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Where Money is Thrown Away

We would be conservative in stating that the value of the farmyard manure that is wasted in Canada each year through improper methods of handling represents a loss 10 times greater than the value of all of the commercial fertilizers used in the country. We in Canada have not yet learned how to use commercial fertilizers. We are depending altogether on the farmyard manure produced to maintain the fertility of our soils. The importance therefore of making the very best use of this, our principal

source of fertility, is evident.

The important part of the manure to conserve is not the solid but the liquid excrement. In the liquid is two-thirds of the nitrogen and nine-tenths of the potash. The solid portions are rich in phosphoric acid only. Yet from the way in which many of us look after this source of fertility, one would imagine that the plant food was contained in the solid rather than the liquid excrement.

DETERIORATION COMMENCES AT ONCE The great loss that takes place

in the manure is due largely to manner illust ly in the liquid portions. Nitrogen, the most valuable of all fertilizing ingredients, is the first to go. We have often noticed in close stables a strong smell of ammonia. Ammonia is a compound of nitrogen and hydrogen. The first loss of nitrogen, therefore, occurs inside of 10 hours from the time the manure leaves the animal.

Just how serious is the loss from holding ma nure in large heaps, even if the heaps are well made, was brought out by an experiment at Cornell University. A large pile of manure was allowed to stand in the open for six

months. At the end of that time bacterial action had destroyed 50 per cent. of the dry matter and much more than 50 per cent. of the plant food. In other words, the manure was not worth half as much as if it had been applied directly to the land.

ABSORBENTS FOR THE LIQUID

We must first take measures to prevent loss of the liquid excrement in the stable. This is accomplished by the use of plenty of absorbent material in the gutters. The next point is to get the manure to the fields as quickly as possible. Where manure is spread daily the loss is reduced to a minimum. In the field when, under the influence of bacteria, chemical changes do take place the plant

food elements that are released combine again with the materials that make up soil and are held there ready for the use of the plant.

Leaving the manure in small heaps in the field, we regard as a wastefu! practice. There is greater chance for bacterial action in the small heap than in the large one, and much of the fertility is washed out by the rains, and only the land directly under the heap is benefited. Were the heaps left in the field in very cold weather and spread before a soft spell, this loss would, of course, be prevented.

The only place where it is permissible to leave manure in the stable for any length of time is in calf pens. If the calves are well bedded they will keep the manure tramped down, and there will be little loss.

We should remember in spreading manure that the only portion that will be of value to the plant is that which is rendered soluble. Hence the importance of breaking the manure up fine and

spreading it thinly. Ten loads of r anure properly spread will be of as much use to the next crop as 15 or 20 loads thrown around in coarse lumps. Here is the biggest point in favor of the manure spreader. It fines the manure and spreads it in a manner that is impossible with a fork. We believe that on a 50-acre farm a manure spreader would be a profitable investment.

The manure produced on the average 100-acre farm should be valued at at least \$200. On the dairy farm, where the stock is large and the



The Up-to-Date Money Making Way of Spreading Manure

The manure spreader is a money maker on any transform of 50 neres or more in extent. It saves labor, saves manure and makes a hard job easy. The manure being spread so evenly gives greater results per ton when applied with a spreader than when applied in the manner illustrated below.

cattle well fed, the value may be twice or three times that much. We could not afford in milking a cow to let half of the milk go on to the floor and half into the bucket. That, however, is the principle on which too many of us care for our most valuable source of fertility-farm yard manure.-"Bluenose."

Best Time to Make Money from Cows

Henry Glendinning, Ontario Co., Ont. We are making more money and making it easier by winter dairying than we can by summer



The Out-of-Date Wasteful Method of Handling Manure

The Survey was a strain we not strain and the stables to the field is getting greater returns from the manure even if spread in the manner here shown than the one who cleans his yards once or twice a year. The manure spreader is the one additional improve-ment needed to get the manume value from the manure. -Courtesy I H C

> dairying. A great mistake that is being made Ly the majority of dairy farmers in Ontario is that they milk the cows in summer to supply the cheese factory and when the factory closes down, they close the cows down.

> We have our cows coming in the year round. We keep them in good condition, we get more milk, and our income is larger in consequence. We would like to have the majority of the calves come in in November.

> Of course to make money from winter dairying we must have cheap food. We have this in silage and alfalfa. We do not receive fancy prices for our cream. It goes to the creamery, and we receive the same prices as our neighbors.

> The corn crop is one of our most valuable crops. We not only have a great quantity of excellent feed, but the good effect can be seen on the land for several crops following .- Wm. L. Corbett, Middlesex Co., Ont.

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Demonstrate Scientific Agriculture

J. C. Todd, Middlesex Co., Ont.

The older I grow the more convinced do 1 become that the great lack of our farmers is education. Everywhere around us we see out-of-date methods, out-of-date machinery, and most decidedly out-of-date cows sustained on feed that is raised in the most expensive manner. I believe that we have only ourselves to blame for this lack of correct knowledge.

When the Ontario Agricultural College first became well known among us it was quite common to smile at the idea of anyone learning agriculture "in school." The institute lecturers we were pleased to regard as men who dealt in fine theories that they could not put into practice, nor anyone else. Hence it is that having heard good methods expounded to us time and time again, the ideas advanced have rolled off like water from a duck's back.

"YOU HAVE TO SHOW ME"

As I have sat listening to institute lecturers expounding the principles of better agriculture, I have often wondered how it would be possible to get that informaion across to the audience in such a strong and convincing manner that they would go home and practice it. I have concluded that the common saying, "You have to show me," points the way to the solution of the question.

The revolution that has been worked in orchard methods in some sections of Ontario through the demonstration orchard idea is but the working out of the "You have to show me" principle. By taking old and neglected orchards that were not regarded as profitable and making of them the most profitable department of the farm right under the eyes of everybody in the vicinity, the principle has indeed caught the indifferent ones and they are now going after their old orchards with a vengeance. Mr. "You Have to Show Me" has received his answer.

Now I would propose that this scheme be applied to general farming lines as well. Why can not our Government take hold of some run-down farms in poor sections of the country, put a good farmer on them and in a practical way demonstrate the application of scientific principles of agriculture? The experiment need not cost much, as the farms will be self-sustaining, as were the orchards. I believe this idea is worthy of consideration.

Notes From Farmers

As work decreases in the fall we drop the rations of our work horses in proportion .- C. C. Elton, Huron Co., Ont.

The cow must have free access to good, clean water at all times, summer and winter. At a trifling cost, the water can be put into the stable either in a trough in front of the cows, or in individual basins .- E. F. Eaton, Colchester Co., NS

Having had many years' experience with land drained, also land undrained, I have no hesitation in saying that land tile drained, will yield sufficient increase of orop over land undrained to pay for the draining in from three to four years. Many have paid for the extra draining in two years .- John Fixter, Macdonald College, Que.

Many have become discouraged with silage be cause cows do not do well when fed on it. We cannot expect cows to do well on silage alone. It is to the cow like potatoes are to the familly, very valuable but not enough. They will not do alone. We should aim to grow those feeds that in combination with silage will produce the largest amount of milk at the least cost.-D. Derbyshire, Leeds Co., Ont.

The milk production of cows should be weighed during the entire year. Some cows give good re-ults for a few months and hence obtain a good reputation with the owner that annual records show is undeserved .- C. F. Whitley, In Charge of Records, Ottawa, Ont.