

The Source of Salt Lake City's Milk Supply

PROEM.
The average consumer of milk and cream in this city has but a vague idea of what he is about to receive when he hears his dairymen shout "milk" a little before sunrise each morning. Yet the matter of pure milk is of sufficient importance to secure an appropriation of the city council, for the salary and expenses of both a city chemist and milk inspector.

The "News," realizing the fact that 100,000 people in this city use milk or cream in some form every day, determined to step behind the scenes, as it were, and let its readers become better acquainted with their dairymen. Of the 70 licensed dairies in the city, about half a dozen supply most of the trade. We have accordingly devoted space to the principal individual enterprises that would bear inspection. Something like 2,500 gallons of milk are daily consumed in this city. We have secured representations from dealers who handle over two-thirds of this amount, and after personal investigation of the sources of their supply can say with Mr. Harms, the city chemist, that Salt Lake has as good service as the average city, although in some quarters there is pressing need for improvement.

CITY CHEMIST HERMAN HARMS Gives Valuable Information Relative to Milk.

Milk is technically described as a secretion of the mammary glands produced by the breaking down of the food and milk is secreted by the females of the mammalia for the nourishment of their young and is therefore the food provided by nature for the needs of animal organism at its early stage and furnishes all the nutrients required and in the proper proportion.

DESCRIPTION.

Milk may be described as a white or yellowish white liquid, nearly opaque, except in very thin layers, or when largely diluted. In this case it assumes a bluish opalescent appearance. It has a mild sweetish taste and a slight, but characteristic odor, stronger when still warm from the cow.

CHEMICAL CONSTITUENTS.

Chemically considered the essential constituents are: Water, fat, casein, albumen, milk sugar and ash. These are essentially the same in the milk of all mammals, but they vary in relative proportions. By way of illustration: Human milk averages 2.9 per cent fat; cows' milk 3.5 per cent.

MICROSCOPICAL APPEARANCE.

Viewed with a microscope, milk is seen to consist of innumerable minute globules, each globule surrounded by a thin film and floating in a liquid, termed the "serum." These globules are the fat globules and remain intact for many hours after the milk is drawn, but they gradually coalesce and finally form a solid mass of fat globules forming ordinary cream.

CHANGES IN MILK.

From the moment the milk is drawn from the udder of the cow, changes commence to take place, due to lactic acid which are present everywhere and they cause what is known as fermentation of milk.

FERMENTATION.

By this process a portion of the milk sugar is gradually converted into lactic acid and as the process advances, the milk loses its sweet taste until finally the large amount of lactic acid formed curdles the milk, rendering it sour to the taste and smell. The rapidity of change is influenced by the water (especially during the heated season) and by the spores and microbes of filth; the latter may be derived from bad air, food, water, straw, pails, strainers, cloths and many other sources. Hence to insure against milk contamination which is most likely to cause sickness or disease, absolute cleanliness should be the index rule from the moment the milk is drawn from the udder of the cow, until it is delivered to the customer.

RESULT OF IMPROPER CARE OF MILK.

As stated before, a lack of proper care and cleanliness causes rapid souring and undesirable products may result in the milk, such as butter taste, usually laid to the animal eating feed, tallowy taste in butter, development of peculiar noxious gases and in some instances, active poisons.

EFFECTS OF FEED UPON MILK.

Certain feeds produce a peculiar bitter taste, which is present the moment the milk is drawn, while the bitter taste developed from fermentation is gradually increased. Cows fed upon beet pulp and residues will impart to their milk a peculiar sweetish taste. Still worse, fermenting grain and will produce an excess of acidity.

ADULTERATIONS.

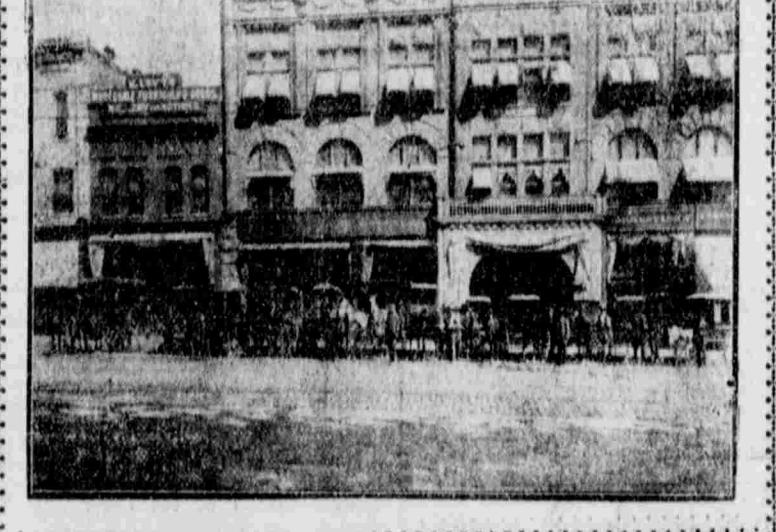
The law defines this as the addition of a foreign substance, or the removal of an essential element of an article, in water. A common practice is the removal of cream and the addition of foreign substances such as starch, sugar, chalk, etc., and preservatives. The practice of watering, skimming and adding adulterants has been checked very largely since the adoption of pure food laws by all the leading

A METROPOLITAN CREAMERY ESTABLISHMENT.

Wholesale and Retail Distributors of Utah Dairy Products.

One of the best known institutions of its kind and one that has ever maintained a policy of the strictest equity in all its operations, large and small, is that of the Elgin Creamery company, located on State near Second South streets. There the company occupies the ground floor and basement of the Holmes building, and everything connected with the establishment both in the offices and creamery is up-to-date and perfect in every detail.

The Elgin Creamery company was incorporated in January, 1900, with a capital of \$20,000, having as its president Capt. John E. Hill, and C. H. Wilson as secretary and treasurer. The business of the firm is as follows:



THE ELGIN DAIRY CREAMERY CO'S MAIN OFFICE AND CREAMERY.

oroughly systematized as that of any of the largest mercantile institutions in the country. Efficient men with years of experience in their particular lines are in charge of the various departments and with everything necessary at their command it is not to be wondered at that they have succeeded in making of the Elgin one of the leading creameries not only in this city but in the entire state. The storehouse occupied by the company is 100x200 feet, and the machinery in use is the most modern yet devised. The entire plant is operated by a 20 horsepower engine and boiler, located in the basement.

COMPANY'S PRODUCTS.

The Elgin Dairy and Creamery's products consist entirely of milk, cream, butter and eggs, ice cream and ices. The company is a wholesale distributor to most of the principal hotels and restaurants in Salt Lake City. A very large retail trade is enjoyed among the private families, a larger business being done in this line than in any other. One thing which fully demonstrates the popularity of the Elgin Creamery company's goods is the fact that the city's leading drug stores



REGISTERED COWS, "A SOURCE OF SUPPLY" FOR THE ELGIN CO.

advertise delicious, hot, "Elgin Cream" beverages during the winter and "celebrated Elgin Ice Cream" during the summer, the large demand is a most substantial compliment to the company making the cream.

Some idea of the magnitude of the business carried on may be obtained from the fact that from nine to twelve wagons are in constant use making morning and evening deliveries, and 20 men are employed and 24 horses used in operating this department and thus distributing the products of the company's creameries located at Springville, Kayville, American Fork and Mona.

THE BUTTER.

The butter sold by the company is made on the premises in the winter, a churn with a capacity of 750 pounds being used for that purpose. In the summer, the butter comes from outside points. The sales in this line are enormous and this is quite apparent when it becomes known that last fall the com-

panies of this country, and the leading countries of the world. Several hundred samples of the milk furnished to the citizens of Salt Lake City have been submitted to me for analysis during the past six months, and, generally speaking, I may say the milk has been found of good quality—free from appreciable amounts

THE MILK.

All of the milk used for distribution comes from within a radius of 15 miles of this city, and is brought into town by wagons from points as far north as Farmington and Kayville, and as far south as Big Cottonwood. The milk is aerated at the milking stations, and after reaching the company's plant in this city is pasteurized as a further, sanitary measure for the benefit of the numerous customers. More than 600 gallons are sold daily and over 150 gallons of this is bottled.

THE CREAM.

The cream comes from the company's

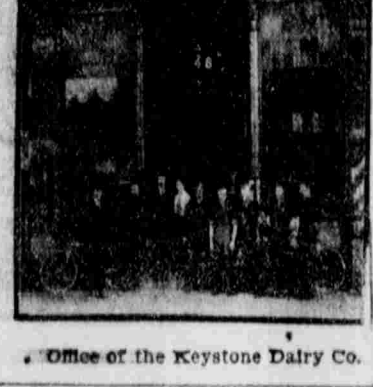
ADVANTAGES OF UTAH AS A DAIRY CENTER.

To discuss the advantages which Utah possesses, or holds out to the dairy farmer, is practically to recite a new theme with the writer, as at sundry times and in various places, the subject has been not infrequently presented during the past eight or nine years.

At the present I wish to present this subject under two phases, first, the natural advantages, the second, the economic advantages possessed by the state. Dairying in its broad sense involves the production of milk, its care and distribution as an article of food, and the manufacture of condensed food products therefrom. Practically, therefore, the economic question is an all important one though it is so closely related to the natural conditions as to, in a measure, depend upon them.

THE MILK SUPPLY.

Among the sources of supply of the



Office of the Keystone Dairy Co.

tion of the state to the growing of lucern and the climatic conditions which enable our farmers to care the crops and preserve all the plant in the highest palatable condition, provides a forage crop that is almost a perfect ration for feeding dairy cows, and good well cured food is another essential to the production of good milk, the foundation of high quality in the product manufactured therefrom.

Most of the farms in Utah are small. This makes intensive farming possible and almost a necessity if the farmer is to do for himself and his family what the progressive civilization of the twentieth century demands. With the help which is generally available and seeking employment, I believe the dairy cow, which should milk largely all winter, will nearly double the returns from the crops from the farm, or in other words the crops grown on the farm may be sold to the cows at market prices and good pay received for the labor and care bestowed upon them and their product during the winter months.

Again Utah's fertile valleys are situated in the center of the intermountain region and they afford a source of supply to the many surrounding states. We might supply the cheaper products, grain and feeders, but it will be better for us and for our farms if we can send out the more concentrated products which represent a minimum of material and a maximum of labor, skill and intelligence. From all the information I can gather the markets for dairy products to the north and west are practically unlimited provided we can supply those articles in suitable quantities and at the right price.

On the latter point I do not fear any honest competition. The supply will depend upon whether our farmers are satisfied with present attainments, or are determined to excel, and will rest only on the accomplishment of their greatest possibilities. To do less is in a measure to fail. The past if it is anything else than an inspiration to spur us forward is a milestone to drag us down. Progress, therefore, should be the watchword. Natural and economic conditions are most favorable. Our part performed, success must follow.

F. B. LINFIELD, Agricultural College, Logan, Utah.

A FACTOR IN SALT LAKE CITY'S MILK SUPPLY

The Keystone Dairy and Creamery Company.

If there is anything more essential to the table than the products of a dairy, the general public knows little about it. Suffice to say that twentieth century city life has created demands that have been met by the large dairying interests of the country in a most approved manner. It is now a well-known fact that possibly no one other article of food can so thoroughly distribute germs and the dreaded bacteria of disease, as milk. To prevent the spread of disease, every city of any standing makes generous provisions for the inspection of the milk that is offered for sale. Salt Lake City is fully aware of the importance of maintaining



KEYSTONE WAGONS READY FOR AFTERNOON DELIVERY.

such an office, and the need of it can be seen at a glance when it is known that permits are issued annually to over 70 dairymen to dispose of their product in this city. While this large number have obtained licenses, the bulk of the business is in the hands of two or three leading dairies and creameries. It is the purpose of this article to call attention to the modern sanitary manner in which the Keystone Dairy, prepares all milk, cream and butter sold to their customers for market.

A year ago this month the manager, Mr. H. N. Standish, bought up all the stock of the original Keystone company and invested several thousand dollars, in the way of modern improvements, machinery and etc., with the object of establishing and maintaining an up-to-date establishment.

THE MILK SUPPLY.

Among the sources of supply of the



AS FAMILIAR A SIGHT AS THE STREET CARS.

Keystone Dairy are some of the most model dairy farms in the state. As an illustration of the recognized importance of absolute cleanliness, it will be interesting to describe the care taken in milking. The cows are all milked in the stables, kept scrupulously clean, and the milkers are required to observe the motto of the dairymen, "Cleanliness." The milkers use a double layer of cheese cloth filled in with one-half an inch of cotton batting, over the milking pails and through which the milk passes into the pails. Again it is strained through a cloth in being emptied from the milkers' pails into the can in which it is taken to the station. Arrived at the station it is for the third time strained upon entering the receiving tank of the cooler, it then passes over a Star cooler into the cans and is ready for shipment. Shipments are made at each milking, customers receiving the night's milk in the early morning delivery, and morning milk in the afternoon delivery.

THE CREAMERY.

A special feature that will appeal strongly to the modern housewife, is the absolute cleanliness evident in every department, and, most important of all, the management of the Keystone dairy, have the only perfect process of pasteurizing milk. Every pint of milk that leaves the dairy is treated to this modern process, both winter and summer. The process is simple—to those who

THE DAIRY COW.

The importance of milk as an article of human diet is so well known that it seems almost needless to say a word to emphasize its great usefulness. Several years ago one of our most experienced as well as most conscientious and able physicians said to the writer that pure milk in the hands of an intelligent mother contains more nutritious qualities for the preservation of the health and the development of strength of a family of children than any other substance. Its products—cream, butter and cheese—are in every well supplied household deemed indispensable, and even in the commonest meal would seem incomplete without at least one of these.

THE IDEAL DAIRY COW.

Perhaps for the sake of brevity it will be well to consider the subject under different headings and to subdivide each heading. Therefore I shall first tell what qualities she should have:

1. Ability to produce a good flow of milk and to keep it up until time to rest before again ready to "freshen."
2. Milk as rich in "butter-fat" as possible.
3. A vigorous constitution and a good appetite. The first will give the disposition to hunt and work for food and the appetite to enjoy it when found. The exercise will prevent getting fat and will produce milk of better taste



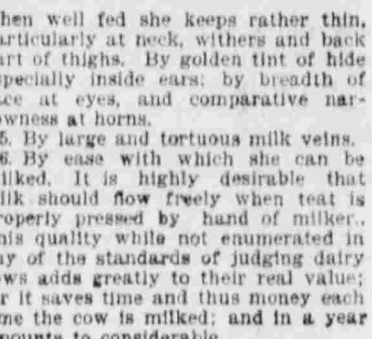
A KEYSTONE COW. Record of 1,100 lbs of milk in 23 days, 1/4 Jersey, 3/4 Ayrshire.

and quality than from the lazy cow.

4. A quiet, gentle disposition. A cow not easily disturbed, calm, fearless and gentle will uniformly produce more milk than the excitable, scary, long-legged variety always found. A chance to "jump over the moon."

HOW GOOD DAIRY COW MAY BE KNOWN.

1. By good sized but not "beefy" udder running well up behind and full and far out along the belly in front. When empty the most desirable udder shrinks and becomes much like an empty "silk purse."
2. By large (but not fleshy) teats, wide apart and squarely placed.
3. By good sized "haired" legs, well hooked and capacious, showing good stovage capacity; by width of hips and by large girth around heart (just back of fore legs).
4. By fact that when in milk even



Three Keystone Beauties.

when well fed she keeps rather thin, particularly at neck, withers and back part of thighs. By golden tint of hide especially inside ears; by breadth of face at eyes, and comparative narrowness at horns.

5. By large and tortuous milk veins.
6. By ease with which she can be milked. It is highly desirable that milk should flow freely when test is properly pressed by hand of milker. This quality while not enumerated in any of the standards of judging dairy cows adds greatly to their real value; for it saves time and thus money each time the cow is milked; and in a year amounts to considerable.

RULES FOR TREATMENT.

1. Feed well and regularly. A smaller quantity of food fed regularly and in good condition and constituting a "balanced ration" (foods that go well together) will produce better results than larger quantities fed carelessly and irregularly.
2. Shelter from severe storms or extremely cold weather. At same time see that they have all the exercise and sunshine possible with plenty of pure, fresh water.
3. Invariably treated kindly. A cow unless spoiled rarely kicks without good cause. Remove the cause and she will generally cease to kick. Most cows have much better habits in this respect than most milkers.
4. Sell to the butcher all cows with radical defects no matter what their ancestry, unless sure the defects will not be transmitted to progeny. This applies particularly to all cows with naturally defective udders or teats.

GEORGE M. CANNON.

GEDGE BROS. DAIRY.

Five miles south of the city on Redwood Road lies a pretty tract of land for a dairy farm as can be found in this section. Here is conducted one of the oldest dairies doing business in Salt Lake, in fact they were the first dairymen to apply for a license, and have been doing business since 1897.