

DAIRY.

New Plan in Cheese and Butter Factory Management.

The FARMER'S ADVOCATE takes pleasure in laying before its readers the outline of a new system of factory management just being inaugurated in one of the older dairy sections of Western Ontario. Our readers are well aware that one of the essentials to success in establishing a successful and permanent local trade in products like butter is to provide customers with a regular supply of good quality. Once the consumer's taste is satisfied and his or her eye pleased with the style of package, the great point then is to preserve uniformity, and next, without fail, to deliver the article when wanted. The same rule holds good in an export trade when we follow up to their final distribution our butter, cheese, bacon, eggs or other food products. Cold storage is effecting a revolution in transportation, but it does not and cannot overcome all the difficulties, some of which have their origin in the factories. One of the greatest benefits ever conferred upon the Canadian cheese-factory system was the inauguration of the plan of travelling instructors, of whom the late Prof. L. B. Arnold was a distinguished pioneer. In this and other ways Canadian Cheddar cheese came to be made in a fairly uniform style. But the consuming market under keener competition grows more discriminating and exacting. These conditions must be met. One of the largest provision houses of Liverpool, that have come to be heavy importers of bacon, butter and cheese during recent years, but latterly from their customers have found the need of being certain of a regular supply of dairy products, uniformly fine in quality. A representative of the house recently visited Canada, and a new plan was mapped out for the future, which we trust will prove beneficial to patrons of the factories concerned, and a success as far as the company is concerned, because they have ventured very considerable capital therein. If the results are satisfactory it may mean the embarking of a great deal more British funds in the same way. They have purchased out and out three well-known factories: "The Thames factory, at Nilestown, Ont., owned by Mr. Jas. A. James, for many years on the directorate of the Western Ontario Dairyman's Association; the Dorchester Station factory, owned by Mr. Smith; and the Pond Mills factory, owned by Mr. Carrothers; the first named being in the center and the two others a couple of miles distant on either side. In making this purchase the company have had the association of Mr. T. B. Millar, of Kincardine, who has taken a share in the enterprise, and who will be their Canadian representative and manager of the Thames Dairy Company (and will be entirely responsible for its management), as the trio of factories is now to be called. Mr. Millar is well and favorably known to dairymen in that part of Canada. A farmer's son, he finally adopted cheesemaking as a profession, and was engaged for five or six years at the Burgoyne factory near his home in Bruce County, where he enjoyed marked success; so much so that eight years ago the Western Association selected him as one of its travelling instructors, and for the past two years he has been the chief instructor and inspector. For six seasons he has been one of the teaching staff in the Dairy School in connection with the Ontario Agricultural College at Guelph. A man of integrity and good business judgment, he is therefore in every way qualified for the work entrusted to him, and the factories should prosper. As he remarked himself the other day, much depends upon the satisfaction and hearty co-operation of the patrons, as their interests and those of the company, which is investing some \$15,000 in this enterprise, are mutual. Meetings will be held with the latter, when a fair basis will be arranged, so that full market value will be received by them for the products, which will probably go forward in regular weekly or fortnightly shipments, as may prove best. Necessarily, it will prevent the evil of refusing to accept cheese, which has too often been done, we fear, upon mere quibbles, where cheese is sold on the open market subject to inspection, and from which some makers and patrons have lost heavily. In the matter of milk routes there will naturally be less friction than is sometimes the case in contiguous factories, and a good deal of needless expenditure might be saved in that regard. Mr. Millar will go from factory to factory, personally superintending the making, curing and shipments of butter and cheese. The Nilestown factory is already splendidly equipped with a new creamery building and buttermaking plant, including two separators. Last season (the first) Mr. James turned out some 21,000 pounds of butter. The Dorchester Station factory has just been equipped for winter buttermaking and will be run as a creaming station; likewise the Pond Mills factory, providing sufficient milk is assured at the latter. The patrons will get their sweet skim milk, and the cream will be taken to the central factory at

Nilestown, which is splendidly located and possesses one of the finest spring wells in the Province. The buttermaking will all be done there, thus ensuring uniformity. The three factories now have a total output of about 400 tons of cheese per year, which ought to be increased and the winter butter output at least doubled. Mr. David James, a successful dairy school graduate, will continue in charge of the buttermaking. The cheesemaker at Nilestown will be Mr. Robert Murray, a first-class maker, from Ethel, Ont., who also had the advantage of a dairy school course. Mr. R. R. Milne, who has been making for nine years, the last four at Burgoyne, and who also took a dairy school training, will have charge at Pond Mills. The cheesemaker at Dorchester Station will be Mr. Moses Knechtel, who has been for some years maker in the celebrated Ballantyne & Bell factory at Tavistock, Ont., an extended description of which, by the way, was given in the Sept 1st issue of the FARMER'S ADVOCATE. Mr. Millar is taking control on December 1st inst., and has already let contracts for making a number of needed improvements about some of the buildings, so that everything will be in "shipshape" for future operations.

How an Indiana Town Jersey Dairy is Managed.

[BY AN OCCASIONAL CORRESPONDENT.]

One of the places of interest at Indianapolis, the capital of the State of Indiana, is Col. J. T. Polk's dairy farm. It is located at a small suburban village nine miles from the city, and connected therewith by an electric railway. The herd comprises one hundred and thirty pure-bred Jersey cows, besides a small drove of young things that are reared to increase the herd and to take the place of cows that may be sold. The milk produced by the herd is sold in the city, and the business is steadily growing. On the farm there is



YEARLING JERSEY BULL, PRINCE FRANK'S SON 48753, WINNER OF FIRST PRIZE AT WESTERN FAIR, LONDON, 1898; OWNED BY W. G. LAIDLAW, WILTON GROVE, ONT.

also a large canning factory, and the refuse from the corn, peas, etc., used in it, preserved in silos, forms no inconsiderable part of the feed of the cows. Col. Polk, while giving a general supervision over all his business interests, gives his personal attention to the management of the canning factory. A superintendent is given the oversight of the dairy herd, and the city office, through which the milk is sold and distributed, is managed by a member of the Polk family.

Many of the citizens of Indianapolis, patrons and others, appear to take a lively interest in this dairy, and when the weather is fine there are few days on which there are no visitors at the time of afternoon milking, while there have been as many as thirty to witness this interesting sight. An elevated platform for the accommodation of visitors is erected in such a position as to give them a view of two milking barns. The cows live and are fed in a covered yard with sides, open in summer and closed in winter. At a signal, morning and evening, the cows march into the milking barns, each to her own stall, where a small ration of bran or meal is awaiting her. The order and regularity of this march of the cows from their living room to the milking rooms are remarkable. Not many schoolrooms give better evidence to the visitors' platform of careful drill than do these Jersey "ladies." As soon as a cow has been milked and has eaten her ration she is released from her stall, when she returns of her own accord to the covered yard, with the same order and precision with which she entered the milking-room. The use of wholesome food and pure water, the frequent brushing and cleaning of the animals, and the freedom of movement and pure air of the covered barnyard, are potent elements in maintaining the health and vigor of the herd. Cleanliness and order are marked features in the milking-rooms. The milkers, men and women (some of whom come from the village for this special work) and have no

connection with the farm except at milking times), are clad in white caps and jackets. Before milking, the udder of each cow is carefully wiped off with a damp cloth. The milkers have nothing to do with the milk after it is drawn from the udder and weighed—for the milk of each cow, morning and evening, is carefully weighed and tabulated. Each cow's milk, as soon as it is weighed, is carried to the aerating and bottling room, where helpers continue the work in such an orderly and expeditious manner that usually the milk is all bottled in twenty minutes after the last cow is milked. For the aeration of the milk, fresh pure air is introduced from the outside of the building and forced through a small closed compartment partially filled with water. This small piece of apparatus is of much interest to the average visitor from the city, for it is explained to him that any bacteria that may be in the air brought from the outside to aerate the milk are drowned in the passage of the air through the water! To the skilled dairyman this apparatus is only a simple and harmless means of giving the bacteria a bath. The milk is shipped and sold in bottles. The bottles are thoroughly washed and then sterilized with steam, filled, placed in crates, and covered with small blocks of ice, sawn by a machine made for this purpose. Previous to the building of the electric railway, two years ago, the milk was conveyed to the city in a large wagon drawn by four horses, but the railway now carries it, at a great saving of man- and horse-energy.

An unusual feature in the distribution of the milk of this dairy is that it is all delivered in the night time. The carriers, with their wagons, leave the city office about one o'clock a. m., and their work is over by five or six o'clock. Each patron is supplied with a close box, which is placed of easy access by the carrier. In it the patron places the empty bottles and the tickets necessary for the requirements of the day. The carrier takes the empty bottles and tickets and leaves the required number of full bottles. Col. Polk's people have given this system a thorough trial, and they have no desire to return to the old system of delivery. This new system has several advantages. Amongst them are the delivery of the milk in the coolest part of the day; no interruptions in the work of delivering the milk, and a consequent saving of time; the carriers are free to earn additional money during at least a portion of the working day, and consequently a better class of carrier than the ordinary is available; and the patrons always have fresh milk for breakfast. Occasional visits to the patrons by the manager of the city office, to make collections or sales of tickets, help to keep the business in good running order. The average dairyman who caters to the town and city daily milk supply has a good deal to learn before he reaches the ideal method of handling his product. This recital of Col. Polk's methods—unique in some respects—may help some dairyman to attain to better methods than he now uses.

ORIGIN.

Buttermaking in Canada on the Creamery Plan.

[FIFTH PAPER.]

CHURNING.

Scald and cool the churn. Always stir the cream thoroughly in the vat just before removing it into the churn, and when at all possible run it in by gravitation. This saves time and frequently cream. The cream must, of course, be strained. For export no extra color is required. The temperature at which cream should be churned will vary, but only slightly. As a general rule the proper churning temperature for separator cream will be within the limits of 48 degrees to 52 degrees Fahr. Experience has proven to us that under actual creamery conditions a temperature above 52 degrees Fahr. results in loss of fat and less excellent texture, while below 48 degrees Fahr. we reap no advantage, and at the same time it costs considerable to get a lower temperature. As the butter is about to break, a little water should be added to assist in getting a complete separation. Butter-makers who experience undue loss of fat in the buttermilk should use the thermometer at this stage to be sure that the cream has not warmed up too much during churning—a frequent source of loss. The temperature of the water should be such as will keep the butter in nice firm condition—as cold as possible in summer, and about 52 degrees, to 55 degrees Fahr. in winter. Churn until the separation is complete, then stop.

Washing.—After standing a few minutes, draw the buttermilk. Then wash with plenty of water. If the butter is in good condition once washing will do, otherwise twice is better, the idea being to wash until the water runs off practically clear. The temperature of the water available in a creamery is a very important consideration. Quantity cannot be made to offset an unduly high temperature, and unless the temperature of the water be low, especially in summer months, it is not possible to turn out as much butter from a given weight of cream, nor to make as excellent an article as where water of low temperature is available.

We would emphasize here the advisability—yes, we would say necessity—of churning and working