

A Commodious Cattle Barn.

The illustration appearing on this page shows the cattle barn on the farm of David Jackson, of Newdale, Manitoba. This entire barn is devoted to cattle, as he has, in addition to it, a large horse stable and a granary, which are built at considerable distances apart. This barn is 112 feet by 38 feet, 9-foot stone basement wall, with natural bank along the north side, from which there are two driveways into the barn. The frame superstructure has 16 foot 8x8 posts, 26-foot 8x10 purline posts, and the whole space is available for the storage of hay and fodder. A large water tank is situated on this floor, a grain crusher stands 8 feet above the floor, with a hopper on floor level, from which it is elevated to bin at top of barn, with self-feed, into the crusher, and the chop falls into a bin in feed passage below. Pump and crusher are run by geared 14 foot windmill. The ground floor is laid out with an 8 foot passage running lengthways of the entire stable, with a row of cattle on each side, facing the outer walls. This wide passage permits a team and wagon or flat sled to be driven right through the stable, to take the manure direct from the stable to field or heap. Four-foot feed passages run the full length of the stable, in front of cattle, with water troughs above the mangers, which are supplied by pipes from the water tank on the upper floor. The troughs are provided with covers, to keep them clean and to allow the cattle to drink at the will of the feeder. The floor is plank through-out, and the stalls are double, 6 feet wide, with accommodation for 69 head of mature cattle. As will be noticed, the south side of the stable is well lighted with a number of good-sized windows, which also provide ventilation, but improvements are being planned in this particular. The herd consists of Shorthorn grade cows, and a pure-bred Ayrshire bull is used.

Farmers' Institute Field Notes.

BY THE SUPERINTENDENT.

The Institute delegates who have been addressing meetings and introducing discussions in every county of the Province of Ontario this winter have returned home to get ready for the February sessions. Without exception, they say they have had better meetings on the whole this year than in previous sessions.

ALONG THE ST. LAWRENCE.

Mr. Henry Glendinning, who has been in the dairy counties of Hastings, Addington, Leeds, and Frontenac, says that the people in the West do not appreciate what these counties are doing, particularly in dairying. We talk about Oxford and Middlesex, and our minds become prejudiced in favor of the farmers of these districts. We forget that these people in the Western Peninsula have had superior advantages ever since the early settlers hued out homes for themselves in what was known in those days as the old "Huron Tract." We forget that the people of the St. Lawrence have had to come to the western part of the Province for the foundation stock of their herds. We forget that dairying all the year round would scarcely be possible without summer feed in the form of either ensilage or soiling crops.

We forget that last summer, when, in order to keep up the milk flow, the Western farmer had to take his cattle off the dry pastures and feed them in the stables, the cattle of the St. Lawrence district were wading in pasture up to their knees. The district through which Mr. Glendinning passed has contributed a large per cent. of the butter and cheese that went to make up the twenty-five million dollars' worth of exported products during the year 1900.

FEEDING RATIONS.

Mr. Glendinning says that notwithstanding the fact that his subjects as advertised cover quite a broad field, the one entitled "Feeds and Feeding" was called for most frequently and discussed most thoroughly. "My charts," said Mr. Glendinning, "which showed the nutritive value of the different stock foods were most closely scanned. It was found to be almost invariably true that as each successful feeder explained just what he was giving each cow each day, and then compared it with the scientific basis furnished by the speaker, they were in perfect harmony."

Continuing, Mr. Glendinning said that dairy-men were fast finding out the value of different foods from an economic standpoint. Timothy has had its day, and the different kinds of clover are entering into almost every rotation.

WOMEN'S INSTITUTES.

Miss Blanche Maddock, of Guelph, who accompanied Mr. Glendinning, has nothing but the highest words of praise to say of the progress of Women's Institutes. "The women met and asked me to organize a Women's Institute in almost every riding," said Miss Maddock. "They see their husbands using improved machinery and thereby lessening their labor on the farm. They see cash in the form of bank checks coming in from the creameries and cheese factories every month, and

they begin to see the necessity of improving their home surroundings."

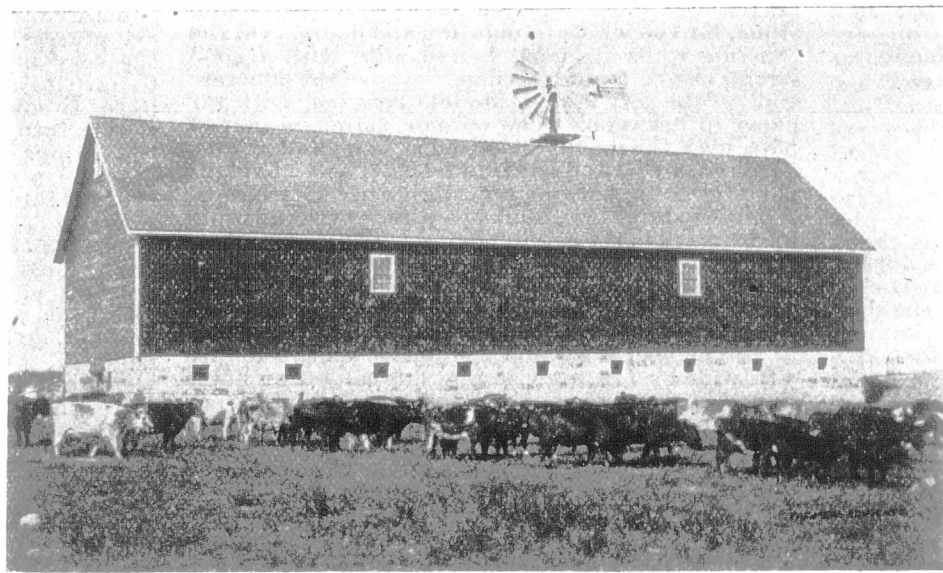
One lady writes me that since Miss Maddock visited their section of the country several ladies had said to her: "Why did we not think of this before? We had thought we knew all about house-keeping, and we believed that cleanliness was not only next to godliness, but was pretty nearly everything. We have scrubbed our floors until they were fit to eat from, and then this young girl comes along and tells us, in her bright and cheery way, that there is no use spending our energies and wasting our lives in this way when we do not propose to eat from this floor anyhow."

"Why use heavy pots and pans," said Miss Maddock, "when lighter ones are just as cheap and just as durable? Why put up with an old stove when a new one of modern design would do the work with half the fuel? Why worry and spend part of almost every night making, mending, starching and ironing white dresses for our children, when pretty, bright-colored patterns can be had which only require half the labor?"

Such letters as this are coming in almost daily from women who have listened to one or other of our lady delegates now in the field.

IN SIMCOE, GREY AND DUFFERIN.

Mr. A. W. Peart, of Burlington, and Mr. J. E. Meyer, of Kossuth, passed through the city yesterday on their way home from Division G. "On the whole, we had good meetings," said Mr. Peart. "Mr. Meyer's work on poultry was especially acceptable, and I am sure the good people in the north have taken home many practical ideas on this subject. For myself," said Mr. Peart, "I was called upon at almost every meeting to discuss the 'Management of Soil.' Here I found every one interested. Some places they wanted 'Fruit.' Other places they asked for 'Insects and Fungi,' occasionally 'Wheat-growing,' but everywhere 'Soils.' I tried to show them," said Mr. Peart, "exactly what they were losing in dollars and cents from the growing of certain crops. I also tried to point



EXTERIOR VIEW OF BARN BELONGING TO DAVID JACKSON, NEWDALE, MAN.

out what was to be gained by the growing of clover and other leguminous plants."

NITROGEN.

"Compare a crop of clover," said Mr. Peart, "with a crop of wheat as it affects the fertility of the soil. If you plow under a crop of clover that will produce two tons to the acre, you add to your land exactly 90 lbs. of nitrogen. This nitrogen is appropriated from the free nitrogen of the air, and costs the farmer nothing. The wheat plant has not the power to do this. Nitrogen is worth, in the commercial world when you go to buy it in the shape of a fertilizer, about 18 cents per pound. You have here, then, a gain of \$15.20 per acre. Take a crop of wheat, on the other hand, and you remove from your soil two pounds of nitrogen for every bushel of wheat and the straw which accompanies it. At 20 bushels to the acre, you therefore take from your land 40 lbs., which, at 18 cents, amounts to \$7.20. You have as a balance against this 20 bushels of wheat at the market price. This is the foundation principle of what is known as the 'Norfolk Rotation,' which is so popular in the Old Country. It is a four-years' rotation with roots, barley, clover and wheat in the order named. Many English farmers, by following this rotation, have not only retained the fertility of their farms, but have actually increased it, although in constant cultivation for hundreds of years."

POULTRY.

One year ago last December the Provincial Winter Fair offered prizes for dressed poultry at their show held in the City of London. They also arranged with Prof. Graham, of the Agricultural College; Mr. J. E. Meyer, of our Institute staff; and Prof. A. G. Gilbert and his estimable wife, of Ottawa, to give practical talks and demonstrations on the different phases of the subject, with a view to improving this industry in Ontario. Our eyes were then opened to the possibilities of the poultry industry. Acting under the instructions of the Minister, we have this winter held practical

poultry meetings and given instruction to more than 5,000 farmers and their wives and daughters.

Mr. A. G. Gilbert has charge of the meetings in the district east of Toronto. Mr. G. R. Cottrell and Prof. Graham are covering the Western Peninsula, while Mr. J. E. Meyer has addressed 20 meetings north of Toronto. All of these gentlemen agree on the following points:

1st.—Our home markets are glutted with a lot of poor, scrawny fowl.

2nd.—There is an unlimited demand for plump young birds.

3rd.—Merchants in Toronto and Montreal are paying as high as 10 cents per pound for chickens properly fed and dressed.

4th.—A flock of chickens properly handled would return to their owner at least one dollar a head per year.

5th.—A hen is not a profitable animal on the farm after two years of age.

6th.—Pullets are the most profitable winter layers, but they must be hatched early.

7th.—During the laying period, to get the best results, hens must be made literally to work for their living. Whole grain should be scattered each day in the litter, so that in hunting for it the hens will get exercise, keep healthy, and fill the egg basket.

8th.—Ground bone is the best form in which animal food can be fed to laying hens. If this cannot be obtained, meat scraps from the house and an occasional liver give good results.

9th.—Grit must be supplied in some form, as, in the absence of teeth, it serves to grind the food in the gizzard.

10th.—Laying hens must have access to some form of line, from which to manufacture shells for their eggs.

IN THE OTTAWA VALLEY.

An Institute officer in North Renfrew sends in the following:

"Our Institute meetings this year have been successful indeed. You sent us only one speaker, but he has proved a host in himself, and we hope

to have the pleasure of his company another year." The writer goes on to say: "The speaker advertised was Mr. Duncan Anderson, of Rugby, Simcoe County, and he proved to be a thoroughly practical Canadian farmer, capable of setting forth his experience in a common-sense, everyday way, which took well with his audience. We have no doubt a brief sketch of his life will be interesting, not only to those who heard him, but also to those who may, we hope, hear him on a future occasion. Mr. Anderson was born in Glasgow (a fact patent to everyone who hears him speak and knows the 'Glasca tongue'), and came to this country with his parents in 1862. His father took up land in the Township of Oro, County of Simcoe, on which farm Mr. Anderson now resides, besides owning another in the same township. When young, he assisted in clearing the timber, stumps, etc., off the home farm. He has done every kind of work from swinging the old-fashioned cradle to running the modern binder. Beginning with

a few common cattle, he has now a select herd of good milking, registered Shorthorns, and a flock of high-bred Leicester sheep, besides a number of well-selected hogs. With only a common school education received in Scotland, he has so improved himself by home study as to be able to state his views in a clear, lucid manner."

Mr. Anderson firmly believes in keeping up the fertility of the soil by the use of stable manures and green clover. Three points he emphatically insists upon:

1st.—You cannot make the seed-bed too fine.

2nd.—You cannot keep the fertilizers too near the top.

3rd.—It is better to wait until the ground is warm in the spring before planting.

Mr. Anderson also says: "Farmers plow too deep and too often. In cultivated crops, the surface soil has to be kept constantly stirred, but you waste your time and energy and often do much harm by plowing the average farm over and over again, each time turning up some poor soil from below and thereby bringing down the fertility of the surface. Probably most farmers," said Mr. Anderson, "make most of their money nowadays by their by-products. With us at home, poultry has become one of our sources of revenue. We have made a bargain with the women folks of the house that they are to have all the products accruing from the poultry trade if they pay for the feed. Last year they had 90 hens, and the amount realized from the sale of eggs and chickens was \$110.30. The cost of feed and loss was \$35.45, leaving a net profit of \$74.85." This he claimed was a good investment.

That winter is the season when farmers find most time for reading and writing is evidenced by the many letters received at the office of the Advocate expressing appreciation of the paper, and by the rush of contributions on practical subjects for publication, many of which we are compelled to hold over for lack of space in present issue.