

of all blanks and no prizes, and thousands have been lost in the amusement. Thoroughbred horses were probably never better or more numerous than they are at the present time. Their legs are longer, and they cover more ground, and they are faster than ever; and I doubt not, speaking of the really good horses, they are as enduring. And so they ought, for it takes 1,000 mares to produce 10 really first-class horses, and something like 40,000 qrs. of oats, for it is necessary to corn-feed from birth the 1,000, should they have them, in order to eliminate the upper ten. Unfortunately, although they have got higher and higher they have not got wider; and so this is the system that is recommended to be generally adopted in order to supply the army with troopers, and the trade of the country with useful horses. It is lamented by many that we have allowed the foreigners to buy up our best thoroughbred horses and weight-carrying mares. The former could readily be spared, but the loss of the latter makes us really poorer, provided they would have been devoted to breeding purposes at home, which is somewhat doubtful. By using the thoroughbred sire for successive generations, their produce have become almost thoroughbred, have lost their bone and substance and rendered unfit for the stud. Where would our Short-horns and Herefords, our Leicesters and Cotswold and Oxford sheep have been if we had adopted and continued such a system? A scheme is proposed of raising a voluntary fund of a large amount for the providing and distributing stud horses throughout the country. But if this fund is to be employed in purchasing thoroughbred good stud horses, that would in any case be used for breeding, how will the country be the gainer? It will simply be to divert the stream instead of finding out a new spring. If, however, such an establishment as Hampton Court, instead of breeding second rate racers, could be devoted to the breeding of weight-carrying stud horses and mares of the proper type for stud purposes, the new spring would be tapped from which the country might get a perennial flow of useful animals.—*W. C. S., in Ag. Gazette.*

Character of Milk from Diseased Cows.

We have referred, heretofore, in these columns to the importance of selecting healthy animals from which to raise our dairy stock, and the consequences likely to result in breeding from weakly or diseased animals. The subject is again brought to notice from a recent paragraph in the *New York Tribune*, giving the result of some experiments made by the French investigator, M. Chauveau. According to the statement referred to, "M. Chauveau has recently made several observations of the action upon healthy calves of milk from cows suffering from tuberculosis phthisis. The calves were perfectly healthy, and after sixty days' feeding they were slaughtered. They were then found seriously diseased; numerous tubercles were found throughout the lymphatic system, and the lungs were full of caseous deposits. Similar investigations by Dr. Klebs, a German physician, resulted similarly, and he concludes that the infection first attacks the intestines, then the liver and the spleen, and finally the lungs. Vigorous organisms may resist the infection or overcome its effects, but the virus is contained in the milk of diseased cows in proportion to their condition. Scrofula is thus communicated to a healthy animal by a diseased nurse. The virus is contained in the serum of the milk, and is not destroyed by boiling."

In raising stock for our own dairy, we long since observed that constitutional defects and a tendency to disease in the parent animal were very liable to be transmitted to the offspring; and particularly was this the case in animals disposed to scrofulous affections. Cows that have a "milky habit" are not unfrequently taxed to their utmost capacity of strength and endurance in the production of milk, and they not unfrequently break down early, unable to meet the drain on their vitality, unless of robust constitution and free from a hereditary tendency to disease. But apart from the losses liable to be sustained by raising stock tainted with scrofula and other diseases, there are considerations of a sanitary character which cannot be overlooked when the milk of such cows is employed for human consumption.

If the statements be true concerning the effect which this description of milk has upon calves, is it not reasonable to suppose that it would be injurious as an article of human food? Again, if the virus is not destroyed by boiling, is there not a

reasonable supposition that it is carried into the dairy products made from such milk, and thus may become a fruitful source of disease? We have long held the opinion that this is the case, and have therefore urged upon dairymen the necessity of weeding from the herds all weakly or sickly disposed animals. The question is a very important one for the consideration of dairymen, and one which demands earnest attention from all thoughtful men, since milk, butter and cheese enters so largely into consumption.

We are convinced that a large number of dairymen are entirely acquainted with the facts here detailed. They should be generally known, so that faults now common in practice may be avoided; and, with this view, we urge the subject upon the attention of dairymen now, at the commencement of the dairying season, that action may be taken accordingly, both as to the selection of calves to be reared and the employment of unhealthy milk for the manufacture of dairy products.—*Rural New Yorker.*



The Free Milker.

However freely the above cow may be milked, we would strongly advise all patrons of cheese factories and milkmen who supply milk to towns and cities, not to mix the product of the above cow with that of the more sensitive or higher bred class of animals.

How to Milk.

At the suggestion of Warbeck I will state briefly the best method of milking. The first requisite to good milking is that the cow be kept where her sides, teats and udder shall be clean and dry. In the summer, when cows are grazing, this is easy, but in the winter, when they are stabled, it requires some attention and effort to keep them clean. But it can, and always should be done with cows which are milked. Some advise washing the udder before every milking. This is all nonsense, except in accidental cases. A cow's bag has no business to be, at every milking, in a condition to require washing, whether stabled or not. The man who keeps his cows so filthy as to be habitually subject to this necessity, has failed, not only in the initial step to good milking, but in the first essential to neatness in dairying. The udder of a cow is not likely to become filthy without involving other portions of her body. If it were necessary to wash her bag it would be equally so to wash her sides also. Milk is a very powerful absorbent, and if there is filth upon or near her, the scent from it will infect the milk, to say nothing of the danger of getting filth into the pail.

The next requisite is that she shall be where she will be comfortable and free from any annoyance or excitement. This is essential to her "giving down" perfectly. A cow's bag is interspersed with delicate muscles so much under the control of her will that she can easily contract them and hold back a portion of her milk. There are but few cows which can long "hold back" the milk of a full udder, but it is very easy for them to hold back whenever there is but little in the bag, as at the last end of a milking; and this they are very sure to do if there is anything unusual to disturb or excite them, as loud-talking, being milked by a stranger, or even his presence. I had my dairy of twenty cows fall short in their yield a pailful of milk several times one summer, simply from a neighbor's dog following into the milking barn when I was milking, my cows not being accustomed to the sight of a dog.

Assuming that the cow and her bag are clean and dry, and that she is comfortable and quiet, the milker should sit down gently on a firm stool, and with a light and careful motion brush the teats, udder and side of the cow next to him, to free them from any specks of dust or dirt or hairs that would be liable to fall into his pail. A tin-pail with the

top wider than the bottom is the best vessel to milk in. Let this be held firmly between the knees, with the bottom resting on the ankles, as this is the safest and best way to hold a pail to protect it against any sudden motion of the cow. If the bag is much pendant, and the cow is very gentle, there is no objection to setting the pail on the ground. Let the milker now grasp the teats with his whole hand, and by a firm and rapid but steady pressure crowd the milk out by closing the fingers next to the udder a little in advance of those below, being careful not to hurt the cow by pinching her teat between the ends of his fingers and his hand, or by pressing his finger-nails into the teat as his hand is closed. Milk the left hand teat with the right forward one, and the right hind with the left forward, always holding the left wrist firmly so as to be ready instantly to crowd the cow's leg back if she should attempt to kick suddenly forward. The milking should always be done with dry hands, both on account of cleanliness and for the sake of keeping the teats in good order. If the teats are too dry and inclined to crack, they may be wet after milking with a little of the strippings, or with a little linseed oil or other soft grease. The hands should press alternately and not both at once; and when milking is once begun it should go on as rapidly as it can consistently with the comfort of the cow and the strength of the operator, and without any cessation until the milk is all drawn, otherwise the cow will get out of patience and hold back the last part of her milk.

The milk in the udder is contained in branching tubes and numerous small cavities distributed through it, the tubes coming together just at the upper end of the teat, and forming a single constricted channel, which is inclined to keep closed, and is nearly equivalent to a valve. Toward the close of the milking a little pulling down as the teat is pressed works the milk out of the little cavities by stretching and flattening them, and at the same time pulls open the constricted channel to let it flow through. This pulling down must be gentle and moderate. As done by the calf in sucking it is just right. If the teats are pulled too hard, the severe stretching of the walls of the passage at the upper end of the teat causes them to pull up and thicken, so much as to impede the flow into the teat, and often to stop it entirely. For this reason the practice of stripping the milk out by pulling down with the thumb and fingers, and letting the teat slip between them as the milk is driven out, is not a good practice. It often causes the passage at the top of the teat to pull up and close, as just described, and to make the thickening of the walls apparent by a hard bunch, which feels like a kernel of corn. The stripping method pulls too hard.

To get out the last drop of milk is an important means of keeping up and prolonging the flow. Nothing will dry up a cow faster than to leave a part of her milk in her bag at each milking. It will often aid in getting that important drop to clasp the lower part of the udder, or so much of it as can be taken in, and slide the hand down, gently pressing so as to help crowd the milk forward, till the hand comes to the position for grasping the teat, and pressing the milk out. All this should be done as expeditiously as possible, as the quicker the milk is got out the more perfectly it can be drawn.—*L. B. Arnold.*

The Canadian Wool Market.

From Canadian Exchanges it appears that the Dominion wool growers are generally marketing their wool at current rates offered by dealers—mainly 35 to 37 cents, gold—instead of holding it back for higher values. As to the clip, the *Monetary Times*, of Toronto, estimates it to be above an average yield, and to be equal to that of 1870, which by the census of 1871 was shown to be as follows:—Ontario, 6,411,305 lbs.; Quebec, 2,763,394 lbs.; New Brunswick, 726,168 lbs.; and Nova Scotia, 1,132,703 lbs.: being a total for the whole Dominion of 11,033,480 lbs. The quality is also said to be about an average, although in some sections where drouth has prevailed the fleeces are somewhat out of condition from the dust collected since washing. But other localities are sufficiently above an average condition as to make the usual averages. An important fact is also noted, that not only the quantity but the quality of the fleeces is being guarded improved by better feeding and sheltering since the farmers have acquired the means to provide better for their flock.