

Shorthorn Butter Test at the Industrial Fair, Toronto.

That there were not more than three cows entered, and two competing, for the prizes offered by the American Shorthorn Breeders' Association, at the Industrial was a matter of surprise to a great many. The prizes were certainly tempting enough to bring out the milkers of this breed: "The cow, three years old or over, which makes the most butter in a two days' test on the Fair Grounds, first prize, \$100.00; second prize, \$50.00."

The conditions of the test were:—

1. She must be a characteristic Shorthorn cow in form and color, whose pedigree has already been recorded, or accepted for a record, in the American Herd Book.

2. Shorthorns must be permitted to contest for sweepstakes premiums with other dairy breeds.

3. Competition will be limited to the cows owned in the State that accepts the premiums.

4. If, in the opinion of the committee, the result be unworthy, no premium will be awarded.

(The Secretary, in a letter to Mr. Hill in reference to the test, made this comment on condition 4:—"There is no interpretation that must be placed upon condition No. 4; our Board will consider no test that may be sent here under one pound (presumably one pound of butter per day.") There are two other conditions relating to the requirements from the societies accepting the offer of prizes and one in reference to their payment, which it is not necessary to publish this time.

As I have already stated, there were but two cows competing, one owned by Mr. Thos. Russell, Exeter, and the other owned by Mr. Wm. Redmond, Millbrook. The test commenced on the morning of September 14th, after the cows had been milked out clean at six o'clock the evening previous. The tests for fat were made with a Babcock tester, kindly furnished by J. S. Pearce & Co., London, Ont. To arrive at the number of pounds of fat yielded the milk was weighed and the pounds multiplied by the per cent. of fat given at each milking, and then totaled for the two days:—

Sept. 14th.	Pounds of Milk.	Average per cent. Fat.	Pounds Fat.
Mr. Russell's cow..	38.50	4.78	1.84
Mr. Redmond's " ..	35.75	4.30	1.54
Sept. 15th.			
Mr. Russell's cow..	40.00	4.20	1.68
Mr. Redmond's " ..	38.50	4.30	1.65
Total.			
Mr. Russell's cow..	78.50		3.52
Mr. Redmond's " ..	74.25		3.19

Each of these cows had been milking about one month at the time of the test. Mr. Russell's cow was four years old. Her ration was three gallons of meal composed of equal quantities of bran, ground peas and ground oats, hay and some cut corn fodder.

Mr. Redmond's cow was eleven years old. She was fed each day one gallon of equal quantities of pea and oat meal and one gallon of bran, two pecks of carrots, one of mangolds and cut hay.

For the benefit of those who wish to know the relation between the pounds of butter fat produced and the pounds of butter that would likely be made from this quantity of fat, I would say that the first prize cow produced about four pounds of butter in the two days, and the second prize cow about three and one-half pounds in the same time.

These gentlemen expressed themselves as being anxious to compete with some of the dairy breeds, and thought that it would keep some of the Jerseys or Holsteins pretty busy to beat them. Why not have a contest among all the breeds next year, and have it continue for a longer period of time, say six days?

H. H. DEAN, Superintendent of Test,
Ont. Agrl. College, Guelph.

For two successive years the proprietors of this paper offered a handsome sweepstake prize to be awarded to the three cows which gave the best returns for food consumed, but were not successful in formulating rules to meet the views of the breeders, nor did the breeders themselves formulate a set of rules to meet their own views,

therefore the prize was discontinued. If cattle breeders wish this prize continued and will formulate a suitable set of rules, we will again offer suitable prizes.

Growing Spring Wheat.

BY A. P. KETCHEN.

In the September issue of the FARMER'S ADVOCATE, Mr. Graham takes exception to some of my remarks on his article on the cost of production of spring wheat in Ontario, and seeks to ridicule me for venturing to express doubts as to the accuracy of his calculations. He objects to the rent of the land and the labor of marketing being charged against the crop. "I was not then," he says, "neither am I now, satisfied that either charges should form any part in the labor of production." I am sure the average farmer will agree with me when I say that they form a very material part of the cost of production. To what, if not to the crop, is a farmer to look for the rent of the land or the interest on his investment, or from what other source is he to draw his pay for the labor of marketing the grain? Then, in regard to the plowing, I wish to say that my estimate was based on the assumption that the sod was to be well plowed, and, in plowing, as in most other things, quantity is obtained at the expense of quality. I repeat that if a man goes into a square 10-acre field of sod with a 2-horse team and plows it in a thorough and workmanlike manner in six days, his master has no cause for complaint. I will not attempt to deny that Mr. Graham's pot-iron plow, drawn by pot-bellied oxen, and held by a pot-headed plowman, may succeed in flopping it over in less time, but such plowmen do not find employment on the well managed farms of today. Mr. Graham is afraid that I over-charged for the reaping. He says: "I am satisfied no farmer would pay this at the present time."

Should Mr. Graham ever find his way to the county of Huron, I will be only too happy to introduce him to a dozen farmers who paid this very identical figure (50c. an acre and the farmer to find the twine) for reaping the harvest of 1892, and I have no doubt he will be pleased to meet one gentleman who paid \$1 an acre (including twine) to get his fall wheat cut this last summer. He says: "As a rule farmers are not dependent on having this class of work in a hurried time."

What the dear fellow means by that sentence is rather difficult to imagine. The wheat must certainly be cut when it is ripe, and if that is not a hurried time I would like to know what is. We will pass over his remarks as to the sowing and harrowing, as they are not worth the paper it would take to reply to them. Concerning the seed, I would say that 1½ bushels will do, but, in our experience, 2 bushels are better, and careful experiments, conducted by competent men, have demonstrated, time and again, that the best results are obtained by a seeding of from 7 to 8 pecks per acre, unless it is on very rich land. A very important item that must be taken into consideration in computing the cost of producing spring wheat, that both Mr. Graham and myself overlooked, is that of manure. I think that even he will agree with me that in order to keep up the producing capacity of the land, it will be necessary to apply some form of fertilizer, which is usually both a costly and a laborious process. If those who are sufficiently interested will turn to page 267 of the July issue of the FARMER'S ADVOCATE, they will find an article by Mr. McMillan on the culture of corn, and I may say that Mr. McMillan is one of the most progressive farmers in western Ontario, and is regarded on all hands as a good authority on agricultural matters. He estimates the cost of manure for 5 acres as follows:—

Manure, 14 loads per acre, at \$1 per load, \$70; hauling and spreading, \$12.60, or a total of \$82.60, equal to \$6.50 per acre, one-half of which is charged to the corn. But as corn is a more exhaustive crop than wheat, we will only charge the wheat with one-third of the cost of manure, which will be \$5.50 per acre; or taking 25 bushels as the yield, this item alone will increase the cost 22c. a bushel. Mr. Graham, in his anxiety to keep down the cost of producing wheat to 18c. per bushel, may object to any part of the manure being charged to the wheat, but the

average farmer will agree with me that it should be taken into consideration. If Mr. Graham's estimate is correct, why is it that so many of our farmers' sons are leaving comfortable homes and braving the cyclone and blizzard, and enduring hardships too numerous to mention, in order to make homes for themselves in the great Northwest, instead of staying at home and making for themselves an independent fortune, raising spring wheat at a cost of 18c. and selling it at 75c. a bushel, making a clear profit of 400%? And why do men of capital invest their money in risky manufacturing concerns, which, at the best, will yield them the comparatively paltry return of 15 to 20%, instead of engaging in agriculture, where their money will be safe, and which will yield them the handsome return of 400% per annum? Mr. Graham concludes his remarks with the following sentence:—"And to those who conduct their business on the old lines, and are hindered by a lack of experience, observation and enterprise, I have nothing to say." Now, I think that, on giving it a second thought, he will agree with me that these are the very men to whom he should address himself. They need no sympathy, who, like himself, are possessed of the extraordinary ability necessary to the production of spring wheat at a cost of 18c. a bushel. But the vast majority who are toiling away year after year, often finding it difficult to make both ends meet, and who are satisfied if at the end of the year their profits are equal to what would be a fair wage for their time as laborers—these are the men who stand most in need of enlightenment. And if Mr. Graham can teach the Ontario farmers how to produce wheat at a cost of 18c. per bushel, his name will be handed down to posterity as one of the greatest public benefactors of the nineteenth century.

On Ensilage.

QUESTIONS TREATED IN THE WISCONSIN EXPERIMENT STATION REPORT.

The eighth annual report of the Wisconsin Experiment Station devotes a large share of space to questions relative to ensilage. One chapter is devoted to a careful study, by F. H. King, of the construction and filling of silos. Mr. King visited ninety-three silos in Missouri, Michigan, Ohio and Illinois, and several farmers while filling their silos, in order to obtain data for this chapter. Mr. King concludes that a stone silo, properly constructed, will keep the silage as well as a wooden one, but that it will be necessary to renew the cement lining frequently, or else to whitewash it with fresh cement every year, as the acids of the silage soon soften the cement. He finds that lath and plaster is a failure as a silo lining, both because of the softening of the plaster and the liability to injury with the fork in handling the silage. Of the wooden linings, that made by two thicknesses of boards with tarred paper between, all nailed firmly together, is showing greatest durability; but all wooden linings rot soon, unless well ventilated. Painting the lining tends to hasten decay instead of preserving it.

From an experiment in feeding corn silage in comparison with dry corn fodder, the following conclusions are reached:—

1. A daily ration of four pounds of hay and seven pounds of grain feed, with corn silage or field-cured fodder corn *ad libitum*, fed to twenty cows during sixteen weeks produced a total quantity of 19,813 pounds of milk during the silage period, and 19,801 pounds of milk during the fodder corn period.

2. When we consider the areas of land from which the silage and fodder corn are obtained, we find that the silage would have produced 243 pounds more milk per acre than the dry fodder, or the equivalent of twelve pounds of butter. This is a gain of a little more than three per cent. in favor of the silage.

Don't forget that since plowing matches are dying out, and we are plowing our land on the flat with short plows, our boys are losing their interest in good plowing and farming generally. Good plowing is the first step in good farming.