

Stock and Dairy.

Corn Fodder.

For several years past I have grown corn as a second crop after early potatoes, and have found it valuable both for late roasting ears and fodder. We usually dig our early potato crop between the 4th of July and the 10th of August, and as fast as the potatoes are taken out put in corn by running furrows with one-horse plow four feet apart, and three deep, in which we plant corn thick enough to insure one every 10 or 12 inches, then throw a good furrow on the corn and follow on the top of the rows with a roller. I keep 15 horses and mules and 5 cows, none of which have been fed with hay from the 1st of October to the present date only as chopped feed with middlings from the mill, but have had plenty of corn fodder, which they will eat in preference to good timothy hay. My horses and mules are kept at work steadily and kept in good condition. I consider my corn crop, grown on potato, ground worth more than a crop of turnips. As evidence of value placed on corn fodder by stock men, I have known the blades taken hundreds of miles to feed to race horses in preference to feeding good hay. —[E. T. (market gardener), Jefferson Co., Ky.]

MAIN SUPPORT OF TWENTY-EIGHT HEAD OF STOCK.

The article condemning sowing corn so unsparingly should not pass without notice. Mr. Beckman's manner of curing was where the trouble lay; any kind of feed cured in that manner would be worthless. I will describe my mode of management and the results: As soon as we got our corn planted last spring I put a plow into a four-acre lot that never had any manure on it, but had not been run down; had it plowed, followed the plow, and dropped in every second furrow-seam, about 18 inches apart, from 10 to 20 grains of corn, then took a two-horse harrow and harrowed in. I had designed to work some with shovel plow, but it came on very dry, and there were no weeds, so it was not worked at all. In September it was as tall as common corn, but was very thick on the ground. I hired a man to cut it up, as corn is usually cut, and tie it in shocks, paying him \$2 per acre. We hauled some of those shocks day before yesterday, and I think Mr. B.'s cattle would have eaten them without steaming. The cost of that lot of feed (and I did not get less than 18 tons of it off those four acres) did not exceed \$20, and it has furnished the principal support for 28 head of horses and cattle for the last two months, and some left to feed next month.

As I have remarked, last summer was very dry, and I did not mow ten tons of hay with a stock of 30 head of horses and cattle to winter, and after mowing over 10 acres of ground the 1st of July, and getting about three tons of inferior hay, I thought something must be done. There came some rain about the 10th of the month, and we plowed five acres of the lot that gave us the above-mentioned crop of hay, and sowed corn broadcast about the 20th of July. Sowed about 1½ bushels of seed to the acre; harrowed it in; did not touch it till we were threatened with frost; got one of my neighbors to cut it with a self raking reaper, got three or four hands to stand it up in moderate-sized shocks, and tied it up well and let it stand until we wanted to use it. It would average about six feet in height, and there was not less than 20 tons of dry feed on the lot, and I find the account stands thus: For plowing five acres, \$10; seed, harrowing, and cutting, \$15; shocking and use of land, \$20; 20 tons of feed at \$10 per ton, \$200; profit, \$125.

Now to sum up—those two lots of fodder, nine acres in all, have wintered 28 head of milch cows and grown horses up to this time, with less grain than we usually use when we have hay. My cows eat it well, and we have not had occasion to throw away five bushels of waste. We cut and steam it, and our cows milk well and give a good yield of butter to the quantity of milk, and as good quality as we ever had from hay. This was done without manure, grown on land that was in good condition and we put no extra work curing; stood it up in moderate sized shocks, and let it stand until we wanted to use it. I will say this much more in favor of sowed or drilled corn, that I can get enough more off my ground to well afford to plow up old fields, and take off a couple of crops until the sod gets pretty well rotted, and then re-seed to grass, and I would rather have it to cut and steam than any other feed I have ever handled. My experiment proves an assertion that I have frequently made, to wit, that fodder-corn should be cut as

soon as it tassels; my stock eat the late sowed much better than that which was planted early, and had small ears.—Chas Jenkins, Mahoning Co., Ohio.

ITS IMPORTANCE IN DAIRY PRACTICE.

I think Mr. B.'s first mistake was in sowing Southern corn. It could not have been fully matured by the 24th of August. It is a very difficult matter to cure sowed corn that has not reached its full growth. The second mistake was the bleaching process. "After curing for several days, turning twice in the mean time," he "hauled it upon a meadow and spread out for several days and then bound up in stocks." Then, in consequence of heating under the bands, it was "all spread out again, turning several times," &c. No wonder that "it is good for nothing." What kind of grass or clover would stand that amount of bleaching and be good for anything? Fodder-corn is becoming a very important part of dairy farming, since it can be sown as late as the middle of June with good success, after an early drouth has shortened the grass crop.

The common practice here is to cut with the reaper, if the growth is not too large nor the ground too soft. Let it lie a day or two if the weather is fair, and set up in shocks large enough to stand firmly, and bin it not too tight. It is better to bind with two bands, one quite near the top. Let it remain until cold weather. There is a great deal more fodder corn injured in the barn than in the shock. There is another method practiced where it is intended to follow the corn with wheat or rye: Sow early with an early variety, so as to get a mature growth. To harvest, bind in small bundles, set three or four together, let stand a week or two, as you can afford the time before plowing; then haul on a meadow, or some grass plot near the barn, and set up in large shocks and let remain until wanted, when it can be carried to the barn or hauled in as needed, a sled-load at a time. Not every farmer has barn-room enough for everything raised on the farm, and corn will stand the weather better than straw, while straw is already in the barn, and it is considered a pretty hard job to store away several tons of fodder in a loft without being able to bring the elevator into use.—Cor. N. Y. Tribune.

Method of Making Fine Cheese by the Cheddar or English System, from Tainted, Sour and Fine Milk.

The milk that is delivered at cheese factories is not always in the same state, sometimes being tainted or partially putrid,—sometimes sour, or nearly so,—and sometimes it is what it ought to be, perfect. I propose to describe the process, first, when the milk is all right; second, when it is partially sour, and third, when tainted.

1st. The evening's milk, when delivered at the factory, ought to be cooled so that its temperature will be from 58° to 62° in the morning. When the morning's milk is added, it is heated to 80°, then enough rennet is added to coagulate the mass in as nearly forty minutes' time as possible. When the curd has attained sufficient consistency, it is then cut four times, twice with the horizontal curd knife, and twice with the perpendicular one, with a short interval between each cutting. The curd is then gently manipulated and heated to 96°, care being taken to prevent the curd from packing on the bottom of the vat; the time required for heating being from an hour to an hour and a half. The stirring is continued for ten or fifteen minutes after the heat has been attained; the curd is then allowed to pack on the bottom of the vat where it lies undisturbed until the separation of the whey from the curd becomes necessary. Up to this stage the process is almost identical with that practiced in manufacturing cheese in the usual manner.

In the manufacture of the American cheese [I will so designate the method usually practiced, to distinguish it from the grinding process which I will term Cheddar,] it is of importance to determine the precise time at which to separate the whey from the curd. But in the manufacture of Cheddar cheese, it is not of the same importance, as the whey can be separated from the curd from half an hour to an hour and a half before acidity is developed enough to be perceptible; and on the other hand the whey can be left on the curd till the acid is distinctly perceptible without materially affecting the quality of the product. As the acid or souring generally makes its appearance about noon in summer, the Cheddar system gives the factory hands more time for dinner.

When the whey is drawn off and the vat tipped down one end, the curd is then heaped on each side of the vat, leaving a space in the middle to allow the remainder of the whey to pass off. I may here state that where the "shute" or flood gate is not used, there ought to be, in the Cheddar system, a faucet in the vat, to allow the whey to pass off as it drains from the curd. After the curd has laid in a heap on the bottom of a vat for fifteen minutes or half an hour, and the original particles of curd have become amalgamated into a solid mass, it is then cut into convenient pieces with a knife and turned over, and so left until the curd has become sour enough for grinding and salting; which is determined by the taste of the whey that drains from the curd. This whey should have a sharp, sour milk taste, which can be understood by any intelligent cheesemaker after a few days' experience. The curd is then torn by hand into strips of two or three pounds weight and allowed to cool a short time, in order to allow the butter in it to become solid enough so as not to escape during the operation of grinding. The curd is then ground into small pieces, averaging about the size of hickory nuts. Five hundred pounds can be ground by the hand with McAdam's curd mill, in from five to ten minutes, according to the toughness of the curd and the muscle of the operator. The salt is then immediately added and mixed thoroughly at the rate of from 1½ to 2½ lbs. per 1,000 lbs. milk, according to circumstances and the season; the curd is then ready to be put in the hoops for pressing.

2d. Mode of procedure when the milk we have to handle is from whatever cause) sour or partially so. You are well aware that when milk is partially sour it will coagulate in the same length of time as sweet milk with the addition of considerable less rennet. But I usually add more rennet, instead of less, so as to have the coagulation occur very quickly. As soon as the rennet has completed its office, I commence cutting and working curd much more rapidly than usual. In such cases I use very little heat in scalding, seldom heating over 86° or 90°, according to the severity of the case, and in some instances when the milk is very sour, I do not think that it is advisable to heat the curd at all after coagulation.

I reason in this way: Just as good cheese can be made without scalding at all, as with it. The reason that we scald the curd, [if heating it to a temperature of 98° can be called scalding] is to develop the acid sooner; and if, when the curd is inclined to develop acid sooner than usual, we heat to a temperature of 96° to 98°, we hasten the action of the acid, which is the very thing we are trying to avoid. In other words, when the acid in the curd is developing too fast of its own accord, we develop it still faster by means of heat, and thus aggravate the evil.

After this curd is cut up, the whey must be removed from it as fast as it makes its appearance, and as soon as practicable the vat must be tipped down and the curd thrown to the upper end of the vat. The curd at this stage is very sloppy, as it contains considerable whey. One person should now cut it into small pieces with a knife, and another turn the pieces over and pile them in heaps, so as to liberate the whey which will run off in a continuous stream. When the curd has assumed a proper consistency, it must be ground and salted; the quantity of salt used must be according to the amount of whey contained in the curd, which is generally in such cases considerably more than usual. In extreme cases, the whole process from the adding of the rennet to the mixture of the salt, can be performed in less than an hour. So, when we have a vat of sour milk to handle, we must add more rennet to counterbalance its action on the nitrogenous ingredients of the milk, and thereby causing the cheese to ripen much quicker than if less rennet had been added.

I have found by experiment that the cheese made from sour milk in the above manner will cure as fast as other cheese, but they require more annatto to make them of the same color as the other cheese, those sour milk spores appearing to have a destructive effect upon annatto; and that such cheese will have a tendency to mould, but the flavor will not be objectionable.

3d. When the milk to be made into cheese is tainted or has an excess of putrefactive spores. This tainted milk occurs in some localities in hot weather, and I think that the milk is damaged in most cases before it is drawn from the cow. But of course it can be greatly aggravated by being brought in contact with unclean milk-pails, strainers, cans, &c.

In handling such milk I prefer to have the temperature of the evening's mess about 68° or 70° in

the morning before I maintain the cooled, so as not to ing, the better the milk is properly

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