October, 1881.

THE FARMER'S ADVOCATE.

question which has not been very thoroughly investigated or discussed by our dairy authorities; but there can be no doubt that certain soils, though capable of yielding grass abundantly, produce it of very inferior quality, and of such a character that cows feeding upon it are unable to convert it into milk of good quality.

NO FIRST-CLASS CHEESE FROM POOR GRASS.

The observations of Dumas, Payen and Boussingault have shown the fact that a cow gives healthy milk in exact proportion to the surplus of food beyond what is necessary for her own maintenance. If the animal is kept on food barely sufficient for proper nourishment, the milk produced must be at a loss of animal tissue, with general deterioration of the milk and also of the cow. Milk formed at an expense of the nutrients and tissues of the body, has less caseine, butter, sugar and salts, while the albumen will be increased. It follows that the value of milk must depend upon the excess of food beyond what is required by nature to keep up the normal vigor of the body. Decaisne demonstrated by experiments during the seige of Paris in 1871, in 43 cases of nursing women, that insufficient or non-nutritious food produces a diminution in the normal quality of the milk ; also a variation of its chemical con stituents, such as an increase of albumen and diminution of caseine, butter and sugar. The proportion of albumen in such cases is generally in inverse ratio to that of caseine. Such milk rapidly decomposes, and this will explain why in hot weather, if mingled with good milk, it would induce ferments and cause serious trouble to the cheese-maker.

That the quality of grasses is greatly influenced by soil and situation, has been generally observed by farmers who have been in the practice of fattening stock for the shambles. Upon certain pas-tures, cattle fatten rapidly and without trouble, while upon other lands they do not readily take on flesh, though the growth of grass seems abundant and of varieties accounted nutritious. It is not surprising that cheese makers often have trouble in handling milk when going from one locality to another, for in addition to the more common causes of bad milk, such as uncleanliness in milking, bad water, abuse of cows by beating and overdriving, there is still another affecting milk-that of soil or the food which it produces. Generally on high and dry pastures of gravelly loam, the milk will be more readily converted into cheese than when the milk is produced on low, wet grounds. The treatment of milk and curds, therefore, must be varied to meet the different character of soils, for that manipulation which would make good cheese in one locality might make bad

cheese in another. It has been said that good dairy products can be

ter and cheese depend wholly on the skill of the

maker. The late Mr. Joseph Harding, of Markesbury, England, was accustomed to say that he was able to make a fair quality of cheese on any soil by studying closely its character and the food it produced, and that different soils required a different manipulation of the milk and curds ; but to make the highest grades of fine cheese required the sweetest and most nutritious pasturage. It will be remembered that in England the feeding of ground grain or some concentrated food in addition to pasturage, is much more common than in this country, and on account of this supplemental food Mr. Harding was doubtless warranted in assuming the position referred to. It should be remembered in this connection that floating curds are unknown in English dairies, all the conditions for making good, sound milk being such as to cause no trouble of this description.

When we consider the great variety of causes for faulty milk at American factories, and the skilfful method in which it is often handled by the manufacturer, great praise is due to our factory cheese-makers for their high acquirements in the art of making a merchantable article out of bad material. Give them the best kinds of milk, and there is no fear of their not surpassing the world in the excellence of their product.—X. A. WILL-ARD. -Ex.

Cheese and Butter at the Provincial. The show of cheese was large, and considering the weather through which they have passed, the make and quality were good. When we compare the quality made now with that made some 12 or 14 years ago, the improvement is very marked and striking. If by any means the quality of the goods now made should degenerate to a par with goods now made should degenerate of a pair with those of 1867 or 1868, we have no hesitation in saying that such cheese would not bring more than 5 cents per pound. We think it was a pity the judges were not a little more careful in boring plugging the cheese; many of them were without a plug, and others might almost as well be without. and

In butter the show was very small, but said to be fine. We hope the day is not far distant when we shall see the same competition in butter there is now in cheese. This can only be brought about by the introduction of creameries, and we hope to see them some day as numerous as the cheese factories.

Our Native Cows.

The superior merits of the common Canadian and American cow as a dairy animal has long been known, and it is a matter of doubt whether the imported stock, so highly praised, are really her (many of them are very good) and breed as care-fully, feed as well as you do the imported animals, superiors. and we venture to say she will surprise many. Prof. Henry, of Cornell University, says at the Experimental Farm at that station they have a native cow which produced over 8,000 pounds of milk in one season. She was well fed and cared for. Another gentleman says he has a native cow which gave 11,000 pounds in one season. It is proposed by the managers of the Experimental Farm at Madison, Wisconsin, to take a good selection of native milkers that are as far removed from all the different breeds as possible, and see if they cannot be improved just as well as the imported They hope to make a Wisconsin breed of stock. good milkers.

Stork.

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Recent Stock Sales at Guelph, Ont.

The first of these was Mr. F. W. Stone's 14th annual sale, which was held at his farm near Guelph, on the 7th of September. The attendance was fair, about 300 breeders being present from various parts of Ontario, Quebec and the U. S. A. The sale commenced at 12:30 p. m., and was concluded by 6 o'clock p. m. Col. J. W. Judy, of Illinois, U. S. A., and W. S. G. Knowles, of Guelph, were the auctioneers. Most of the animals were taken from the pasture, not having been stall-fed during the summer. Very fair prices were realized, but no fancy figures such as ruled among some breeders a few years ago. Fortythree shorthorn cows and heifers were sold at an average of nearly \$98 per head ; twelve balls and bull calves made an average of a fraction over \$106 per head. The highest price paid was \$225, for the bull Baron Craggs (37595) calved October 1879, and the lowest for a bull calf, which sold for \$35. After the shorthorns were sold, 14 Cotswold rams and 8 Cotswold ewes were offered. The rams made an average of nearly \$30 per head, and the ewes \$17 per head. Ninet een Southdown rams were then sold, at an average of \$28 per head, and 24 head of ewes averaged \$20.50 each.

The next day the Ontario Experimental Farm held their tifth annual sale. A large number of breeders from various parts of Ontario, some from Quebec, and a few Americans, were present. Three shorthorns were sold, at an average of nearly \$100 each. All of these were bought by gentlemen of this province. Only one Hereford was sold, viz. Duke of Connaught (4528), which has been used for the past few years at the College Farm. He was bought by an American for \$175. Three Polled Angus were then sold-one of which was a young calf, another a very fine two-year old heifer and the third "Gladiolus" (1161), their old stock bull. The three brought \$565. All remain in Ontario. Then came two Ayrshires, their aged bull and a bull calf. They brought \$130. This year was the first time Devons have been offered for sale at the College Farm. Two only were sold, a two-year-old heifer and a heifer calf, both of which were bought to go to Quebe brought \$95. This finished the cattle, and 98 sheep were now sold - 55 ('otswolds, 21 rams, including the imported stock ram, I two shears ram, 5 yearlings, 14 ram lambs. The remaining Cotswolds were made up of aged ewes and ewe lambs, The 55 head made an average of nearly \$17,50 per head. Some of the aged ewes were old. In all cases the age was not given. The yearlings were small, coarse in the wool and rather inclined to be bare underneath; they were by no means a first-class lot. The ram lambs, though small, were of better quality. Though the printed circular stated that full pedigrees would be given with all, when required, the breeding of the sheep was not given required, the breeding of the sheep was not given in the ring. If the animals had good pedigrees, we believe they would have sold much better if their breeding had been stated when they were brought in We have had experience in this line the ring. We have had experience in any fine and found the above course profitable. Eighteen of the above Cotswolds were bought to go to Que-bec, and three to the U.S. A. The others remain in Ontario. Ten Leicesters were disposed of. They in Ontario. Len Leicesters were disposed of. They were composed of one yearling ram, 15 ram lambs, and four ewe lambs. They were a much better lot throughout than the Cotswolds. The average price was \$19.70. The Oxfords were also of fair quality. Four were sold, viz.: the imported stock ram, a yearling and two ram lambs. This lot made an yearling and two ram lambs. This lot made an average of \$42.25. Two Shropshire ram lamba-were offered, and sold for \$59. Twenty-seven Nouthdowns made an average of nearly \$20 per head. The bidding on the Downs was much more pirited than for the long-wools. Especially was this the case with the Shropshires. Six very nice. Berkshires, all of which had good pedigrees, sold for \$164.

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made over a vast extent of country, and almost in any section where there is a suitable climate ; and the extension of dairying over the West and North west is cited in proof that soil has little or no intucnee in the production of the finer qualities of dairy goods. This is undoubtedly true if pastur-age is supplemented with ground grain, cornneal, shipstuffs and the like ; but if cows are to be kept wholly on grass during summer, as is common in the best dairy districts of the East, the truth of the statement may well be doubted. The fine butter and cheese that come from Iowa and other parts of the West, are not due wholly to the excellence of western grasses, but to the full supply of ground grain which the cows get as a supplement to their pasturage in summer. The success of winter dairying depends upon the feeding of meal, bran, shipstulls, or the like, as a supplement to good hay; for hay alone, as ordinarily fed, does not make a "gilt-edged" product.

HOW TO REMEDY THE TROUBLE.

If nutritious grasses are found on worn soilsgrasses that are not capable of making good milk (and we have no doubt such soils are more common than is generally supposed)-the remedy, it is plain, must be in supplementing pasturage with some kinds of ground grain or concentrated food, that will supply all the elements of nutrition by which good milk can be made. There is abundant wildener to show that the granes on different soils evidence to show that the grasses on different soils vary greatly in nutrition, and that it is not always the quantity of herbage on a field that has capacity to make good milk, but that this is regulated largely by its quality. The question is one of deep interest to dairy men who are striving to excel in their dairy weakate. To make the best goods we their dairy products. To make the best goods we must have the best kind of milk, and dairymen will do well to study more the source of the production than to hug the delusion that the best but- at an early age.

The oleo-margarine question has a nearer interest for Canadians than has, perhaps, been imagined, in this way: In the past winter, and up to the end of April, all the choicest beef tallow in in various parts of Ontario had been bought up, and was sent to Montreal, there to undergo a process of refining preparatory to being shipped to New York, where it was manufactured into olcomargarize.

The best beef is young beef, reaching its greatest point of superiority at from two to three years. The same is true of sheep and swine. A wether, for the best mutton, should be in the market at two years. As a general rule a 250 pound pig is better in quality and more profitable than a hog weighing 500. The point of appreciation of quickly maturing animals is being reached, though somewhat gradually, and it remains to improve the various breads the various breeds, especial care being used to select animals to breed from that come to maturity