the superintendent as to the disposal of exhibits, and these will be carefully carried out. The butter will be kept in a large glass refrigerator made for the purpose and well supplied with ice.

### AGRICULTURE IN GLENGARRY.

WHAT MR. D. M. MACPHERSON M.P.P., HOPES TO ACCOMPLISH.

His Own Farm an Object-Lesson—He Wants to Make the County an Example for the Province—Government Aid to Farmers.

"Give me a hundred-acre farm with a thousand-dollar mortgage on it, let me borrow another thousand dollars

to run it and within ten years. I will pay off mortgage, loan and interest simply by the products of that farm and leave it in much better condition than I found it."

This is the claim made by Mr. D. M. Macpherson M.P.P. of Lancaster, the well known cheese-man, who represents the County of Glengarry in the Ontario Legislature. As a business man Mr. Macpherson is intimately associated with farming and as a representative of the Patrons of Industry he has given the condition of the Agriculture of Canada, and particularly Ontario, much time and study. He has a farm at Bainsville on which in the past six years he has worked a revolution. It comprises 120 acres and previous to Mr. Macpherson's working it himself, it had been rented for seven years. During this time the soil had run down considerably and nothing had been done to improve it. Mr. Macpherson built a large barn, fitted it up with every modern improvement, including a silo—for he is a warm believer in silage for feed—and could comfortably house 150 head of cattle. Since then it has been his aim to accomplish a two-fold object—to make all he could out of the farm and at the same time to keep on improving it. What has been done—and Mr. Macpherson claims the same can be done by any farmer with \$1000 capital—can be seen from the following estimate of this year's crop:

Hay, 110 tons, at say \$9...	\$ 990.00
Grain—oats and barley—	
900 bush, say .....	340.00
Corn—700 tons at \$2.....	1,400.00
Milk production.....	1,800.00
Pork production.....	450.00
Veal—Calves sold.....	200.05
	<b>\$ 5,180.00</b>

This makes an average crop value of forty-three dollars per acre. It will be seen that Mr. Macpherson does not limit himself to one line. He goes in for general farming and when a representative of the Star visited the place this week it was seen that everything was unusually vigorous and prolific. The haying had been finished about a week and the meadows were covered (1) with a luxurious growth of after-grass,—"the result of top-dressing last year," Mr. Macpherson remarked.

In one of the meadows seventy-five head of cattle were grazing, and thirty-five acres of pasture—less than half an acre to each animal—had sustained this large herd in good condition. An eleven acre field of corn is expected to make a record this year with a yield of thirty tons to the acre. It is incredibly thick and stands over twelve feet with a month's growth ahead of it.

"This condition of things," said Mr. Macpherson, "may be attained by any farmer in the county, or for that matter, in the province. The knowledge and a little capital is all they need. I have tried to make this farm an object-lesson for the county, and now I want to make this county an object-lesson for the Province. The Government should provide the money, for the improvement of agriculture is a national question—I care not whether it is the Provincial or Dominion Government that takes the matter up. I have offered my services in explaining methods and pointing out the principles of action to Mr. Dryden, the Ontario Minister of Agriculture. What I propose is that the Government borrow money to loan to the farmers. A thousand dollars each would be quite

(1) I. e. by the 3rd August.

sufficient for each farmer who would be willing to try the new methods, and an officer should be appointed to see that this money be properly applied, just the same as an official would oversee any other contract with a Government. These loans could be repaid in ten years at most, and then look at the change. This question of increasing the farmers' surplus, to my mind, solves the whole question of political economy. Increased surplus would mean increased Government revenue, increased population (which would be imperative under an improved system of farming, for extra help would be required) increased railway traffic, increased education resulting from the aroused intellect by a more intelligent system of farming. Let me give you a few figures. Roughly speaking, there are in this county of Glengarry, two thousand farms worth at present twenty-five dollars per acre, which makes five million dollars. The labor on these farms would aggregate one million days yearly. The surplus produced in cash, taking the average for the past ten years, is \$500,000 annually, and the surplus exported \$250,000. The average value of a day's work in cash is fifty cents.

"Now look on the other side. By systematic improvement the value of the two thousand farms would be doubled; double the number of days' labor would be required; the population would be nearly doubled. Instead of the surplus being \$500,000 it would be three millions. Half a million would represent the amount consumed by home wants, and \$2,500,000 would be the value of the surplus reported. (exported?) To achieve these results I have done, one of the most important points is the proper rotation of crops. My system is this: Corn, two years manured first year; third year, grain, seeded down with grass; fourth year hay followed by top-dressing; fifth year: hay, and then two or three years of pasture according to circumstances. This, if every condition be fulfilled, will give an average yield for each season of forty dollars per acre.

"Of course, I cannot get every farmer to adopt new methods. Some are so used to farming along the old ruts, just as their grandfathers did, that they cannot realize that any improvement is possible, but if I can win over half the farmers in Glengarry, I shall be satisfied. And if the results I have indicated could be achieved in Glengarry, why not all over Ontario."

### STATE OF THE CROPS.

HAY.—At my last writing the haying was in full swing in many places, and should have been more general. There is lots of hay to cut yet, that is, what some might call hay, but it will be very little better than straw, and some that I saw harvested the past weeks not so good as lots of good straw; it was black and musty, having been out in the rain and wet weather the past 10 days. Asking some of these people in passing why they had not finished haying in the fine dry weather during July, they said cutting hay when in bloom gave the horses the heaves, my reply was use the hay cut in bloom for the cows and the last hay cut for the horses there would be no danger of the cows taking the heaves, at least. I never had heard of such a thing. A great many in Vaudreuil and Soulanges, kept their hay for seed, but it has been a bad time for saving it, there would have been more money in