

Feeding and Milking Cows.

At a meeting of the Vermont State Board of Agriculture, Mr. E. R. Skinner, an experienced dairyman, produced an excellent paper for dairymen. On the above subject Mr. Skinner said: "Good cows are essential to the production of good butter, and good feed and care are essential. A first class article of butter cannot be made from cows that are thin in flesh or poorly fed. The basis of feed for cows is early cut hay or cut grass. I cut my hay in 1876 from the 19th to the 20th of June inclusive; in 1877 from the 18th to the 23rd inclusive, cutting the second crop about the middle of August. In addition to this I feed meal and bran, as I think the circumstances and condition of the cow require. I feed bran the year round, varying from two to four quarts per day, according to conditions. A short time before a cow drops her calf and a short time after, I feed no corn meal. I then commence adding a little meal with the bran, and increase as she will bear it, so as to hold her flesh as much as possible. I have no stated amount; this must be left to the judgment and sagacity of the person taking care. I have varied from one quart of meal to four quarts of bran, always adding a little fine salt twice per day. In feeding of cows we should be as liberal as we would be with a friend at our table, and be careful not to overdo. No food makes better butter than corn meal. At a regular hour in the morning I feed hay, and feed until the cows have eaten enough; they clean their mangers clean, water them in the barn, so that each may quietly have what she wants at the proper time, then give them their meal and bran, with a little salt; I then card and brush thoroughly. This they enjoy, and will call for it with unmistakable signs. They then enjoy perfect quiet until about half past three p. m., when they are again watered, fed meal and bran, then hay, until they have enough. Their mangers are then cleaned for the night. I feed them but twice per day. If the weather is pleasant and warm I turn the cows into the yard a short time in the middle of the day; but if cold and stormy I keep them in. The more you add to the quiet and comfort of the cow, the better the result at the pail and the churn. The nervous condition of the cow affects the quantity and quality of the butter.

Milking.—We again come to a fundamental principle, viz., pure milk. This is as essential as anything heretofore named. Without this, good and pure butter cannot be obtained. I make it a rule to milk at five o'clock during the summer, and but little later than that during winter. I first clean the stable, then brush the cows with a short-handled broom kept in the stable on purpose, so as to remove all dust that might otherwise find its way into the milk pail. The milk is then carried to the dairy room and strained, first through a fine wire cloth, then through a knit cloth prepared for the purpose. A knit cloth will catch all dust more readily, and at the same time let through the milk quite as freely as cloth that is woven. Those who wish may discuss the necessity of escape of animal odor from such milk (I am satisfied with it just as it is) as a basis for butter making. This milk is now placed exclusively and entirely in the hands of the dairy-woman, and on her care and intelligence depends very much the character of the production. The milk is skimmed before changing to sour. I use tin cans for cream, with tin cream sticks for stirring. Churn twice a week. Temperature sixty-two to sixty-five degrees. Wash until water runs clear. Work and salt on butter worker. Use three-fourths of an ounce of salt to each pound of butter. Churn and work slowly and carefully. After working the butter, it is prepared in the manner desired for market. The butter is sent to market every week during the year. I would advise all who sell butter to do the same.

Soiling Cows—A Seasonable Record.

Having had quite a number of letters making inquiries with reference to my system of soiling, I thought it best to wait till such time as I could report as I advanced in feeding. To-day (May 22) I have finished feeding winter rye from a half acre of land. I began on the 4th of May, when it had just begun to head out; when I finished it was not in blossom, though four feet high. This I fed to eight cows; they have had the range of a hillside, an old river terrace; a little grass grows on it, which I find increases every year as it is fertilized by the droppings from the cows the few hours they occupied it each day. I do not think it well to keep my cows too closely stabled, but turn them out six or eight hours daily. My rye I feed three times a day, and generally fresh-cut every time; in

addition to this they have had about half a bushel brewer's grain daily. My spring rye is not ready to feed yet; I do not feed it till it heads out; but I always keep a reserve force, and this is orchard grass, which has just begun to head. I fed it to-day for the first time this year. For assisting in soiling it is an excellent grass, and as my land is rather light, it comes early and makes a good growth before dry weather arrives. Last spring I seeded down a small piece of land with orchard grass, perennial rye grass, and tall meadow oat grass, with some clover; these all blossom together, and I expect by the middle of June to have them in the barn, made into hay. I shall put in about three acres of Hungarian, but this I shall make into hay. I have put in three lots of corn to feed green—the first on the 4th of May, another on the 12th, and another on the 18th. I shall continue to plant corn about in this order till the middle of June, if not later; but as I propose to report my progress from time to time, I shall make my articles short, and probably some questions may be asked which I shall answer as I go along.—T. W., in N. Y. Tribune.

Fertility of Dairy Farms.

In refuting the often expressed opinion that the soil of dairy farms becomes poorer by the abstraction of phosphates sold in the milk the American Agriculturist gives the following figures:—"One thousand pounds of milk contain about three to four pounds of phosphates, of which nearly the whole is phosphate of lime. Of this less than half is phosphoric acid; five thousand pounds of milk, therefore, contain but seven and one-half pounds of phosphoric acid, which may be taken as the yearly consumption, in this way, of each cow. As wheat bran contains 2.9 per centum of phosphoric acid, it needs only that about two hundred and fifty pounds of bran to be fed to each cow yearly, to replace the draft upon the soil. There are few dairy cows that are fed less than this quantity of either bran, or some food equivalent to it, and it is pretty certain that very little, if any, phosphoric acid is really taken from the soil of dairy farms. On the contrary, to say nothing of the natural supply in the soil, which slowly becomes soluble, there is good reason to believe that every well-kept dairy farm becomes gradually richer in phosphates every year.

White-Oak Cheese.

The American Dairyman in depreciating the practice of skimming milk which is to be made into cheese, says:—"But what can be done to stay the tide of speculation which is preying upon the ignorance of the community, and, for a temporary individual gain, is destroying both the butter and cheese manufacturing business? It is a moral fever, and we suppose it must run its course. So long as water in cheese, in place of butter, will sell so nearly at the same price, skimming milk and watering cheese will go on. It is gradually forcing the manufacturers of full cream cheese into skimming to save themselves from financial ruin. But as surely as sawdust cannot take the place of meal in fattening animals, and asses do not grow fat by snuffing the east wind, the time will come when the scarcity of cream cheese will put up the price and make it profitable to manufacture it, while the glut of poor cheese and butter will make that class of goods so worthless as to drive out of the business altogether those who first resorted to the skimmer, because not satisfied with moderate profits in the manufacture of honest full-cream cheese. We believe another season will give some evidences of the truth of this assertion."

Whatever philosophy may be involved, we know it is not good to set milk in a foul atmosphere. The odors will get into the milk, and cling to the cream and butter—if not by condensation, by absorption they creep in. It may be that only the gases are taken up, or condensed. They may find their way in through condensation, or through chemical affinity, or by mechanical absorption, as the sponge takes up water. We are inclined to the opinion that there is some condensation from a warm moist atmosphere by a cold liquid surface.

Mr. Horsfall, the celebrated English dairy authority, feeds his herds as follows:—Each cow receives nine pounds of hay, six pounds of rape-cake, one pound each of malt comings and bran, with twenty-eight pounds of roots or cabbage. The food (except roots and hay) is given in a mixed, cooked state and whilst warm. In addition to this food, a cow in full milk receives two pounds of bean meal daily, and cows not in full milking order smaller quantities of this article.

The Horse.

Balky Horses.

Every balky horse, unless it inherits the habit, is a living witness against some owner or driver. The difficulty is not a physical, but a moral one, and in most cases is acquired by the animal's being overloaded. A horse generally has a pretty definite idea of how much it ought to draw, and if this amount is exceeded, balking is the very natural result. We once knew an uncommonly intelligent pony which was employed in drawing bark in a cart up an inclined plane into a tannery. The little brute would be patient and apparently unconcerned while the load was going into the cart, until it had reached a certain amount. Then if the loading continued, it would turn its head and watch with evident interest and anxiety every piece that was added to the load, until, finally, without waiting for the word of command, it would start off at a brisk pace, showing by the position of its ears and in other ways its irritation and displeasure at what it seemed to consider an attempted imposition.

It is far more easy to prevent than to cure the habit of balking; when once acquired no harsh treatment will ever break it. Firmness and kindness alone will avail anything. Never apply a whip to a horse when it is balking, nor after it starts. Success in training and governing animals lies in one's ability to make them uncomfortable when disobedient and comfortable when they obey. And yet how often do we see foolish drivers, when a horse has staked and refused to start for a while, when it does start make him uncomfortable by putting on the whip while it is doing what they want it to. It is whipped when it stands and whipped when it goes. This foolish practice has grown from the foolish idea that punishment must be given for what has been done, and the horse has no opportunity to learn that it is better for it to obey than not to obey, consequently it cannot learn to obey.

Brood Mares and Foals.

Perhaps no animals upon our farms receive so large an amount of attention, and create a greater degree of interest, than the brood mares and foals; and yet, about nursing one or both through an illness, our knowledge is of the most limited description.

The mare far advanced in pregnancy sometimes continues tied up in her stall in a crowded stable, instead of enjoying the room, quiet and comfort of a good box; and thus are increased the risks of accidents from other horses, and from getting cast in the stall, whilst the unwieldy mare, finding it difficult to lie down and get up in a narrow stall, is apt to stand persistently, to the detriment of her legs and her strength. Most mares during the last month of pregnancy are unfit for anything like work; but if not worked gently, they require regular exercise in a yard or paddock, or by being led about. The feeding is very important. It must not be too bulky to swell out the digestive organs, and thus diminish the amount of room needed by the foal; it must be sufficiently nutritive to sustain properly both mother and offspring; it must be rather laxative, so as to counteract the tendency to constipation, which is a serious matter when parturition arrives and then is apt to cause straining and eversion of the uterus and other mischief. From causes not always explicable, the foal sometimes comes in a wrong position; the head is occasionally thrown backwards, turned to the side, or down below the brim of the pelvis. Such misadventures are sometimes traceable to the mare having been knocked about, frightened, cast in her stall, or foaling having been brought on prematurely, and are more difficult to rectify in the mare than in the cow, for the mare strains violently, so that the requisite turning and proper placing of the foal for delivery is sometimes almost impossible, and, even with the administration of chloroform, the mare's life has often in such cases to be preserved at the sacrifice of the fetus. As to the ailments from which mares suffer after foaling, inflammation and internal hemorrhage are fortunately rare. Exhaustion, the result of a very hard parturition, or of previous overwork or insufficient feeding, is combated by digestible, easily assimilated food, and a pint of good ale repeated twice daily. A good many, both of draught and lighter bred foals, are lost from their not taking to the teat.

The mares are sometimes troublesome or vicious, their udders are tender, their teats painful, and