

period. It will thus get her started right in the line of persistence; but, in justice to the heifer, give her at least a two-months' rest before freshening again. We must not overlook the fact that she has still a lot of growing to do, in addition to producing milk, and must be fed accordingly. In the two-months' intermission before her second calf, she will, with proper care, make good gains. If in the stable, she should have plenty of roots and some wheat bran, with, if possible, the addition of a small quantity of oil-cake meal. If on grass, it is better to put her on pasture that is not too rank, with the same grain ration. It tends to build up her system, regulates her bowels and puts her in the best of shape, while a pasture that is too succulent is apt to stimulate the milk flow, at the expense of her strength.

Give plenty of light and ventilation, and sanitary conditions fore and aft. With these conditions, we find dairying, though a steady and exacting occupation (keeping our Sunday and Monday alike), yet, withal, a pleasant, interesting, and, last, but not least, a very remunerative one.

Siberia Competing in Butter.

Advices from Great Britain show that Canadian butter, during the past season or two, has found a strong competitor in the product from Siberia. A geographical comparison shows the Siberian buttermaking territory to lie in the same latitude as Edmonton, Alberta. Some sections are 100 miles further north than Alberta's capital.

Discussing the question, the weekly report of the Department of Trade and Commerce says: "The enormous growth of exports, particularly butter and other dairy products, within the past few years, from Siberia, along the line of the Great Siberian Railway, immediately east and west of the Ural Mountains, has attracted the attention of the commercial world. The district thus outlined is in the exact latitude of Edmonton, Alberta. The inference, then, is what must be the possibilities of the Canadian West, beyond Edmonton, upon which, as yet, little definite valuation has been set? Experts have recently given the assurance that the country is in every way superior to that portion of Siberia which has produced such wonderful results. The Russian peasant, from Siberia, is beginning to supply the market of Great Britain with dairy produce. His advent upon the market has been comparatively recent, yet the statistics showing his progress will be material for the consideration of those interested in the Canadian West." A report prepared by H. Cooke, special commissioner for the British Board of Trade, in 1905, supplemented by later figures, shows recent reports of grain (rye, wheat, oats, millet, buckwheat, barley, maize, flour, and oil seeds), from Siberia proper, by rail, thus: 1905, 17,922,000 pounds; 1906, 28,719,000 pounds (a pound is roughly 36 pounds). Wheat is the principal representative of the Siberian grain trade, forming at least over 50 per cent. of that conveyed by railway.

The following concise account of the origin of the butter industry has been extracted from the British Government report:

The buttermaking industry of Western Siberia is one of the first direct results of the construction of the railway, and, from the point of view of the general well-being of the peasant population, the most promising outcome of the changed conditions now prevailing. It is at present the main resource of the inhabitants of the entire region.

The progress made has indeed been wonderful. Previous to 1893 no butter was produced in Siberia for export. The first to engage in butter-making under modern methods was an Englishwoman, married to a Russian, whose dairy farm at Chernaiia, Reitchka, in the district of Tiumen, was, in 1885, the only one in Siberia, and is still a well-known model of its kind. The initial difficulties encountered, she told me, were extremely depressing. No experienced hands were to be found; the peasants did not understand that cows had to be properly fed or attended to; the distances were enormous, and communications were non-existent or primitive, while the people in general, with the exception of the few who could afford to order supplies by the then communications from Moscow, had but faint ideas as to the difference between cheese and butter, and how they were to be eaten. The first separator—the first in Siberia—was purchased in 1887 from Sweden.

Common peasant cows, small, and yielding little milk, were utilized at first, and the breed gradually improved by the introduction of Simmental cattle. The farm now has 180 head of its own rearing.

NOW THE STAPLE INDUSTRY.

In 1893, Mr. Wolkoff, a Russian, opened near Kourgan the first dairy producing butter for export beyond the Urals. Some 400 pounds (14,400 pounds) were exported in 1891.

Since the establishment of the first dairy in Siberia, buttermaking has become the staple industry of the country, as regards international trade and home resource. Indeed, the peasants believe that, were it not for the dairy, they would have perished in the recent hard times. In 1903 over 2,000 dairies were scattered through Western Siberia, exporting 2,185,000 pounds, or 78,994,720 pounds. The westward export by rail since then has grown thus: 1904—2,157,774 pounds; 1905—1,937,989 pounds; 1906—2,897,776 pounds; 1907—3,413,641 pounds; 1908—3,310,229 pounds.

Almost all goes via Baltic ports. There was sent to the United Kingdom, from Russia, in 1906, 617,348 cwt., valued at £2,974,520; and in 1907, 669,748 cwt., valued at £3,148,643.

The region engaged in buttermaking extends along the line of the railway from Obi, or Novo-Nikolaievsk, to Kourgan, a distance of 1,100 versts, or 733 miles. It now possesses a population of from 30,000 to 33,000, and is the exporting point by rail for the rich Barnoul or Altai region, south of the line, the produce of which is conveyed to the railway by the river steamers of the Obi. Here the special butter train, running daily in summer, takes on its first ice-trucks, picking up others ready-loaded at each butter-transit center along the line, as far as Cheliabinsk, whence the complete train of twenty-five trucks starts through Russia for the Baltic ports, where its freight is shipped to the markets of Copenhagen and Great Britain.

INDIVIDUAL OWNERSHIP OR CO-OPERATION.

The first dairy for the manufacture of butter for export abroad was opened in 1893. By 1902 the number of Siberian dairies amounted to over 2,000. They are termed in Russian "zavodi," or "works." They have, indeed, little in common with the ordinary conception of the word dairy, or of its accompaniments and surroundings, as understood in Western Europe. Hurried up and hastily equipped in the first flush of the movement, both suitable and unsuitable tenements were adapted to the purpose, with a total lack of technical knowledge and experience on the part of the villagers, and it is only lately that the stress of competition, backed by the endeavors of the authorities and the special instructors, has begun to work some improvement in the general conditions of production. The dairies in general are either the property of individual owners, or of two or three combined, who buy milk from the peasants around, or else they belong either to artels or to entire village societies, both of which supply the milk from their own cows. Theartelni dairy is defined as "one created by several peasants, who distribute the proceeds in proportion to the amount of milk provided."

A movement, encouraged by the authorities, has gradually established co-operative dairies for villages, or entire hamlets throughout. In the Kourgan region, almost the entire production of butter is now in the hands of co-operative dairies. It would seem more than probable that the whole Siberian butter industry will eventually assume this village co-operative form of production.

EDMONTON HAS BETTER CLIMATE.

Turning, therefore, to Canada, the inference must be apparent. If such developments have been achieved in Siberia, much more, then, should the resources of the Canadian Northwest, as yet scarcely realized, be productive of surpassing results. That both districts are in the same latitude, does not in itself insure identical climatic conditions. Latitude, it was shown before a private committee of the House last year, does not govern climate. Evidence was laid before the members of this committee, inquiring into the agricultural possibilities of the north, indicating conclusively that vegetables have been grown within fourteen miles of the Arctic Circle; that wheat has been harvested just short of latitude 62, averaging nearly 64 pounds to the bushel; and at Fort Vermilion was a flour mill, electrically equipped, turning out 35 barrels per day. Numerous other statements were presented to corroborate that there was a vast area extending north, suitable for cultivation. The winters may be colder, but the summers, shorter though they may be, from June 1st to August 20th, have the same temperature as Ottawa. And, as has been pithily remarked, "things don't grow in winter." The mere fact that in the northern part of Siberia are towns of 1,000 and more, indicate that some industry must be carried on to support them. As regards dairying, there is no question that in the north are grasses of the greatest possible value for cattle grazing, far surpassing, indeed, those of the Northwest.

POULTRY.

Quality Demanded in Eggs.

In discussing the quality of eggs, A. G. Gilbert, before the Select Standing Committee on Agriculture, in 1908, said that, for storage, the best eggs could be collected from November to March, because, as a rule, the fowls were better handled, and more carefully fed. As the birds got outside, they picked up decayed vegetable matter or animal matter, and the quality of the eggs is deteriorated.

If you can be sure that the eggs put into storage, or into preservative liquid, are fresh, said Mr. Gilbert, I think the summer months are the best time to buy for storing. In order to secure reliable eggs during the summer season, there should be a guarantee not only that the eggs are strictly fresh, but that the hens which laid them were cleanly fed. It takes effort and care to place guaranteed eggs on sale. This is an age where people demand pure food. There is a call for strictly new-laid eggs of good flavor and quality, by people who must have them, even at increased cost. Let me cite an instance. One early summer day, about two years ago, I was met by the junior partner of a grocery firm. He said: "Can you give me a regular supply of strictly new-laid eggs of good flavor. We have a class of customers who will have no other kind of article, and we are bound to get such for them, if at all possible." I replied: "I can give you a limited number, but you will not pay me what they are worth." "What are they worth?" he asked. "Twenty cents per dozen," I answered. He at once said: "I will give you twenty-five cents for all the guaranteed eggs of the freshness and quality I mentioned that you can give me." I explained that we might not be able to give him many eggs from the farm, as we usually induced our hens to moult early, but that I might be able to procure the quality of goods he desired from people I could trust. He said: "As long as you can guarantee the eggs, I am satisfied." I certainly got the quality of eggs he desired, and in some cases had them put up in card boxes holding one dozen, with a printed guarantee on the box cover: "Strictly New-laid Eggs. These eggs are guaranteed to be non-fertilized, and to have been laid by cleanly-fed and well-kept hens."

Summer market eggs should be non-fertilized. There is not the slightest doubt that, if the egg is fertilized, and put away in a warm place during a warm month in summer, the germ is likely to make such progress that, when its development is arrested, a certain amount of decomposition is liable to occur.

The quality of the feed is doubtless a factor in obtaining flavor. Our only safeguard is really to find the man who feeds his hens properly, and takes precautions to secure the flavor of the eggs. He should certainly be encouraged by getting a high price. The bad fellow is encouraged, as well as the good fellow, under ordinary conditions.

Feeding Young Chicks.

Rations for young chicks, from the time they come from the shell, are given by A. G. Gilbert, C. E. F., Ottawa, as follows:

First Day.—Little or no food is required. Towards end of the day, a few stale breadcrumbs may be fed.

Second Day.—Stale bread soaked in milk and squeezed dry, may be given in small quantity. Feed a little at a time, and leave none on the platform. A little hard-boiled egg, finely cut up, may be added, with benefit. Continue this for a day or two, and add granulated oatmeal; finely-crushed wheat may be given at this time. Continue the stale bread soaked in milk and granulated oatmeal for ten days, when finely-crushed corn may be added to the foregoing with advantage. After 14 days, give whole wheat, in small quantity at first.

As the chicks grow older, they should be given a mash composed of stale bread, shorts, corn meal, ground meat, etc. Finely-cut bone or meat will be found a great incentive to growth at this stage. On the chickens becoming eight weeks of age, their rations may be dropped to three per day. Care should be taken that they are generously fed at last ration. For drink, give skimmed milk and water.

The best sort of fowls for the farmer—indeed, for any poultry-keeper who desires to make money from both eggs and flesh—are Barred Plymouth Rocks, White Wyandottes, Buff or White Orpingtons, Dorkings, for the reason that all these varieties are good for both eggs and flesh. They are as nearly the dual-purpose fowls as we have in poultry, affording the farmer opportunity to make money by the eggs laid by them, and then by their chickens, which are of the most approved market type.—[A. G. Gilbert, before Select Standing Committee on Agriculture.]