

mium to breeding animals carries with it a recommendation of those animals for breeding purposes.

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In another letter, dated September 6th, Professor Kedzie informs me that, "regarding the experiments with plants grown on humus deprived of ammonia, I would say, that the investigations undertaken have not been continued long enough to make it seem proper for me to direct attention to them through any scientific publication."

AGRICULTURAL LETTER.

PARIS, JUNE 17.

Denmark is very justly proud of her reputation for good butter: the mark is appreciated wherever it is known. But as nothing succeeds like success, Denmark wants to become celebrated for her skim-milk cheese: to achieve this end, she is tormented by American competition, and still more so, by her neighbors the Dutch. Butter farming cannot be financially successful save that a profitable outlet be found for thin milk cheese, in the event of the non-existence of a local demand. The average price of such cheese is about—3 cts. to 4 cts. per lb.; it reaches double that price in some seasons, Dutch makes realize as much as—9 cts. lbs. The principal outlets for second-milk cheese, are warm countries, as soft, rich cheese will not stand a long voyage.

In Denmark, there is no uniformity in the preparation of cheese, as in the case of that of butter; less attention is paid to variations of temperature, that which exercises so important an influence on the production of cheese; indeed, it may be a question, if, from the industrial point of view, Denmark is up to the mark in the commercial preparation of cheese.

In Germany, milk societies are the order of the day; they are constituted according to important legal formalities, and severe penalties are imposed on such members as transgress the statutes. The general lines of these milk associations are: the members accept unlimited responsibility; each farmer undertakes to supply daily a fixed quantity of milk, over and above that required for home and young-stock consumption. Milk from a diseased cow, the mouth and foot malady excepted, cannot be received, and the milk from cows after calving, must be delivered separately, pending a period of 15 days. If the milk arrive late, the farmer is fined, and if the cart containing the tins be not locked, the latter must be: the sender and the receiver have duplicate keys; the cart is never entrusted with the key. In winter these cows are covered with straw during the journey: in summer, with damp cloths; the van, too, must be hung on springs. Some of the societies include 160 members, each furnishing on an average the milk of five cows. As there must be different qualities of milk, are the farmers paid? They are paid alike, 10 per cent of cream being accepted as a minimum standard of richness. Every mechanical appliance has been tried to test the measurement of the cream in the milk, but without success. Personal and unexpected visits of officials to the farms at milking hours, and taking away, then and there, samples, are the only practical tests.

But while the percentage of cream in the milk allows of the yield of butter being estimated, there is no test to determine the production of cheese. The richer the milk in butter the less dense the milk, while the contrary is the case for cheese, because the matters rich in cheese, are held in dissolution. One of the rules of the milk associations is, that any milk which becomes sour in six hours after delivery, will be reduced in price 60 per cent. The milk is paid for

every month, never in advance; but the accounts are finally balanced once a year, and dividends declared, when the sales of cheese and fattening of pigs have been realized. The societies also undertake to supply pure milk to children, and it is becoming the practice to select the neighbourhood of these societies for "nursing stations."

Milk and cheese farming naturally bring in their wake pig rearing; this is not only the case in France and Switzerland, but notoriously in Denmark. The small pigs in that country are shipped to Hamburg, where they are killed, cured, and exported to England as bacon. The coarser animals are sent to Holland and the Rhenish provinces: indeed, some of the hams find their way to France as "Yorkshire" and "Westphalian." The trichina is closely connected with pork: the Academy of Sciences has been discussing the vitality of that parasite: Mr Fourmant asserted, that a morsel of pork affected with trichina was kept in brine pending fifteen months: it was then given to some mice, that died from trichina after eating it. In the uncertainty, then, which reigns, the popular remedy is the safest, that of well-boiling the meat; which the French ever do, whether it be healthy or diseased.

The Pasteur process of vaccinating cattle continues to make enthusiastic progress. Russia and Italy have sent veterinary surgeons to be initiated into the *modus operandi*, and have had nothing but success to note. There are two kinds of *charbon* malady; the one accompanied by fever and the other by tumors. Mr. Pasteur confined his discoveries to the first, while Messrs. Arloing, Cornevin, and Thomas, have applied vaccination to the second, and with equal success.

The beet crop has taken a considerable extension this year in France, and is destined still farther to extend, when the legislature settles the vexed question of distillation and the sugaring of wines. When wines require body, or to be "cured," beet sugar—never any syrup from grain—is added, which is duly converted into alcohol. Indeed, with beet sugar, a special aroma, a prepared color, and an unlimited supply of water, wine can be manufactured at will. The vineyard proprietors allege, that if the law does not check the preparation of artificial wines, the days are counted for classed natural brands.

The reports on the state of the crops cannot be more favorable, and this year promises to be one of plenty. If the yield of hay be light, the quality is good, and this is shown in the superior condition of the stock sent either to the shows or to the markets. The season will be a dry one, but taken with all its drawbacks, a tendency to drought is preferable to a constant dripping. In dry weather, plants perspire a good deal, and give off their watery vapor to the atmosphere: but in many cases we can correct a little the drawback: irrigation where practicable, green manuring, and especially that of the farm yard. For light soils, cow and pig-stye manure is most suitable: it is cool and retains humidity. If there be less consumption—or less waste, during a dry summer of the elements of plant food, more will be left for the following season.

Mr Rodinoff draws attention to the use of calcined earth as cattle-bedding. He covers some branches with clay, sets them on fire and the earth is baked; it must then be kept under a shed to prevent absorption of humidity. In the calcined form, the absorbent power of clay is naturally augmented; in that state, it is better fitted also to fix gases. It is more suitable for a sheep than a cattle shed, and, when employed in the latter case, a slight sprinkling of straw will be an improvement. The best litter is that which will absorb most urine etc.: in this sense, following Boussingault, bean, buck-wheat, and pulse-straws, are first, as they absorb 3 times their weight of liquid: wheaten straw, but twice its