The International Dairy Fair.

The first week of the International Dairy Fair, held in the city of New York, closed on the 13th ult. The number of entries of butter in the fair is 540; of cheese, 504, and of dairy implements, 300. One feature in the latter exhibit which has attracted special attention is the machine for separating the cream from the milk by centrifugal action. The machine which does this is a Danish invention, and is extensively used in Denmark. The whole exhibit of dairy implements is extremely interesting in many ways. It shows how elaborate and how ingenious becomes the machinery when dairy work is transferred from the farm-house to the factory, and thousands of pounds of butter and cheese are turned out weekly, instead of the modest product resulting from the labors of the farmer's wife and daughters. Still, there is no want of domestic dairy implements, and in the single item of churns there is an almost endless variety of models, each claiming to save more labor and do more work than any other.

The trade is increasing yearly. In 1876, 7,000,000 of pounds cheese were exported; As we are already the largest grain exporters in the world, is is a pretty safe prediction to make that in a few years we shall be equally large exporters of dairy products.

The tables for the exhibit of creamery butter fairly groan beneath the weight of the pails which cover them. To the left of the great pyramid, is a magnificent display of foreign imported cheese, which includes specimens of Roman, Parmesan, Leyden, Cheddar, Stilton, Neufchatel, Sapsago, and a score of other varieties, including native imitations. Holland has a large display of creamery butter and cheese, manufactured for export to England and tropical countries. The cheese designed for the tropics is packed in lead. One of the most notable features of the fair is a large case of fancy or printed butter from Minnesota. The butter, which is of a golden hue, is modeled into a variety of beautiful forms. There are boquets, baskets of flowers, a cross entwined with ivy, wreaths, and cakes of every form known to the geometry of the dairy. This is the only exhibition of the kind in the fair.

The creameries, which are designed to facilitate the separation of the cream from the milk, are numerous and of many devices.

The cattle exhibit is now complete, and, although not remarkably large, is one of the finest, in regard to the quality of the stock, ever displayed in this city. The greater number of the cattle are quartered in the machinery-room, although a few are in the main building, near Third-avenue.

In the machinery room a large number of machines are in active operation, including a well excavator, a steam pump, and the generator of electricity by which the electric light in front of the building is fed. With the growing trade increase the ingenious devices for preserving the products on their long journeys, and though the exhibit of these at the fair seems large, there is no reasons to to suppose that every succeeding fair will fail to show an augmentation of their number and improvement to meet such new wants as experience may demonstrate. Addresses are made at the fair every evening by gentlemen interested in dairying and agriculture. Mr. Thomas Leaming, of Montreal, and Col. R. M. Littler, of Iowa, spoke on Saturday. The latter is Secretary of the National Butter and Cheese Association. The scene within the American Institute Building on Monday evening was decidedly more lively and satisfactory than on the previous evenings of the exhibition. At 8 o'clock a large crowd gathered. The judges, for some days, were busy in testing the half-thousand odd tubs of butter offered for their inspection and judgment. The result gives the first sweepstakes prize for the best butter to Wisconsin. This finding, as was emphasized in some remarks made by the Chairman, was a surprise to the New-York dairymen in the instance of cheese, and to the dairymen of Iowa in that of butter.

THE QUANTITY OF FOOD NECESSARY FOR A HORSE.—The required amount of food for a horse for ordinary work is 12 pounds of oats or any other kind of grain food, and 14 pounds of hay. A horse weighing 1,000 pounds, and fed 8 quarts of grain or oats, which is equivalent to 8 pounds, should be fed 18 pounds of hay. Hay is the nerve food for a horse, cattle or sheep, and grain is the muscular and adipose or fat-producing food.

Breeding Cows for Butter.

We say when we speak of a heifer by an Alderney bull and dropped by a common cow, "she is half Alderney." This word "half" does not by any means indicate the measure of Alderney characteristics which the heifer possesses. We might with greater propriety say "she is half Alderney by blood and seven-eights by nature." Some well-bred bulls will impress the characteristics of their own breed so remarkably that many of their offspring might pass as pure bloods; others possess this quality, which is called prepotency, so slightly that their offspring take after their race but slightly. Such bulls, though perhaps well-bred, are valueless; but they are very rare among full bloods, of any breed. Among the grades of any breed, and among crossbreds of any dissimilar breeds, bulls lacking this invaluable quality of prepotency are the rule rather than the exception. Now and then a grade bull will get very good calves with considerable uniformity. Very fine-looking grade bulls are common, and it is hard to convince common farmers that they are not just as good for use as pure breds which, perhaps, do not look so well. The difference in the herds of two breeders, one of which uses pure-bred bulls, the other scrubs of grades, is always most obvious.

Those who select bulls for beef points will raise the best steers; those who wish to make milk will breed from bulls of the great milking breeds; and in butter sections it is equally important to use only bulls of the best butter breeds, the Jerseys and Guernsey standing pre-eminent. But among the Guernsey and Jersey herds we do not find all the cows good butter-makers, while among those which are really good, there is an enormous disparity.

It is a good cow which gives ten pounds of butter a week. Very many which give twelve; quite a number which yield fourteen; a very few sixteen, eighteen, or even twenty. Such cases are not, so to speak, sporadic or isolated, but more or less in families—that is, we find that a great number of good cows will generally be found in the progeny of one famous one.

What we want is to be able to breed great butter yielders every time. This might occur occasionally, or often, when the progeny of one great butter-cow is rather closely inbred, but with very much greater probability when the blood of different families, each famous for its butter yield, is combined. In each there is a "prepotency" for butter production, and as the families are not akin, we really combine the two, and, if each prepotency is equal to the other, then we have a double force, whereas, in breeding in one family we have only the single force, no matter how its parts are combined.

Rule for breeding prodigies of any kind: First, discover or establish in two families the particular prepotency—that is, the quality which produces similar characteristics, say a great yield of butter, in many, or all the individuals of a family; second, combine these two families. It is, of course, a question whether the tendency will continue in double power. If not, then we must continue to combine the excellencies that is the prepotencies —of two families, just as we breed grades now.—American Dairyman.

By the latest despatches we learn that the cattle plague has broken out in Cyprus. It had also broken out in Austria, and had appeared in Prussia in places previously free of that disease.

CANADA AHEAD.—At the great Dairy Show held in New York, in December, a Canadian gained the first prize in the Sweepstakes for cheese, open to all nations. Canadians also took high premiums in the butter department.

An American writer, referring to the greatly increased area of the wheat raising this season, asks:—"If all Europe makes an average crop next year, and all European nations except England, as is usually the case, have wheat to sell, what will American wheat be worth?"

The land under cultivation in Great Britain has been steadily increasing rather than diminishing notwithstanding the agricultural depression. The increase since 1878 has been 121,000 acres; the total increase in the ten years since 1869 being no less than 1,637,000 acres. Large quantities of bog, mountain and moor have been reclaimed and placed under the plough.

Pleuro-Pneumonia—Its Existence in the United States.

From the address of the President of the American Association of Short-Horn breeders, delivered at their last annual meeting, we take the following extract, admitting that pleuro-pneumonia does exist in the United States, despite the persistent denial of the past by Americans and by some Canadians. This journal strongly advocated the prohibiting of the importation of cattle from the infected country to Canada, and thereby was the means of saving farmers from incalculable loss. Time has proved the judiciousness of the Canadian and the Imperial Governments in the course they then took. Will those so-called Canadians now confess that we were right, and that their denials were all prompted by motives of self-interest, regardless of the welfare of the farmers?

"It is beyond doubt that contagious pleuro-pneumonia exists among the cattle of several States of the Union. At this date it is unnecessary to inquire into the truth of the statements as to the existence of the disease among the cattle composing the cargo of the Ontario, and which led to the scheduling of American cattle. But, as has been stated, we know that contagious pleuro-pneumonia does exist among cattle in some eastern States, and the imperative duty of every American breeder and professional man is to urge, with determination which cannot be misunderstood, that the Government of the United States shall take such action as shall effectually 'stamp out' this dire scourge, and prevent its reintroduction among the cattle of America. Had the Government heeded the warnings given when we were threatened with an invasion of rinderpest, much of the difficulty would have been avoided and a proper system of quarantine and veterinary inspection would have been instituted."

A new form of cattle disease, differing altogether from the pleuro-pneumonia, has broken out in the northern portion of Westchester Co., N. Y. Four cows of the herd of one farmer have died of this distemper. It is characterized by difficulty of breathing and signs of fever, followed by delirium. On examination the heart of one of the dead cattle was found much enlarged, the blood vessels distended, and the lungs diseased.

Work in the phosphate mines in Hull is being resumed, as the demand and prices for phosphates have increased.

H. C. Howard, of Caston, Me., has raised on 45 acres of land 10,000 bushels of potatoes, doubtless the largest crop raised by any one man in the State.

In the most important agricultural region of France, the number of cattle kept now is one head to each two and a-half acres; in 1840 it was one to five acres.

The exports of produce from P. E. I. in the last few months have been enormous. In oats alone there have been shipped from the Island since September 1,315,000 bushels.

The Burlington Free Press says:—"The changes going on in the population of the rural districts of Vermont are slow but sweeping. In a single locality about five miles from this city can be counted twenty deserted farm houses, or the remains of what were once such."

Treeless Iowa is being transformed into a forest-covered country, by a law which remits certain taxes for five years on every acre of fruit, and ten years on every acre of forest trees planted and kept alive Over 75,000 acres of fruit and forest trees have been planted, and $200,000 have been remitted in taxes.

EMIGRATION.—It is reported that forty thousand people will emigrate to the North-West next year. The Hudson's Bay Company are making strong efforts to further the cause of settlement, and half a million acres of their land have been surveyed in the townships laid out by the Dominion Government.