

ON FEEDING MILCH COWS.

The following is an extract from a lecture recently delivered at Alwyck, England, by Professor Johnston, of Durham University, at the desire of the Duke of Northumberland, "On the feeding of stock."

"I have spoken of the various conditions of animals. I will now direct your attention to the milk of the cow. When an animal comes into the world, the parent gives it milk. The parent must nourish its own body, and produce the milk besides. The cow gives a large quantity of milk as soon as the calf is born. And cows that give a large quantity of milk are in general characterized by striking peculiarities. Such an animal an unexperienced eye would say is poor and meagre and worth nothing; but when he is told to look at the large udder, and the conformation of the whole animal, fitted for the copious production of milk, he soon learns to change his opinion.

Now, what does milk contain? Casein, or casein, butter, sugar, and saline matter, as you will see on referring to the table. Therefore, if you would feed a cow with food that contains these ingredients in a large proportion, you may give her beans and peas or you must give her some gummy crop. Observe, the butter is derived from the fatty matter of the food; and some pastures, as you know, are calculated to fatten. These same pastures would give a milk rich in cream, or that would produce much butter, while others would increase the yield of casein, or would be adapted for the production of cheese. It is clear, therefore, that the constituents of the food must exist in the pasture. Now, you all know that milk is extensively used as food, and is raised for sale, either directly, as by the cow-keepers in our large towns, or in the form of butter and cheese, as in our districts, or it is manufactured into veal. The object of the cow-keeper of the towns is different from that of the true dairy farmer.

His object is to produce a large quantity of milk; and he accomplishes that by feeding the animal upon succulent substances, and such as contain a large quantity of water. In some places, you know, they are said to have little scruple in adding water to it afterward. But they can avoid the odium of this by giving it in the food. Milk of average quality, contains about 87 per cent. of water; but it is possible to increase the proportion to several per cent. more. Then there are the cheese districts, such as those of Cheshire and Ayrshire, and a different kind of food is made use of in these places from what is employed where milk only is required. If you wish the product of cheese to be plentiful, you must feed the cattle on clover, beans, and peas, and other plants that contain a large quantity of casein. A rich milk may be obtained by feeding your cows upon clover, but you may obtain a very rich milk also by putting them partly on beans or peasemeal. But, if butter be the principal object desired, you may feed your cows upon food containing a large quantity of oil. Indian corn, as I said before, contains a great portion of oil, and no doubt would increase the proportion of cream. Some kinds of fodder also contain more fatty matter than others.

From this fatty matter the butter, as I have said, appears to be derived, and I think, by using a little care, a milk rich in butter might be obtained by the use of oil cake, without imparting any disagreeable taste to the milk itself, or to the cream or butter obtained from it. Then in other places they are in the habit of manufacturing the milk into veal. The young calf it is necessary to feed on such substances as contribute at once to the growth of the bones, and to the laying on of fat. These substances exist in milk, and it may be necessary, at certain seasons of its growth, to give the milk skimmed, at other unusually rich in cream. Thus in the neighbourhood of large towns, where veal is much used, it is usual, when the animal arrives at an age when it ought to lap on fat rapidly, to give it the milk rich in cream, as well as a larger quantity of it. This is altogether a different process from feeding farm stock.

CHARCOAL.

Most of you know that charcoal will correct the taint in meat; will purify rain water in a suitable cistern, so as to render it the purest water for culinary purposes. Such charcoal should be often renewed in filtering cisterns, and when thus saturated with ammonia, is an extremely valuable manure. The liberal application of this well known substance to the wheat fields in France, has mainly, in connexion with the use of lime, added, within the last few years, 100,000,000 bushels to the annual crop of wheat grown in that kingdom. The charcoal should be sown in May, at the rate of 75 bushels per acre, well pulverised. This substance is one of vast importance. By studying the science of agriculture, you may grow 50 bushels of

good wheat on any acre of your land, I have good reason to believe, every year, buting, of course, extreme casualties.—[Dr. Lee's address.

GUIDE IN BUYING A HORSE.

A correspondent of the *Prairie Farmer*, contrary to old maxims, undertakes to judge the character of a horse by outward appearances, and offers the following suggestions, as the result of his close observation and long experience:—

If the color be light sorrel or chestnut, his feet, legs and face white, these are marks of kindness.

If he is broad and full between the eyes, he may be depended on as a horse of good sense, and capable of being trained to anything.

As respects such horses, the more kindly you treat them, the better you will be treated in return. Nor will a horse of that description stand the whip if well fed.

If you want a safe horse, avoid one that is dish-faced; he may be so far gentle as not to scate, but he will have too much go ahead in him to be safe for every body.

If you want a foal, but a horse of great bottom, get a d-dop bay, with not a white hair about him; if his face is a little dished, so much the worse. Let no man ride such a horse who is not an adept in riding—they are always tricky and unsafe.

If you want a horse that will never give out, never buy a large overgrown one. A black horse cannot stand heat, nor a white one cold.

If you want a gentle horse, get one with more or less white about him—the more the better. A spotted one is preferable. Many suppose that the parti-colored horses belonging to the circuses, shows, &c., are selected for their oddity. But the selection thus made is on account of their great docility and gentleness.

MAKING MANURE.

Messrs. Editors:—Some time since I was conversing with an old farmer, worth some three thousand dollars, respecting improving the soil by increasing the quantity of manure. Said he—looking at me gravely—"These new modes of farming require capital; they are too expensive for farmers generally to adopt." This same man planted last year ten acres with corn and raised about two hundred bushels.

Now suppose the expense of ploughing and cultivating six acres had been laid out judiciously in making manure, and the whole had been put upon the remaining four acres, who doubts that he would have raised as much corn as he did on the whole, besides leaving the land in a far better condition for the next crop? It is not so expensive making compost manure as many imagine. Some wealthy men will expend several hundred dollars a year for this purpose, and the sound frightens others from attempting anything.

But every farmer may at least double his quantity in the yard, hog pen, sink drain, &c. I have practiced composting all, or nearly all my manure, with good effect.

I have not followed the exact rules of the chemist, but my own judgment; and if my plan is not the best it is at least better than none, and it requires no capital but a farm. I collect all the material I can for litter, which becomes mixed with the dung during the winter. I have no barn cellar, but I save the liquid by having my stable floors made tight, and and a little inclined, and keeping them covered behind the cattle with some good absorbent, which is renewed as often as necessary.

I have a swamp which furnishes an inexhaustible supply of peat and mud. After supplying the yard, &c., with this, I collected a long heap near the barn in the Fall, to be pulverized by the frosts of winter. Early in the Spring I draw out the manure from the stables, and drop it beside the muck heap about two feet in the depth, and cover it with the litter, sometimes making two or three alternate layers, and mixing lime or ashes, if I have them. An active fermentation will soon take place, after which I shovel the whole over, mixing it well together, and cover it again with muck. A slight fermentation then takes place, and the whole is converted into fine strong manure much better for grass or for any crop on a light dry soil, than clear stable manure.

CHARLES.

December, 1846.—[Boston Cultivator.

CORNS IN HORSES.—The doughs of the common cedar, cut fine, and mixed with the food of horses, are said to be an effectual remedy for the troublesome and very prevalent disease called "cough."

MARBLE SUGAR.

The *Salem Gazette* says that the pulverized white sugar, now used in families, contains in every pound of sugar two ounces of pulverized marble: When used and dissolved, it deposits a sediment of clay or mortar. On a post mortem examination of the body of a man who lately died of it. His bowels were found to be completely macadamized, and pipe-clayed.

SALT AS A PREVENTIVE OF POTATOE ROT.—We have been requested to give publicity to the following facts as evidence that the application of salt is efficacious in preventing the disease by which potatoes have been visited last year and the present—John Lee, market gardener, of Soke Prior, Worcestershire, says, "The land, a light gravelly soil, was all manured precisely alike. To one portion he applied a mixture of lime and soot in the drills, at the time of planting; to another portion he applied salt in a similar manner, and left the remainder without any artificial dressing. When harvested, the tubers were found to be badly diseased where no artificial dressing had been applied; partially so, where soot and lime had been applied; but they were perfectly clear and free from disease where salt had been applied. John Lee does not know the quantity he used, but says he is so satisfied of its utility, that he shall dress all his land with 10 or 12 cwt to the acre, sown broadcast, next spring, some weeks before planting." This process has been found most useful in the United States, as is proved by the testimony of Henry Colman, Esq., agricultural commissioner from that country, and by various other authorities, which shows that any saline matter would have the same effect as common salt.

CHEESE that has been suffered to stand until rancid, or slightly mouldy, which is often the case, should never be churned; it may make very palatable cream cheese, but abominably bad butter. Cream never rises from the milk after thirty-six hours' standing. This may be proved by the lactometer. It becomes more solid, and thus appears thicker, but nothing is gained in quantity, and much lost in quality, by suffering it to stand too long before skimming.

HOW TO MAKE ISING GUM.—Take 1 quart of boiling water and stir in 2 or 3 tablespoonfuls of finely-sifted Indian meal, previously mixed with a little cold water. Add salt to your liking, and let the mixture boil for fifteen or twenty minutes. A small quantity of pulverised crackers, a few raisins, or a little sugar added, will render it more palatable to the sick.

A FINE BLUE-WASH FOR WALLS.—To two gallons of white-wash, add one pound of blue vitriol dissolved in hot water, and one pound of flour, well mixed.

INGRESS and gin dissolved together by slow heat, makes a good cement for glass.—[American Agriculturist.

Precious beyond rubies are the hours of youth and health; let none of them pass unprofitably away.

Correspondence.

FEEDING CATTLE AND REARING CALVES—CULTURE OF LINSEED.

We bespeak for the following letter attentive perusal. To the suggestions of our correspondent regarding the cultivation of Linseed, and the manufacture of Oil-cake, we may add that in our opinion, a very extensive trade with England may be carried on in the latter article. The greater portion of the Oil-cake used in England in the feeding of cattle, is imported at a price varying from \$50 to \$65 a ton. We cannot at present enter into any statistical calculation regarding the probable profit and future extent of this trade, but we are decidedly of opinion that it is one which ought to be encouraged. It would add an important item to our exports, and be a means of assisting us to strike "the balance of trade" in our favour:—

To the Editors of the *Canada Farmer*.

GENTLEMEN,—I was much struck with the appropriateness of your remarks, in the last number of the *Canada Farmer*, on our Provision trade. It is true that we have been slow to benefit by the example of English farmers, to which you refer. You are no doubt aware, that it is impossible, and would not be profitable to follow in all cases the practise of English farmers. The difference in the climate forbids it. The colder climate of England, which prevents the English farmer from growing Indian Corn, gives us clearly an advantage over him in this respect, though with us, corn is only an

uncertain crop. The same difference of climate renders it equally impossible for us Canadians to copy the whole practice of English farmers. You will at once perceive, Messrs. Editors, that I am not inclined to receive the entire practice of English farmers as a standard model for us to imitate without discrimination; though I willingly admit that in many, indeed in most branches of our noble art, they are superior to us, but only because they (as a country) are older than we.

Feeding malt to cattle, would, I believe with you, very much improve the quality of our beef; but I plainly see one obstacle against its general use, arising from the impossibility of each farmer, without combining with his neighbours, supplying himself with the necessary materials for making malt. By several joining together, it could be produced at a trifling expense to each.

I think however, that Oil-cake, which is not a new thing to require any experience to prove its value, might be extensively used in the fattening of cattle, the beef of which is intended for the English market. As the best beef in England is fed upon it, I see no reason why, if we used it, we should not produce beef of a quality equal to the best English. It may be asked how we can produce the Oil-cake—I answer, by raising the Linseed, and establishing Mills for manufacturing the cake. The limited experiments which have been made in Canada, sufficiently prove that our climate and soil are adapted to the cultivation of Flax, from the seed of which, Oil-cake is made. We have companies springing up in all parts of the country for manufacturing purposes; but the manufacture of Oil-cake, has been so far neglected, and yet the business is particularly suited to our country. We can grow the seed ourselves, manufacture the cake, and turn it into beef for the English market; and we can derive a profitable trade from the sale of the Linseed Oil and the Flax.

When dairy farming receives more attention amongst us, the use of Linseed will also become extensive. Perhaps nine-tenths of the calves reared in England are fed on linseed "porridge," which is a thick kind of jelly made by mixing the seed with water and boiling it. The use of this gives the farmer an opportunity of converting the greater portion of his milk into butter and cheese. For very young calves, milk is necessary, but by degrees the milk can be mixed with Linseed "porridge," and in a short time the latter may be given by itself. I may perhaps prepare some further remarks on this subject for publication in your next number.

AN ENGLISH-CANADIAN FARMER.

Clark, Feb. 21, 1847.

Mr. Stephens, in a communication to the *Examiner*, gives the following description of the state of agriculture in the neighbourhood of Lake Huron:

The Indians here make an attempt at farming, and they grow corn, squashes, pumpkins, and potatoes, but, from the appearance of their husbandry, I do not think that they read the *British American Cultivator* or the *Canada Farmer*. Some of these men were engaged in shelling corn. Their method was different from any I had ever seen. I have myself used the flail, a spade, a beetle, and the handle of a frying-pan, but they used a pointed stick, which while they held the cob of corn by its knob with the left hand, they inserted between the rows from end to end, in three or four different places, and then the remaining rows were easily shelled by twisting the cob around in the hands.

Both Sydenham and St. Vincent produce excellent wheat, and I saw (what I did not expect) some very fine peaches, which grew in the latter place; and, as a matter of course, they grow splendid potatoes; and what is of very great importance in new settlements, where they of necessity depend so much upon potatoes, they have, I believe, generally escaped the rot.

After passing through St. Vincent, we entered the Township of Collingwood. There are but few settlers in this Township; we met with but two in our whole ride across it; and yet the land seems to be as fertile, and as well adapted for cultivation as any I have seen in Canada, and, every where, the road is crossed by a living stream, which flows from a mountain that runs through the Township, parallel with, but I believe some miles distant from the Lake.