

have been sometimes in successful operation in parts of Eastern Townships. He explained that he occupied a different position from the other authorities. Butter making hitherto has been a matter of experience, judgment and manual skill. It was a coy art, hard to catch and not easy to hold. The object of the speaker had been to make this useful art a matter, not so much of manual skill, as of mechanical aids. In this he believed he could demonstrate that he had succeeded. Butter-making was essentially a mechanical process, and it was by taking advantage of that fact that he accomplished what had been done. It was a strong point gained that with improved implements and taking advantage of what the farmer already knows of the subject, one day was enough to place an outfit in successful work-hands of the average farmer, and thus practically place a model dairy in all the farm-houses of the country.

The Secretary informed the meeting that Mr. Lynch offered a prize of \$50 for the best Canadian milch cow. The prize would be awarded to the cow which would give the most butter in two weeks. He also offered two prizes, the 1st \$30, and the 2nd \$20, for the best butter manufactured with utensils of his invention. He pledged himself to buy all the butter which would be manufactured at the contest at the rate of 25 cents per pound. This dairy contest will be held next summer.

Improvements in Dairying.

A new method of treating milk has been introduced in some of the Vermont dairies, which is attracting considerable attention. The milk is put into several horizontal cylinders of iron, around which steam is turned until the milk is raised to a temperature of 105 degrees. The steam is then turned off, and cold water is introduced, which brings the milk down to a temperature of 40 degrees, which requires about four hours time, at which point the milk will have decreased in volume eight and a half gallons to every thousand pounds of milk. At the same time the cooling process is begun, air-pumps, connected with the milk cylinders, are set in motion, exhausting the air till the gauge shows a pressure of thirteen pounds, when the operation ceases, and the milk rests in the vacuum the remaining part of the twenty-four hours. The benefit claimed to be derived from the vacuum is the freeing of the milk from offensive odors and destructive germs, and the securing of a more rapid and perfect separation of the cream by the removal of the pressure of the atmosphere. At end of twenty-four hours the milk is drawn away from the cream into a vat for making cheese, and if treated as in the ordinary "acid process." Meanwhile the cream is churned sweet, and the butter-milk added to the skimmed milk for the cheese. The cream is churned at 58 degrees, salted an ounce to the pound, stands twenty-four hours, and is then re-worked and packed. The butter is colored, the butter-maker remarking that "the cream being raised in the dark made coloring necessary." By this method they secure from the same 100 pounds of milk, four and one half pounds of butter and nine and one half pounds of cheese. Some analyses of Professor Sabin, of the University of Vermont and Agricultural College, show a remarkable separation of cream, only one and a half per cent. of fat remaining in the skim milk.

The Dairy tells us that a cement floor is not the best for a dairy, as it absorbs the drippings of milk and becomes foul in a short time. Bricks are as absorbent as cement. A good floor can be made of matched boards with tight joints, and painted so that it will not absorb any moisture. And the drippings which fall from the churn can be washed off such a floor without leaving any trace. But the best floor for a dairy can be made of flags, with close joints set in cement.

The Dairyman says: The towel is not usually included among dairy utensils, but it is really a very important one. It is used ostensibly for the promotion of cleanliness, but is, in fact, too often made the very reverse of this. It is not unusual for dairy towels and wiping cloths to be in a very foul condition—a state in which "stink" is a mild term to apply to them; and it is with these that the last touch is given to the pails, pans and strainers. It is because they are saturated with grease and sour milk that they are thus fragrant. No cold water and soap will thoroughly cleanse them. Boiling water is needed, and the cloths should be thoroughly washed and rinsed in this, and then finished in cold water.

The Horse.

The Care of Horses.

There is a great deal to be learned about taking care of horses by our farmers during winter months. Our climate is rigid, and if the truth was known more horses are killed every year through carelessness than by old age or hard work. At this time of the year there are a great number of horses dying—and it is so every year—and it is all for the want of proper care. There is a great abuse of farmers' horses in winter, especially when marketing. For instance, they are driven a long distance with heavy loads and on bad roads; they are halted at wayside inns and allowed to remain outside without any shelter for ten or fifteen minutes, not even blankets or anything else; then a lot of cold water is given them, and again the animals are driven off at high speed, and are again drawn up at another stopping place, heated and sweating, and allowed to remain out without blanket or anything to cover them. This treatment not only destroys a horse's constitution, but it is inhuman; and really this treatment of horses can be seen every day of the year. Take our markets again for example, and here are horses standing for hours with loads of produce on our principal markets without blankets or anything else to protect them. We can safely say that there is more horseflesh sacrificed every year by the lack of proper attention to horse hygiene by farmers than would pay a big per centage of the profits of the farm. Good horses pay; they are a staple; they are gold in any market, and the care of horses should even in an economical point of view be sufficient incentive to every farmer to use his horses well and take good care of them.

Neglect in Rearing Young Colts.

The food fed to young colts is frequently of a very inferior character. In the winter season they are often obliged to subsist exclusively on the nourishment obtained from some old straw stack, with an occasional feed of rotten potatoes, frozen turnips, etc. It should not be lost sight of, that the functions most active in young, growing colts, are the organs of digestion and assimilation, hence derangement of the digestion is quite common to colts fed after this fashion, and is frequently seen in the numerous cases of lameness, hidebound, general oedema, diarrhoea, worms, lice, etc., etc. In this spiritless state catarrh and other disorders of the respiratory organs are commonly produced from the influence of cold and wet and insufficient food.

Bad food, rapid growth, and the vicissitudes of wet and cold, are the common origin of tubercular disease. In the case of colts that have undergone two or three winters of this shortsighted system of feeding, having their skins rigid, sticking, as it were, to the ribs, the hair dull and dead-like, and when the summer's keep on good pasture fails to recuperate them, it is easy to judge as to the nature of the disease. Farmers who make the grave mistake of neglecting to supply the necessary nutriment for the young, growing animal, no doubt imagine that the summer's keep well compensate for the partial starvation during the winter season. But the growing animal requires food, not only to sustain itself, but to maintain its growth. The organic materials of a living body are constantly changing, portions of it becoming effete and being taken away, while new parts are endowed with the property of life, and are built up in their places. The living principle is permanent, while the material changes and the reparatory process can not be maintained in its integrity unless the body be supplied with food adequate to its peculiar wants. This should contain a large supply of the phosphates, from which bone is formed; and of gluten, or fibrin, by which the muscles are developed. These materials are obtained from bran, corn, natural and artificial grasses, roots, etc. In the absence of materials of this kind the bones do not

increase in size, and the muscles are not sufficiently developed, hence the common origin of so many ill-shaped, long-legged, light-carcased horses, that invariably have to be sold for almost nothing; and as a result, the owner never realizes any profit for all his trouble and expense.

Farm stables are not only often heated to excess by being overcrowded, but they are foul and vitiated from gases or vapors of a positively noxious quality, engendered from the decomposition of the litter, feces, and urine, together with the exhalations from the lungs and skin. The deleterious operation of effluvia arising under these circumstances may be short of a directly poisonous effect, yet it gradually undermines the health, and can only be counteracted by a more efficient means of ventilation and cleanliness. A distinction should be drawn between a hot stable and a foul one, as the former is capable of producing one series of effects, and a foul one another. In the foul stable there is heat and impurity arising from the same source, and operation and combination, and producing not only a tendency to inflammatory diseases, but others of a more serious character. It commonly happens that a variety of agents and circumstances may be required to act in combination to produce some diseases; thus, horses that are badly fed and overworked by day, are very likely to be exposed to heated, unventilated stables at night, and these are the common victims of diseases of the lungs, farcy, glanders, and specific ophthalmia.—[National Live-Stock Journal.

Shoulder Lameness.

Shoulder lameness of horses is not of nearly so frequent occurrence as is generally imagined; but sometimes the difficulty in ascertaining the real seat of lameness, when situated in the foot, has occasioned many an ignorant smith to refer the complaint to the shoulder; and the poor animal has in consequence been doomed to undergo the painful operations of blistering, firing and roasting. It is of considerable importance, therefore, to be able to distinguish sprains of the shoulders from other ailments. Mistakes will seldom occur if attention be paid to the following symptoms: When a horse is lame in the shoulder he drags his toe along the ground, from inability of the muscles of the shoulder to lift the foot from the ground. If he lifts his foot high, the shoulder can not be much affected. On walking down hill, he catches up the leg with considerable quickness. He will frequently stumble on going up hill, and will make a shorter step with the lame leg than with the other. He goes equally lame on soft or hard ground, which is not the case when the lameness is in the foot. In shoulder lameness there is no difference in the temperature of the two fore feet.—[Breeder's Gazette.

If you have not already plenty of good stallions in your neighborhood to breed from next spring, don't wait until the season for breeding is here before you begin to think about the matter. If you are not able or do not care to invest as much as some first-class horse will cost, mention the fact to some enterprising neighbor, or two or three of them for that matter, and see if you cannot arrange for the purchase of a horse that will pay a good return on the amount invested, and the trouble, and by so doing enhance the value of your horse stock from fifty to one hundred per cent. in a few years. It is time now to begin to map out your arrangements for next year's breeding, and the sooner you begin the better it will be for many and various reasons. You can select with more deliberation, and if one firm can't suit you, you have time to visit another. You will have time to acclimate a horse and become accustomed to his habits and requirements before the rush season begins. The matter of advertising is no small consideration, as farmers who know positively that a worthy horse is within reach are likely to breed more mares. All the advantages derived from taking hold of such a work would take up more space than we could devote to it, but the principal point should not be lost sight of—that of inaugurating such work, and of doing so at once.—[Stockman.

The value of straw is greater than most people realize. A ton of straw, for feeding purposes, is worth two-thirds as much as a ton of hay. Three tons of straw are equal to two tons of hay. Very few farmers would place a value as high as this upon it, because it is generally fed so slovenly. Feed straw from mangers, and its value, as compared with hay, becomes more apparent.