

DUST, BACTERIA, BAD ODORS AND FLAVORS

Handling the Milk and Methods of Feeding Determine the Purity of Dairy Products.

Dust, bacteria, bad odors and flavors are four wastes so big that to-day the dairy interests are dealing with them as live issues, taking steps for their elimination on every farm; and already much prevention work has been accomplished on the better class of dairy farms.

In every business where food is handled dust means direct lowering of quality, if not actual spoiling. Dustlessness pays. Cleanliness is next to profits. Dust inside a dairy barn or milk house often indicates faulty construction. When the trouble is studied, and when the cause is corrected the problem of reducing the amount of sediment and bacteria in milk will be partially solved. The president of one of the big city milk companies recently said to the writer: "We place more stress upon the sediment test than upon the bacteria count, because if milk is comparatively free of sediment the number of bacteria, as a rule, will not be excessive."

In a broad way the ceiling of the side walls and overhead of the dairy stable and milk house with lath or plaster or matched material will lead to the production of cleaner milk. Bacteria are closely related to dust when it comes to producing sanitary milk, and the same care in stable and milk house construction produces as pleasant results. It is still impossible to produce a germless milk—a few dust particles and bacteria enter the milk in such mysterious ways that there will always be more, or less trouble from such sources; but careful stable management has reduced the amount of dust and number of bacteria to such an extent that the milk produced on many farms is a pure and healthful food. As the dairy farmer understands that this sort of thing pays the incentive to abolish dust and bacteria becomes very direct and practical.

A few dairy farmers have become interested in the fact that dust and bacteria are injurious to the health of their cattle. Many preventative measures were introduced. In a little while it was found that the cows produced better milk, more of it and that the men were better tempered through the day and less tired at night. Dust and bacteria in the dairy barn often indicate something out of balance. When the trouble is studied and the cause is corrected the cows will produce better milk, more of it, remain healthy and need less food than is the case when they are confined in a stable, and exposed to bacteria laden dust and dirt.

Even in the most carefully constructed stables care must be exercised in feeding, cleaning the stables, bedding the cattle and preventing too free circulation of the air in the stable and milk house. Hay and roughage should not be fed until after milking time and it is better to change the bedding material during the middle of the day so that the dust will settle before milking time. If milking machines are used care should be taken not to allow the teat cups to hang close to the floor where the suction will draw dust into them and deposit it in the milk.

Healthy cows give healthy milk. Bacteria get into the milk after it is

drawn from the cow or in the process of milking. The cow is not the guilty party. Milk does not come from the cow entirely free from bacteria, because it is impossible to keep the teats of the cow sterile; however, we can keep them clean and reduce contamination from this source. The ducts of the teats and the body temperature of the cow afford ideal conditions for the bacteria to multiply and, the best we can do, the lower ducts of the teats will contain considerable numbers of bacteria. By using the first few jets of milk to wash out the ducts the milk that goes into the pail will be practically free from bacteria. The proper care is taken at this stage of production, the few bacteria which get into the milk from this source are of but little consequence to the consumer.

On the other hand, cows that have local diseases of the udder may give milk which at times is contaminated with the bacteria which cause this disease. There is many a proof that such germs can live and pass into the body of the user and cause the same disease as the cow was afflicted with. This shows us that tuberculosis of the udder may readily be transmitted to other animals. Milk from unhealthy cows should never be used by human beings, or to feed young stock on the farm. No matter how well all other requirements are met, if the cows producing the milk are not in good health we fail.

The milkers and handlers of the milk in the dairy rooms are a prolific source of contamination. Unclean methods of milking and the handling of the products afford opportunities for the pollution of the milk by disease organisms, as well as dust and dirt that adheres to the hands and clothes of the milker. Here is where such diseases as typhoid, diphtheria and scarlet fever get into milk. Milk as it comes from the healthy cow does not contain these bacteria.

They come from the outside after the milk is drawn from the cow. Any person who has been in attendance on a sick person cannot work among the cows or in the dairy room without being a source of danger to all who use the milk from such a dairy. Typhoid, diphtheria and scarlet fever outbreaks without number prove this point with their deadly results.

In the care of dairy utensils there is still further chance of contamination. This trouble is not from bacteria that commonly adhere to these utensils, but from those introduced in handling and washing. The washing and care of dairy utensils is one of the most exacting from the standpoint of cleanliness and the quality of water used. A supply of bacteria-laden water which will leave some of the bacteria on the utensils is an insidious source of danger to those who use the milk. When the milk goes into the utensils there is a fresh supply of food for these bacteria and they begin to grow and multiply with disastrous results. If typhoid germs are in well-water they will have a chance to contaminate any milk that goes into utensils after they have been washed in such water. Numerous other kinds of bacteria, such as those that cause rosy, colored and slimy milk are frequently in well-water that is used in washing dairy utensils.

Cooling the milk immediately after it is drawn from the cow will retard the development of bacteria and the more the temperature is lowered the more the bacterial growth will be retarded. Milk that is promptly reduced in temperature to forty degrees F. and held at that temperature until ready for use will keep for a long time. When the milk is shipped to city the trouble is invariably with the morning's milk, which goes into the cans without being properly cooled. In the fresh milk the bacterial growth soon exceeds that in the older milk that has been properly cooled. Cooling the milk does not kill any of the disease-producing bacteria or the lactic acid bacteria, so that it cannot take the place of cleanliness in the production of milk. All of the bacteria present in cold milk become active as soon as the temperature conditions become favorable. Cleanliness is of first importance, cooling is next.

Dairymen frequently experience considerable difficulty in the work of tracing the source of an unnatural odor or flavor in milk. In such cases it is first necessary to determine whether or not such an odor or flavor is present when the milk leaves the cow or develops later. If any particular cow is giving milk which is tainted it is not due to bacteria, but to other causes.

If the milk from any number of cows shows the taint the feed or something else which the cattle have found in the pasture is the cause. Carrots, turnips, wild onions, ragweeds, cabbages, off-quality grains and other strongly flavored substances will cause tainted milk. Certain food stuffs for cows not ordinarily considered likely to produce bad-tasting milk will at times do so. Where the flavor is thought to have been caused by something in the ration a change will frequently remove the trouble.

Cows that are kept in the pasture will keep reasonably clean, however, if the pasture is so situated that the cows have access to muddy pools or stagnant ponds they will often stand in the water up to their knees, fighting flies and plastering themselves

FREE TO GIRLS

Big Doll and Doll Carriage

This Big Doll is 18 inches tall, has jointed legs and arms and natural head, hands and feet. The Doll Carriage has steel frame and wheels, and the seat, back and hood are made of leatherette. It is 24 inches high and is just the right size for the Big Doll.

Just send us your name and address and we will send you 20 Packages of lovely embossed Xmas Post Cards to sell at 10 cents a package. When they are sold send us the money and we will send you the Big Doll, with all charges prepaid, and we will also send you the Doll Carriage quickly.

Address: HOMER-WARREN CO., Dept. 198, Toronto

With mud. This mud dries quickly and readily falls into the milk pail. It is one of the most objectionable forms of dirt because it quickly finds its way through the bottom of the strainer and settles in the pails, cans and bottles. It is also loaded with dangerous bacterial life which have a deleterious effect upon the milk and its products. Cows that are plastered with this kind of mud should be thoroughly cleaned before they are milked.

One of the most prolific causes of trouble during the summer months is that of old, sour strainer cloths which are rinsed in lukewarm water and hung up to dry. These cloths should be put in boiling water and thoroughly cleansed before being used for another milking. Ordinary wire strainers are worse than none at all. They are very difficult to keep clean and are almost worthless for removing fine dirt and dust.—W. M. K.

Sheep Notes

With lambs at anywhere near present prices it is especially important that every method be employed for increasing the number of lambs that can be produced from our present supply of breeding ewes. One method not generally employed but well recognized by old shepherds is that of flushing the ewes just before breeding time.

Flushing means grain or other liberal feeding for a short time before turning in the ram so as to make ewes especially thrifty and rapidly gaining flesh at the time of service. It has been found that where this method of handling is used, not only do a smaller percentage of the ewes fail to catch and come in heat again, but more ewes give birth to twins than when the ewes are on poor feed at breeding time. Thus it both increases the number of lambs and makes more of them come during the first three weeks of the lambing period.

The ewes do not need to be grazed all winter where plenty of good clover hay or other satisfactory roughage is fed, but more satisfactory results will be obtained if they are fed well enough to keep them from shrinking weight at any time between breeding and lambing seasons. The careful shepherd will be well repaid for his trouble of seeing to it that the ewes receive sufficient feed at this time of the year.

Sheep are often pastured even into early winter and they are all right there if they really get enough food. But the frosted grass sometimes bloats them, causing them to look full and apparently doing well when they are actually hungry and losing flesh just at the time when they should be most thrifty to insure a maximum yield of lambs the following spring. A few pumpkins scattered in the pasture, eaten once a day or some other additional feed to short late autumn pasture will often give much greater returns than the same extra food at any other time of the year.

Poultry

Selling at wholesale and buying at retail is one of the sure methods of reducing poultry profits. Some poultrymen purchase feed at the city feed store and wholesale their eggs to the groceryman. Others buy as much of their feed as possible from farmers in the fall and sell their eggs to consumers who can afford top notch prices for high-class goods. The second class of producers usually find that poultry can be made to return a profit.

A poultry authority recently stated that buttermilk was worth five cents per quart to him in producing eggs. He was purchasing it at a price of twenty cents for ten gallons. Many farm poultry owners would make more from eggs if they were able to obtain a reliable supply of buttermilk at a fair price.

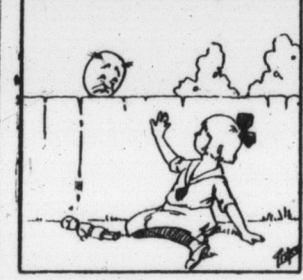
It is said that the success in specialized farming depends more upon the selling ability than the producing ability. The egg business probably falls in that classification. At extra five or ten cents per dozen paid for eggs because they are of fine quality may mean success when the commonly received market price would barely pay expenses.

FUNNY FOLD-UPS

CUT OUT AND FOLD ON DOTTED LINES



WILLIE'S SUCH A NAUGHTY BOY, LOVES HIS SISTER TO ANNOY. DON'T YOU THINK THAT SHE'LL BE SILENT WHEN SHE FINDS IT'S ONLY WILLIE!



Why Keep Accounts?

A man in Manitoba kept accurate accounts of his farm business. At the end of the year he added together the cash which he had on hand at the beginning of the year and his cash receipts during the year. Then he subtracted his cash expenses during the year to see whether the remainder equaled the cash balance which the bank reported at the end of the year. He found he was \$8 short. He asked the bank to look up his cash balance again. They reported the same amount the second time.

He took his farm account-book into the bank next time he went to town and found that a cream-check of his had been credited to another man having the same initials and a similar surname.

The loss of \$8 wouldn't have ruined this man—not any man who is progressive enough to keep accurate accounts of his farm business. Eight hundred dollars might have done so, although we do not know definitely. The incident merely shows that advantage of keeping accounts. The most important thing is that this man made money that year, and having kept accounts he had the satisfaction of knowing it. So he went ahead and planned for bigger crops the next year.

Keeping farm accounts is not only an advantage; it is a necessity. Since farming people have to make income-tax returns just the same as other business people, it is absolutely essential to have figures upon which to base the reports. Hence every farmer ought to keep accounts. The time necessary to keep accounts on the farm need not amount to more than six hours a year. At the end of the year the banker or county agricultural agent will be ready to help in balancing the books, or taking the inventory which is necessary.

There are at least four important reasons why men on farms should keep accounts. The main one is to have a definite method of studying the business with the idea of making it more profitable. If farmers were to produce wheat or other farm products without a profit, soon agriculture would suffer.

A second reason for accounts and farm records is that they improve a man's credit. If a farmer can show from carefully kept records that the money he wishes to borrow is to be used for a purpose that will increase the profits of the farm, then he will be able to get a loan more readily and on better terms.

A third reason for accounts is that they often are the means of agreeably settling disputes or misunderstandings that otherwise might occur between parties who deal with one another and who never keep any record of their business transactions.

A fourth reason, and not the least important, is that a man owes it to his family to make use of every means possible to detect and prevent leaks in the farm business, and thus make the support of the family and the education of his children.

Rice pudding makes a nice dessert for Sunday and can be made on Saturday.

Aprons, both of the attractive and serviceable sort, are becoming an actual fashion.

Marking Small Farm Tools.

In a well equipped farm shop small tools are certain to be misplaced. Some plan for marking tools in order to make them conspicuous is needed. Some plans we have used may help to show what I mean. Such tools as hammers, hatchets, chisels, etc., which are used outside of the shop a great deal are identified by painting them a bright red color. This color is easily distinguishable in the grass, making a tool painted with it conspicuous where it would be hardly seen if it were the natural steel.

The paint will also preserve the steel against rust and wood against decay. A moderately thick implement paint is the best for this purpose. A small pint can will usually cover the tools, but it is well to clean off all rust before using it.

Sometimes neighbors borrow tools and neglect to bring them back, finally forgetting to whom they belong. If the tools have some identification marks on them they are much surer to come home. A good plan is to take a sharp steel punch and by repeated tapping on a smooth surface the initials may be cut into the tool in a short time on a whole kit of tools. A single tap of a hammer on the punch will make a dot deep enough to resist the wearing away of service and rust. It is seldom advisable to cut the name or initials in the wood of handles because of the rough surface it leaves for the hands.

I recall one tool that turned up after being gone for five years, the man finding it recognized the initials and returned it. The return of that one tool paid for the time in marking a whole kit. There is also a plan for initialing tools with acid, but the above plans will be found very serviceable.—J. L.

It's a wise young man who, feeling that he needs culture, makes plans to attend an agricultural college.

It is seldom wise to pasture new seedling. It is especially unwise to do so this year when growth is slow owing to dry weather.

Casserole and other pottery dishes should never be placed in a very hot oven or on a hot stove without first being warmed a little. A sudden change of temperature may cause them to crack.

The man who chooses between a good and indifferent tree, merely on account of the difference of a few cents in price, certainly does not look very far ahead. The saving here will be wasted many times as crops come on.

GOOD HEALTH QUESTION BOX

By Andrew F. Currier, M.D.
Dr. Currier will answer all signed letters pertaining to health. If your question is of general interest it will be answered through these columns; not, it will be answered personally at stated. Dr. Currier will not prescribe for individual cases or make diagnosis. Address Dr. Andrew F. Currier, care of Wilson Publishing Co., 73 Adelaide St. West, Toronto.

Paralysis
Anxious—What is the best way to treat a person who is paralyzed on one side? After a person has had one stroke how can the next one be delayed?

Paralysis or what is commonly called "a stroke" means that there is disease or injury of the arteries. The arteries may be very soft or they may be very brittle. When paralysis occurs one or more arteries in the brain have been broken, the blood has forced its way into the brain some-what like water soaking into a sponge and the pressure of this effused blood injures or destroys the nerve centres in the brain by which motion and sensation in the paralyzed parts are controlled. The paralysis in most cases is on the opposite side of the body from that on which the accident in the brain takes place. The reason of this is that the fibres proceeding from the brain to the spinal cord, along which impulses pass to and fro like the messages along telegraph wires, cross from one side to the other at the junction of the brain with the spinal cord so that if there is paralysis on the left side of the body we may be pretty sure there is injury to the brain on the right side. When the loss of blood is great and the consequent injury to the nerve centres in the brain great the injured person may die in a few hours or even in an hour. If however the loss of blood is small and a clot is quickly formed within the brain, the opening in the broken artery is closed by it and the bleeding stops. The clot then begins to contract, gradually relieving the pressure on the brain and if the brain has not been destroyed to a very great extent the injured person may gradually regain more or less complete use of the paralyzed parts. But, of course, the arteries remain diseased and no-

body would be wise enough to tell when another break would occur any more than one can tell when another break is going to occur in a water pipe or gas pipe that has become old and diseased and has already burst once or oftener. The only thing a person with diseased arteries can do is to lead a very quiet simple life, free from fret and excitement, from indigestion and hard work, and from everything which has a tendency to raise the blood pressure. By such a mode of life one may often continue and do useful work for many years after the first attack. One of the greatest and most useful men who ever lived was Pasteur, when he was between 40 and 50 he had a severe stroke which made him completely helpless on one side and he never completely overcame the paralysis, but he lived for thirty years afterward laying broad and deep foundations for the science of bacteriology, saving to France her silkworms, her vinegar industry, her sheep and cattle, discovering the means for treating hydrophobia and doing many other things which made him one of the greatest benefactors the world has ever had.

Questions and Answers.
A. V. R.—1. When a person has a nervous breakdown, does he sometimes imagine that he hears voices?

2. After the nervousness has passed away, will he sometimes continue to hear voices?
Answer—1. Such a condition as you refer to, is very apt to be an accompaniment of mental disease, and if you are suffering from it, I should advise you to undergo an examination by an alienist.

2. As long as you continue to hear voices to which you refer, it is fair to assume that you are still suffering from mental disease.

Profit in Black Walnut.
A black walnut tree once planted will take care of itself. It needs no pruning or spraying. Furthermore, the product is not perishable and can be kept and shipped when and where the prices are the highest. In twenty-five year the tree is easily worth \$200 to \$400 for timber alone. With the strong interest in the airplane industry and the great boom bound to follow at the conclusion of this present war, the planter of black walnuts will reap a fortune, for this wood is absolutely essential. For the practical side, a well cared for orchard of black walnuts at the age to ten years is estimated to give a gross return of \$200 and a net yield of 80 per cent. of this. From that time on the production increases by leaps and bounds. The black walnut is a beautiful tree, as well as a productive one and makes a striking effect along avenues, driveways or as a single specimen in the home grounds, under which the entire family will enjoy gathering and eating the rich, nutritious nuts.

The horseman who spreads lime on the land to benefit his horses will also stimulate his crops by that process, and the man who spreads lime for his crops thereby supplies it to the horses. In either case the horses get the lime in the form in which the animal system is best adapted to take it.

Complete School Set-24 Pieces
FREE TO BOYS AND GIRLS

This outfit contains:
1. English School Bag.
1. Special Drawing Pencil.
1. Compass.
1. Rubber Tipped Lead Pencil.
1. Metal Cased Lead Pencil.
1. Pen Holder.

We will give you this whole 24-piece outfit if you will send us 20 packages of our lovely embossed Xmas Post Cards at 10 cents a package (six lovely cards in each package).

Send us your name and we will send you the whole outfit. Address: HOMER-WARREN CO., Dept. 198, TORONTO.

Dept. 198, TORONTO.

EXPERIMENTING ON FATHER

Last summer I tried an experiment or perhaps I should say a series of experiments, with Father as my subject.

I began the first evening that I was at home, by asking Father what he thought about woman entering Parliament. The conversation turned to politics and before I knew it we had spent the whole evening talking about current events. I was so ignorant that I resolved to study the weekly and daily papers. I also discovered that Father was interested in many other things that appeal to me. We purchased a bird book and looked up all the birds we knew. Following this we had the most interesting discussions all summer on all sorts of subjects.

On another day I asked Father if he would not like a picture of his new silo. He went out with me to help get the best view. Before we put the camera away, I had used a whole film taking pictures of barns, horses, cows, pigs and sheep. One day after that we spent half an hour getting three calves in the corner of the fence so we could take a good picture. Father was interested in developing and printing these pictures. We tried all sorts of experiments with my camera. One time he sent away, in a letter, a picture of one of the calves. I do not know whether he sold the calf but I do know that he enjoyed the pictures.

There was to be a dance in town and I asked Father why he did not go. He said he and Mother were too old. I said it was time for them to grow young again. The whole family finally went to the dance and I discovered that Father was as good a dancer as the college boys and he discovered that he was not as old as he thought he was. Mother danced too.

I tried a number of other little experiments but the grand success was when I started Father and Mother off to the National Exhibition. I made each think the other wanted to go and to their own surprise, each had a fine time!

When I went back to college and told the girls that I had had a grand good summer they asked me what I did and all I could tell was that I just stayed at home.—P. A. Flint.

PITY THE POOR OSTRICH

Between Dame Fashion and the War He Has Suffered Greatly.

Not the least fortunate among the sufferers from the war are the ostriches.

An ostrich a dozen years ago was a very valuable animal, the price of a well grown young bird being ordinarily about \$500. Ostrich farming was a prosperous and promising industry in this country, though the main source of supply was South Africa.

The Cape government has put an embargo on exportation of the birds, because it wished to discourage rivals in the market. But there were more than 5,000 in the United States—the bulk of them in Arizona and southern California.

Unfortunately, not long before the war began, ostrich feathers suddenly went out of fashion. The price of plumes dropped. Then came Armageddon, and the South African flocks mostly perished of starvation. It did not pay to feed them, providing being scarce.

And now we learn that in Arizona large numbers of the birds are being slaughtered for meat. Women are not wearing their feathers, and it does not pay to keep them.

It is surely a great pity. The fashion for ostrich plumes will certainly come back, and they will be very costly by reason of the scarcity of the birds.

From the naturalist's viewpoint it is extremely fortunate that the French Government maintains in the Sudan a great ostrich preserve, in which the birds are not allowed to be hunted or killed. From this source the domesticated flocks may be recruited later on.

Profit in Black Walnut.
A black walnut tree once planted will take care of itself. It needs no pruning or spraying. Furthermore, the product is not perishable and can be kept and shipped when and where the prices are the highest. In twenty-five year the tree is easily worth \$200 to \$400 for timber alone. With the strong interest in the airplane industry and the great boom bound to follow at the conclusion of this present war, the planter of black walnuts will reap a fortune, for this wood is absolutely essential. For the practical side, a well cared for orchard of black walnuts at the age to ten years is estimated to give a gross return of \$200 and a net yield of 80 per cent. of this. From that time on the production increases by leaps and bounds. The black walnut is a beautiful tree, as well as a productive one and makes a striking effect along avenues, driveways or as a single specimen in the home grounds, under which the entire family will enjoy gathering and eating the rich, nutritious nuts.

The horseman who spreads lime on the land to benefit his horses will also stimulate his crops by that process, and the man who spreads lime for his crops thereby supplies it to the horses. In either case the horses get the lime in the form in which the animal system is best adapted to take it.

WANTED POULTRY, EGGS AND EATERS
Highest Prices Paid
Prompt Returns—No Commission
P. POULIN & CO.
30 Mansfield St. - Montreal

WANTED POULTRY
of all kinds.
Better quality preferred.
Write for prices.
STANFORD'S, Limited
128 Mansfield St. - Montreal

Oliver Spanner & Co.
26 ELM ST., TORONTO
TAXIDERMISTS
TO PARTICULAR PEOPLE
Send for Illustrated Booklet.
Artificial Eyes and Supplies.

RAW FURS WANTED
Send For Our Latest Price List and Shipping Tags

TRAPPERS-WRITE
BUYERS-WRITE
FUNSTEN
FOR FREE

Market Reports, Supply and Demand, Game Laws, Trappers Guide and Shipping Tags.
This is going to be one of the biggest years for trappers, and for shippers ever known. More furs needed—fewer men to trap. Get ready early for the season.
Look over your traps and supplies now. Get our FREE Trapper's Guide and Supply Catalog, in one book. Shows furs in natural colors. Factory prices on traps, snares, etc. Write today—no cost.
FURSTEN
47-49 of the Metropolitan Fur Exchange
St. Louis, Mo.