

The Care and Application of Manure.

BY D. A.

If possible, mix horse and cattle manure together, even if it necessitates some extra wheeling to do so. When carried and spread daily as made, the mixing is not quite as necessary, but, if left for even one week in a pile, the action of a general heat necessary to the making of manure of good quality is much forwarded by the mixing.

While there are different objects to be thought of in the application of manure, the chief one is to enrich; consequently, green and unrotted manure may serve our purpose better than manure rotted to half its original bulk. The writer of this applies the larger part of the manure made on his farm in a fresh state, loading and drawing to the fields and spread as made. We have practiced this for twenty five years, and feel that we are the gainers by doing so. The chief reasons against this way of applying are the weed seeds that often are numerous in the straw used as bedding; but our farming operations should not be of a nature to allow much of our bedding to be infested with weed seeds; certainly it can be prevented, and we claim when a fairly good state of farming operations are in practice, much labor and much waste of the manure is saved by immediate application. Many arguments have been brought forward against this method, but we have failed to find one of them to be proven sufficiently to alter our idea, namely, that the sooner we get it where we want it, the greater benefits we derive. [NOTE.—On very hilly fields, or where, through lack of drainage, water accumulates in pools to run off in a freshet, occasionally there is liability of loss.—ED.] Our method has been to spread evenly on sod fields intended to be plowed up in spring for peas, or any crop not intended to be first or earliest sown; on parts of stubble fields requiring enriching before late fall plowing, or on the fall wheat as soon as the ground is frozen to carry the horses; this we find on clay lands the finest form of application. Spread regularly, and not too heavy, it is most beneficial: first, in enriching the land, and also in mulching, preventing heaving of the plants, and making sure of a clover catch wherever it is applied; and it is wonderful the acreage we cover in this way. Even if heavily put on, to almost smother some plants, it ultimately carries the wheat to a finer finish. Clover seed never fails of a fine start on the portions thus treated.

On sod intended for corn we apply a heavy coat, and find it forwards our work greatly, for we need not plow it until our other sowing is completed. The manure keeps the moisture in the sod, enabling one to plow easily, while had the manure not been applied, it often gets very dry before we are ready for plowing.

Fresh manure applied on sod always turns up in fine shape at the second plowing, and when fall wheat is to follow, the surface is in an almost perfect state. In this way we are really giving both crops a fine application with the labor required for one.

In no case would I use foul, weedy bedding this way, but would heat the manure thoroughly and keep it moist. We draw out mostly on a jumper; when there is sleighing we go to the fields farthest from the stabling; when poorer roads happen we take the fields nearest us. In this way much of our heavy work is done when we are not busy, and at a season when the horses can enjoy a trip also. Seldom do we have to handle manure in hot weather, as we see some do, and our crops always seem to be better than those who allow it lying around from one year to another.

Cement Concrete for Silo Walls.

In various issues of the FARMER'S ADVOCATE, during 1894 and previous years, we have published articles describing in detail the best methods of using sand, gravel and cement in the construction of concrete walls and floors for stables. In our issue for July 16th, we promised to report for our readers upon the success or otherwise of a pair of cement silos built inside a barn at Bothwell, Ont., by Mr. T. D. Hodgins. He says the cost is less than a properly-constructed double-boarded silo; and, besides, it can never rot away. The walls stood the great pressure perfectly, there being no give or cracking anywhere. The outside walls were 18 inches, which Mr. Hodgins thinks is unnecessarily thick. More "cut off" was made in the corners, also, than was necessary. With lighter walls the cost would be materially reduced. The partition wall between the two silos was nine inches thick. A fine, smooth finish was got on the inside of the walls by Mr. Isaac Usher, who superintended the work, so that the ensilage settled perfectly. When filled, the top was covered with a couple of loads of cut straw, and there was practically no waste ensilage when this was removed. It was splendidly preserved right to the walls and in the corners. Corn with more ears might have made richer ensilage, but, as it is, the result has proved entirely satisfactory, and up to last week one of the silos had been fed half-way down.

Remember that horses are made vicious by cruel treatment; that it is speed which kills; that probably more horses are lame from bad shoeing than from all other causes; that a careless application of the whip has blinded many horses; that more fall from weariness than from any other cause, and than no animal should ever be struck upon the head.

DAIRY.

Dairying in Manitoba.

BY JAMES ELDER.

I am gratified to find my contributions on dairying criticised by so many men of eminent ability and practical experience. In fact, I admit that (as Mr. Yuill suggests) I intentionally left a few blunt promonitories, or debatable points, to catch the eye and touch the sensitiveness of just such men, in order to draw out a discussion, and in this way throw more light, and from different standpoints, upon this, to the Manitoban, most important question.

We have all heard of the man who said:—"I am open to conviction, but I would like to see the man who can convince me."

Now, that is my position, only that I would substitute the conjunction *and* for *but*, which changes the meaning of the sentence very much.

Moreover, not only am I open to conviction, but I will feel grateful to any one who will show me a better way.

It is somewhat remarkable that there is only one point of attack which cannot be defended by a simple reference to my introduction, and even in that case a reference to my introduction greatly weakens the attack.

The clause which has played the part of the "Red rag" is the one in which I advise the young dairyman not to invest in thoroughbreds.

And it is noticeable, although not remarkable, that my critics upon this point are all breeders of thoroughbreds. And it is just a little funny that, as in a certain trial of old, "their witness agree not together," for one says the Holstein, another says the Shorthorn, and another says the Ayrshire; but all agree upon the one point,—"thoroughbreds."

It seems to me that there is a good deal of the "Bag of Straw" manifest in the criticism of these gentlemen, arising from a failure to catch the drift of my argument.

This is evident from the remark of Mr. Steel, where he says:—"Had Mr. E. told the public to give pure-breds a wide berth on account of cost, or against investing until they had experience, we would have found no fault with his advice." Now, this was just my chief argument. See ADVOCATE of Oct. 20, clauses 4 and 7. And here Mr. Yuill comes to my aid and says that "a good thoroughbred Ayrshire cannot be bought for less than \$200." Now, I venture to say that every one of these gentlemen would advise to buy the "best," and what would intelligent men have thought of me had I advised the farmers of Manitoba, in their present financial condition, to invest in \$200 cows when starting a dairy with a view to getting out of their present difficulties? Would it not be like telling a drowning man to get well under the water in order to get a good start up?

Mr. Lynch advocates the thoroughbred Shorthorn. Now, I am a great sinner, but I have never committed the sin of advising any person to invest in thoroughbred Shorthorn cows for dairy purposes. Oh, no! The nearest I ever came to that was to advise the use of a Shorthorn bull "of a milking strain" (an animal by no means too plentiful).

But here comes the poser. Mr. Lynch asks: "What is he going to do when he has got two or three crosses?" Crosses of what? Of the milking strain. Why, keep right on, of course. And what will be the result?

First.—I will have made a cheap start.

Second.—I will have intensified the milking tendency in my herd, and at the same time increased their size and improved their symmetry.

Third.—In the meantime, thoroughbred stockmen, being "observant" men and having an eye to business, will breed in the direction which the demand indicates, and the milking tendency will be developed and the strains increased in number.

Fourth.—I will have a hardier herd. How? Well, what are the causes of delicacy? Chiefly: first, in-and-in-breeding; second, fancy care from generation to generation. Now, in founding a herd, as I have suggested, I at once strike away from the first evil, and I can avoid the second, and by the time I have reached Mr. Lynch's "danger line," the danger will be largely done away. But say all at once: "Thoroughbreds are not pampered." Now, a discussion of this question would simply be a case of "It is," "it isn't." I will simply ask the reader to look into the stables of those who keep choice thoroughbreds, and also some grades, and see which occupy the warmest stalls, which get the oil-cake and the "odd handfuls," and which have the curry-comb applied. Or, look at the herd whose owner has seen better days, and tell me if they have not shrunk in size and developed an unwanted amount of horn.

Another says: "We don't want to test the hardiness of our cows." Oh, no. Neither do we want to test our bank deposit; but at the same time, a bank deposit is a mighty good thing to have.

Mr. Yuill states that "in his experience of thirty years with a herd of seventy-five cows, he has only had one cow which missed breeding, and never had an accident among his cows." Well, I must compliment Mr. Yuill. He has been a most fortunate individual.

Paying for Cheese-factory Milk by Test.

Judging from the amount of discussion in dairy circles since Bulletin No. 15, "Experiments in Cheesemaking," by Prof. H. H. Dean, was reviewed in the FARMER'S ADVOCATE of Dec. 1st, we certainly were correct in labelling it "A Disturbing Bulletin." It is a most important subject, both for the consideration of patrons, factorymen and makers, and a live topic for debate at the dairy conventions of this month.

The original plan adopted by a good many Canadian and American cheese factories was to pay for the milk according to its per cent. of fat, whether high, low or medium. The main reasons for this were, as indicated, for example, by a N. Y. State Station Bulletin, that (1) "the milk fat appears to exercise a greater influence upon the composition and yield of cheese than any other constituent, and therefore forms a just basis for estimating the cheese-producing efficiency of factory milk; (2) it induces dairymen to produce a better quality of milk; and (3) it removes any temptation to adulterate milk."

The Vermont Station, on the other hand, proposed (Bulletin 21) to take account of both the fat and casein, contending that "it is not a fact that twice as much cheese can be made from milk containing six per cent. fat as from milk containing three per cent." It suggested that the matter might be adjusted by paying a certain amount for the milk by weight, without regard to its quality, and a certain amount additional for each pound of butter-fat it contains. Thus, if 30 cents per 100 lbs. were paid for all milk, and 10 cents a pound for butter-fat, a milk with three per cent. fat would bring 60 cents per 100 lbs.; one with 4 per cent., 70 cents, etc. However, from later experiments (R. 1891, p. 88), it was concluded that the payment according to fat content "gives substantially correct returns."

The suggestion in Prof. Dean's now famous Bulletin was to add two per cent. to the fat readings, as ascertained by the Babcock test, it being claimed that this would be a more nearly correct method than paying either by weight of milk or by fat alone.

In the last statement which Prof. Dean has issued, containing the results of cheese experiments at the O. A. C. Dairy Department for May to Nov., 1894, are those of A. T. Bell, Tavistock; J. B. Muir, Avonbank; L. L. Philips, Mt. Elgin; E. A. Roode, Hulbert, and Wm. Dwyer, Chesterville; together with a reprint of the Tavistock Dairy School Experiments in 1892, and the Perth Dairy Station table; the following conclusions are drawn:

(1) "An increased percentage of fat in the milk gives an increased yield of cheese, though not in the same proportion."

(2) "That a pound of butter-fat in milk averaging 3.37 per cent. of fat will make more cheese than a pound of fat in milk averaging 3.94 per cent. of fat is shown by the results of the experiments at the Dairy of the O. A. College, and all the other Canadian experiments quoted point in the same direction."

(3) "There is little difference in the per cent. of fat lost in whey, whether the milk is rich or poor in fat, what difference there is being in favor of the whey from the poor milk."

(4) "Adding on two per cent. to the fat readings, and dividing the proceeds among the patrons according to this basis, appears to be more nearly correct for normal milk than paying by weight of milk or paying according to the percentage of fat alone. Though this number is tentative or suggestive rather than conclusive, we expect that something more nearly correct will be discovered in the near future."

Still another suggestion is made by Mr. J. W. Wheaton, Secretary of the Western Ontario Dairymen's Association, who proposes something for the use of factorymen corresponding to an interest table used by bankers. It is, in brief, to have compiled a table showing the actual value of different qualities of milk per 100 pounds for cheesemaking, by finding out the actual value of 100 pounds of milk for cheesemaking upon a basis of .05 of 1% as to quality and upon a basis of 1-16 of one cent per pound as to price of cheese. If this were done on a range of from 2 to 6% in quality of milk, and from 6 to 12 cents in price of cheese, it would, he thinks, cover any variation in quality of milk and in price of cheese that might occur in connection with the Canadian cheese-producing industry. It would entail considerable work and time at the outset, but when once completed would settle the question definitely. Such a table could be placed in the hands of every secretary of a cheese factory, and from it he could with comparatively little figuring make up his accounts.

"Beautiful Butter" from Turnips.

I saw in the ADVOCATE for December 15th, that "F. J. S." informed us good butter could not be made when turnips were fed the cows. I received a remittance from Montreal, the day I got your paper, for a quantity of butter, the cows having been fed turnips and hay. The buyer paid 22 cents for the butter, and said it was beautiful.

ROBERT WARK,
Windsor Mills.

[NOTE. Would Mr. Wark give our readers further information as to the quantity of turnips fed, method, before or after milking, etc.; also give his plan of handling and creaming milk.]