

The Dairy

A Model Dairy and its Certified Milk

So far as most people are concerned, milk is a white, chalky fluid found in glass bottles on doorsteps by servant girls at an early hour of the morning. On the strength of its being in a bottle people take it for granted that it is clean and wholesome, and about once a month they force themselves to drink a glass of it under the impression that they are thus laying a foundation for a hale and hearty old age. But these people have never been in a dairy. They have seen cows in fields occasionally, but their only knowledge of the connection between cows and milk, is one of hearsay and reading.

The average man, so far as milk and dairies are concerned, is much in the same position as the little orphan boy who was sent out to a sanatorium in the country. The matron started in to feed him milk. He refused to touch it.

"But it's good for you," she insisted, "nice, fresh milk—it'll make you fat." "I don't want it," he wailed. "I want clean milk what comes in bottles. I won't drink no milk what you squeeze out of a beastly cow."

That's the general impression. Any milk in a bottle is clean, wholesome milk. But if people visited a few dairies they would change their minds. And if they read a few scientific analysis of milk they would never drink anything but whisky or some other antiseptic lotion for the rest of their lives. Unless, of course, they were sensible and took to certified milk. Which brings me to a consideration of that guaranteed lacteal fluid, and also the very beautiful farm where one variety of it grows.

Away up Yonge Street in the neighborhood of York Mills, there is a dairy farm which is a model in its kind. It is a plant which would delight the heart of a milkman—if a man who makes out milk bills can be regarded as having any heart.

In the first place, there are about three hundred acres of rich land, where you can grow anything you want, from corn to alfalfa. They had three crops of the latter this year. And then there is a magnificent big cow-barn, with a huge loft where they store away all the alfalfa, and a couple of big silos outside where they pack away all the corn. It ferments there and forms silage—the best feed in the world for milk cows.

But the most interesting part of that barn is the basement, where the cows are. If you happen along about three o'clock in the afternoon, and can induce Mr. Gordon Gooderham, the manager of the farm, to take you around the place, he'll probably steer you over here. And you'll see as pretty a lot of Holstein cows as you ever saw in your life. Great, fat, handsome beasts they are, with shining black and white coats, the picture of good health and good spirits. And every cow has its head in a patent iron stanchion. Even the supporting posts are of iron piping. The floor is sprinkled with clean straw, and men in white garments go from cow to cow with patent milk pails, while the air is filled with the pleasant sounds of milking time. Everything in the place is clean and sweet-smelling. It is a revelation to one who knows anything about the ordinary cow barn. And then Mr. Gooderham astonishes you by telling you that the cows have been in for a week or more, and that they won't go out for the rest of the winter.

"But how do they keep healthy," you ask.

"Oh, they keep in good shape all right, because we look after them properly."

"But why not let them out for a little air?" you insist, being a greenhorn, who doesn't know anything about it.

"Well, you see," he explains resignedly, "that they give more milk when they don't have to use up their energy walking around."

And soon you begin to see the completeness of the system on this model dairy. You also begin to understand the thoroughness of the precautions against any contamination of the milk. Every cow is carefully brushed off with a wet cloth before milking, and the patent pail strains the milk at once, so that any hairs or foreign matter that did get in would be eliminated almost immediately.

As the milk is taken from the cows a

boy carries it to a concrete building right near the cow-barn. Here he pours it into a funnel, and it runs into the building. And then you and Mr. Gooderham run in together—which is a very special favor, for this is the center of the whole system. It is the bottling plant.

After going through the office, you enter the bottle-washing room, and then get into the sterilizing room where the bottling is done. As stated above, this is a special favor, for only the bottler is allowed in here during bottling hours. The reason is, that everything is sterilized, and strangers are not permitted to bring in pleasure-parties of germs and microbes.

"Is the bottler sterilized?" you ask, being facetious.

"No, but his clothes are."

And the way they do the sterilizing is by turning into this room, which is all concrete, a current of live steam which thoroughly disinfests it. Any microbes that can't make a getaway are boiled. The bottles are specially sterilized in a patent tank.

The system is beautifully complete. The milk flows in warm from the cows. It flows over chilled pipes and then runs into a receptacle with a dozen short

nozzles running down out of it. A box of bottles is run under these nozzles, which just reach the bottle heads. The man in charge presses a lever. The bottles are raised up against the nozzles, and the milk pours down into them. They are filled in an instant, and are then capped and sealed. It is a striking instance of what scientific methods will do in the way of handling milk. In this case the milk is bottled in the shortest possible time, and is not allowed at any point to come in contact with contamination. It is certified milk, and is guaranteed by the medical association, whose certificate is on each bottle, and whose inspectors

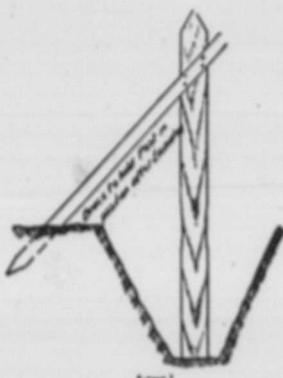


Figure 1

pounce down on the milk wagons every now and then and bear off a bottle to be analyzed.

"Do they ever get any microbes?" you ask, under the impression that a microbe is a thing you catch with a hook.

"Never more than about four hundred to the cubic centimetre—we are allowed a margin of five thousand."

"Good Heavens!" you gasp, "how many are there in ordinary milk?"

"Oh, it would average about one hundred thousand to the cubic centimetre, though, of course, really bad milk would run very much higher than that."

As a matter of fact, it seems that a person can stand a few hundred microbe without any trouble in the world—would never suspect they were there. The individual microbe is fortunately undersized. But when they get up into the hundreds of thousands they begin to be dangerous. And the moral is, drink certified milk and be on the safe side.

There are a lot more interesting things about this model farm, which is one of the hobbies of Mr. W. G. Gooderham, and on which, by the way, he has spent a great deal of money, in spite of the fact that such establishments are rarely profitable.

"There is very little demand for certified milk," Mr. Gordon Gooderham explained, "as the ordinary person doesn't realize the necessity for cleanliness and care in handling milk."

A farm of this kind may, therefore, be regarded as an institution of public service, and it is pleasant to know that at the recent National Dairy Show in Chicago, this York County dairy and this young agriculturist was able to beat the best in America in the certified cream competition. In spite of the handicap which he suffered in being obliged to send his milk and cream so far, Mr. Gooderham got the gold medal for cream and the diploma for milk. This is a splendid and unimpeachable evidence of the efficiency of the Manor Dairy Farm.—Saturday Night.

THE POSSIBILITIES OF CONCRETE

A bag of cement, a few shovelfuls of sand, and a few more of gravel or stone, mixed with water. Simple, easily obtained and cheap, these are the materials

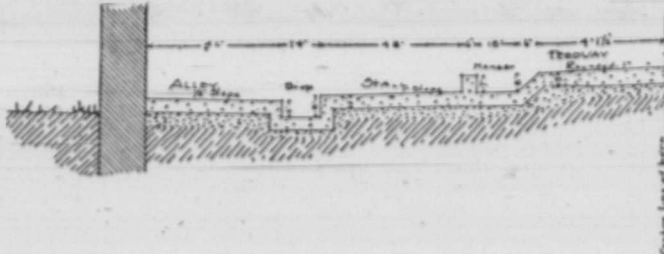


Figure 2

that go to make up concrete—and with them the farmer can work wonders in the improvement of his farm. This 20th century has been referred to as "the cement age," and the growing use of concrete, in all kinds of structural work, would seem to warrant the phrase.

One of the most important features of this rapidly increasing realization of concrete's great possibilities, is its recognition as the ideal material for the construction of farm buildings and farm utilities of every description.

The large number of "converts to concrete" that our agricultural communities have produced in the past few years,

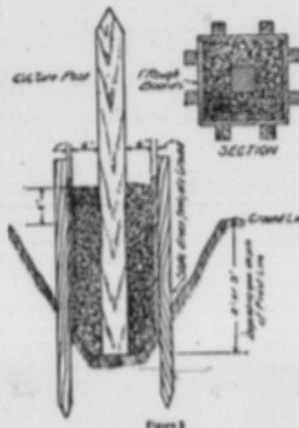


Figure 3

opens up a wide field of speculation as to what we may attain, in this direction, a few years hence; and warrants the prediction that before very long the use of any other material for the erection of new buildings or the repairing of old ones, may be looked upon as an unusual procedure.

Concrete in the Cow Barn

Every section of the country has at times been subjected to an epidemic of infectious diseases directly traceable to milk. Provincial health officers are giving this matter close attention, and in their opinion continual cleanliness is the first requisite of a healthful source of milk

supply. Farmers who experience difficulty in keeping their dairy premises just as neat, clean and odorless as they would like, will find their greatest aid in concrete. The stalls of dairy barns are arranged with the cows in the opposite rows of stalls standing with heads or heels toward each other.

Remove all manure and other foreign matter together with such humps of earth as may be necessary to give the floor a slight slope in the direction in which the manure will be removed. Begin the construction of the floors at the two sides of the barn so that the middle and ends may be used as working space.

Consider a barn planned to have the two rows of cows facing each other. On the earthen floor, at a distance of 4½ feet from the side walls of the barn, set on edge a line of 2 by 6 inch boards, extending the entire length of the building. Support these boards by stakes driven firmly in the ground on the side of the board away from the barn wall. By means of a carpenter's spirit level and a grade line, see that the top of these boards have an even slope (say one-eighth inch per foot) towards the manure pit. Allowing a clear intervening space of 10 inches, set up in a similar way a line of 2 by 8-inch boards with the supporting stakes inside of the 10-inch space and with the top of this board 2 inches higher than the 6-inch board. In this space the drop gutter will later be constructed.

Between the wall and the 6-inch board tamp in sufficient gravel to even off all irregularities in the ground surface and to allow the building of a 5-inch thickness of floor, sloping ½ inch from the wall towards the gutter. Mix the concrete 1:2½:3, tamp into place, and finish the surface with a wooden float or a wire brush. The roughened surface thus produced gives the cow a good footing.

With the alley finished, begin the construction of the stall proper. For the average sized cow, the usual length of stall is 4 feet 8 inches from stanchion to drop gutter. The stall floor should slope not less than ½ inch toward the drop gutter to provide for drain. The adjustable stanchion fastener is set in the centre of the 6-inch manger wall and the length of the stall regulated by this device. For a stall 4 feet 8 inches long set the outside board (2 by 12 inches) of the manger wall 5 feet 2 inches from the drop gutter.

In this space, place the 5-inch floor in the same manner as the alleyway was laid. If gas pipe stall divisions are to be used later, make mortises in the floor at the proper points by tamping the concrete around a core of the right size, removing the core when the concrete has stiffened. As soon as the floor of three stalls has been concreted and while the concrete is yet green, build the concrete manger wall upon the new stall floor. The projecting 7 inches of the 2 by 12-inch board already in place serves as the outer wall form. "Toe nail" two 1 by 6 inch boards together at their edges, thus providing a 7-inch height for the other manger wall form and a bearing plate to rest on the green stall floor.

How to Preserve Gate Posts

A sagging gate post rotted at the ground line gives all the surroundings an unkempt appearance. A very simple remedy is afforded by the use of concrete.

First, brace the post in such a way as to prevent its falling. (See Fig. 1). Then excavate around it, to a depth below frost line. With the post exposed, cut away that part of the wood which is found to be rotten.

Pull the post into proper position and re-nail the brace.

Now, drive stakes and place them against rough boards, (as shown in Fig. 2), allowing the boards to project 6 inches above the ground. This makes a box around the post, into which the concrete is poured.

Nail together several small boards and place them on the ground in such a position that they can be readily shoveled from. Mix your concrete on this platform and shovel it, when mixed, directly into the box, tamping with a 3-inch by 4-inch piece of lumber.

Proportions of concrete are, 1:2½:3. When filled, finish off with a steel trowel, leaving the concrete slightly higher where it rests against the sides of the post than at the edges. Braces and forms may be removed after two days and the earth filled around the concrete, up to the ground level.

Material Required for 6 x 8-inch Post

5 cubic feet of bank run gravel.
2½ cubic feet sand.
1 bag cement.