

A Maritime Province Farmer's Method of Handling Manure.

I think it is settled beyond question that the greatest benefit is derived from manure when it is put on the land soon after it is made. For a long time I would not be convinced of it. It seemed to me that fermentation was necessary in order to render the plant food available, and if it had to take place in the soil it would of necessity be slow; but in view of the results obtained by experiments and the experience of others, I can no longer doubt, but I still question whether it is the best method to pursue in all places, and especially this part of Nova Scotia. Our land is hilly and our spring is wet, and I am afraid a great part of the manure would be lost by washing before the ground was thawed enough to retain it. My own practice is to collect the manure at the barn, using plenty of litter in the stables, and spreading the horse manure in the gutters back of the stable. By these means the liquid manure is all saved, and the horse and cattle manures are intimately mixed. As the stables are cleaned every day the manure is added to a large, deep, square pile in the yard, and its own weight presses it very firmly. I don't like the plan of spreading it out in thin, flat piles, as it presents too much surface to the weather, and is unable to absorb all the moisture which falls upon it. During the winter and early spring this manure is hauled to the fields and again put in large piles, from which it is spread just before cultivation begins. A large part of my manure is made in box stalls, where it is necessary to use plenty of litter in order to keep the cattle clean, and this manure is hauled directly from the stables to the pile in the field. I have always been taught that it is good practice to keep the manure as near the surface as possible, but on account of the quantity of long straw, I have to plow it down; while for root crops it is spread in the bottom of the drill. No doubt I lose something by my way of handling manure, but I do not think it is much. I do not see much signs of heating, nor do the piles shrink much in size. The straw is somewhat broken up, but not much decayed, while the manure looks fresh and is full of moisture. The greatest fault I can find with this way of handling manure is that it is laborious, and the spreading has to be done at a time when time and labor are most valuable.

JOHN GREGORY.

Antigonish Co., N. S.

Gleanings from Farmers' Institutes.

HELPFUL POINTERS BROUGHT OUT.

The Superintendent has been visiting some of the Institutes in the various parts of the Province during the month of January. All of the delegates interviewed say that they have never seen so much interest manifested in the meetings, nor such active discussions entered into. Where meetings were not so largely attended as they ought to be, the fault could almost always be traced to the officers themselves. Usually the advertising had not been thoroughly done. Most Secretaries have done well, and all are to be commended for what they have accomplished, but in a few instances the rules were barely complied with. The Secretary who works up the best meetings is not content with publishing and distributing bills and programmes, but he also keeps the local papers supplied with notices for some weeks beforehand. He also keeps his directors at work, and, in fact, talks "Institutes" everywhere, and all the time.

In the Kingston district, Mr. A. P. Ketchen and Mr. A. M. Campbell addressed some splendid meetings, and, it being a dairy district, they devoted a good deal of their time to this branch of agriculture. They were given good assistance by Mr. Jos. Haycock, ex-M.P.P., and Mr. D. D. Rogers, M. P. The benefits of the Kingston Dairy School are very evident everywhere, and the Superintendent and instructors are doing a good work for the dairy interests of the east.

In Prince Edward and Hastings Counties, Mr. J. E. Orr is talking fruit and orchards, and has given some practical object lessons by pruning specimen trees in orchards near the place of meeting. These will stand for the neighbors to see and imitate on their own farms. Mr. N. G. Somerville, of Lanark, discusses dairy matters, and he finds the Hastings County farmers are very much alive and earnest in all branches of dairy farming. Some of the herds were visited in their own stables, and the general impression left on the delegates seemed to be that the dairy farmers of the east were rapidly culling out their poor cows, and by careful selection and the use of thoroughbred bulls whose pedigrees were right, were bringing their herds up to a splendid standard of excellence.

MEETINGS MORE HELPFUL.

In Victoria County, Mr. T. G. Raynor and Mr. H. R. Ross were having successful meetings. Mr. Raynor says: "The farmers are getting more good out of the meetings than ever before. They are freer in discussions, and the kind of questions asked indicates that they are putting into practice the good ideas they have received at former meetings and from the publications issued by the Ontario Department of Agriculture." Continuing, Mr. Raynor said that at the evening meetings the best results were obtained where the programmes did not contain too many items of a frivolous or purely amusing variety. Good music was always appreciated, and it acted as a condiment to season the more substantial food supplied by the speakers on agricul-

tural matters. There was a tendency for some Institutes to employ local talent to assist in rendering entertainment only, expecting the delegates to do all the speaking on the topics relating to the farm. Mr. Raynor says this is a mistake, for a local man knows the needs of his neighbors, and by introducing subjects of vital interest, and leading the delegates to devote most of their time to the discussion of these subjects, the very best good is accomplished, and one of the objects for which the Institute system was started is attained.

Mr. Ross, in his talk on "Breeding Types," laid stress on the fact that a good conformation and other apparent excellent qualities were not in themselves sufficient to warrant the selection of a sire for the dairy herd. "In choosing a bull for our herd," said he, "we look first at the record of his mother. Then we make sure that he is strong in those individual points where our cows are weak. He must also be distinctly active and masculine in every feature. We injured our herd by using a bull one season who, though scoring high in a standard scale of points, lacked strong masculine qualities. The calves in every instance were lacking in nervous force."

IMPROVING THE LAND.

Mr. John I. Hobson and Mr. W. C. Shearer are in Peel, York and Ontario Counties. Meeting Mr. Hobson in Peel, his first remark was: "I have been doing Institute work now for about twelve years, and I have never seen such enthusiastic audiences as we have had this year." "Mr. McCulloch is a great secretary," said Mr. Shearer. "The halls are always well lighted and heated, the meetings are started on time, and the whole thing goes off with a snap and a vim that means business right from the start. Peel will have over 500 members this year, and Mr. McCulloch will see to it that each one gets his money's worth. He has engaged my ser-



SAMPLES OF GRAIN GROWN IN LAT. 58°, 45'.

Vermilion, Peace River, seven hundred miles north of Edmonton, Alta. Gathered Aug. 26th, 1899. By Mr. Lawrence (standing amongst it). His height is 5 feet 9½ inches.

vices for one other meeting," continued Mr. Shearer, "and I understand that Mr. Duncan Anderson and Miss Laura Rose have also been secured. He knows the dairy business, too, and helps us not a little by his pertinent questions and practical suggestions."

"Is rye not as good as clover to plow under for green manuring?" someone asked Mr. Hobson. "No, sir," came the reply. "But suppose your land will not grow clover?" "Then grow peas. Peas and clover take nitrogen from the air and store it in the soil. Other crops can then be grown, feeding upon this new supply of nitrogenous material." "I have improved my land," said one, "by plowing under turnips, yet we are told that turnips contain little else besides water." This was explained by the statement that any vegetable matter turned under would improve the mechanical condition of some soils, and that decayed vegetable matter made humus. Humus in turn made it possible for certain minute organisms to carry out their work of rendering available for plant growth food material already present in an insoluble form in the soil.

PIGS NEED MORE ROOTS.

"In my opinion," said Mr. John McMillan, M. P., to the farmers of Essex, "we are not feeding roots enough to our hogs. In South Huron many of us feed ten pounds of mangels a day. We start with the pigs even before they are weaned. At five or six weeks old they take to roots eagerly, and during their entire growing period they can be fed with profit." Mr. F. M. Lewis, of Burford, who accompanied Mr. McMillan, says: "I still find too many orchards in grass. We are willing to accept one crop in the shape of grain, hay or roots off the rest of our fields, but expect our orchards, without cultivation, to give us each year an abundant harvest of fruit and a crop of hay besides. More cultivation, better cultivation, and more manure have got

to be supplied before we can get the best results from our fruit trees." Mr. Lewis thinks the regulation of "soil moisture" is one of the problems Ontario farmers have to solve. "All plant food taken from the soil by the plant must be in a state of solution. How can we best preserve in the soil just the proper degree of moisture for plant roots to do their best work?" This question Mr. Lewis discussed most intelligently, and the consensus of opinion seems to be that rolling after sowing on most soils is beneficial, but where the land is not stony it should be lightly harrowed afterwards.

GROW MORE CLOVER.

Duncan Anderson says to the farmers of Division 4: "Grow more clover. You can take off a good harvest of this crop, and yet leave your land richer than it was before. Take off your crop of clover hay, and with a stubble four inches long and a root growth of from 12 to 24 inches, as we find it in the red clover, you have left in actual manurial value \$30 per acre. Three things," continued Mr. Anderson, "we must do to get the best out of our soil:

"(1) We must grow leguminous crops to restore and maintain fertility.

"(2) We must cultivate and pulverize well to provide the roots with a loose soil in which to spread themselves.

"(3) We must always prepare our seed-bed well, and keep the manure near the surface, that the young plants may get a good start.

"Stunt a plant or an animal," said Mr. Anderson, "and no amount of food or attention afterwards will obliterate the effects of the bad start."

UNDERDRAINING NECESSARY.

Mr. A. W. Peart, of Burlington, says that some lands can never be brought into a proper state of cultivation without underdraining. "There is little use, however, in draining a field unless it is thoroughly done. Lay out the main drains first and then the laterals. You do not need to go so deep in clay as in sandy soil, and there is some danger of placing your tiles so that the surface water never penetrates to their depth." Mr. Peart finds it best to use a wooden outlet for tile drains, as it is less liable to be broken by stock, and if a square or triangular box ten or twelve feet long be used, it cannot be easily obstructed at the mouth by a breaking away of the soil around it. The mouth should be protected by wire or iron bars to prevent small animals from penetrating the drain.

As viewed from the standpoint of an Institute worker, the agricultural conditions in Ontario are improving every year. A greater diversity of products and our rapidly increasing export trade necessitated a changed condition of farm management. The farmer of to-day has problems to solve and enemies to combat that were unheard of twenty years ago. He therefore requires a more technical training and a better general education. In travelling from county to county, and township to township, the two things that most strongly impressed the Superintendent were the necessity for a deeper knowledge of the scientific principles underlying our business, and the fact that we do not devote enough thought to maintaining and increasing the fertility of our soils.

New Kinds of Seed Grain.

To the Editor FARMER'S ADVOCATE:

SIR,—Seed time will soon be here, and as there is often a number of inquiries with regard to new varieties of grain, I venture to take the liberty of writing with regard to some of the newer varieties that have been grown in the northern part of the Township of Etobicoke, County of West York.

The Success or Beardless Barley.—The Success barley has been grown in this part for the last four or five years. After the harvest of 1899 the amount of bushels threshed in this neighborhood could be counted up in the thousands. I had 9½ acres, which yielded between 350 and 400 bushels. I sold about 300 bushels at the elevators at Malton station for 41 cents per bushel, and it was emptied amongst the other kinds of barley, to be shipped to the breweries or exported out of the country with other barley. We got the same price for it as for other barley. It requires good strong land. I would not advise any person to sow it on light sandy land. It ripens about six or seven days sooner than the Russian barleys, and on account of there being no beards the straw makes excellent feed when run through a cutting box. It is the earliest grain to ripen that is grown in this part, generally being cut before fall wheat is ready. There has been a small quantity of the Mandscheuri (not Mepsury) grown in this locality, and by all accounts it is going to be the coming barley for general crop.

Black or Hulless Barley.—This is a barley that a great many people make a mistake with when drilling it into the land. They seem to have the idea that because it is called barley they set the drill to put on about two bushels of barley to the acre, and the consequence is, when it comes to head out the heads will be very short on account of being sown too thickly, and the chances are they will have a poor yield. It is of the same weight per bushel as wheat, and sometimes when well cleaned will test 65 lbs. to the bushel. It will run out of the drill faster than wheat, therefore when setting the drill set it to sow wheat. I set the drill to sow a little less than a bushel and a half of wheat per acre, and the Black barley was plenty thick enough. Some people claim that it will yield over 40 bushels to the