



# CANADA'S BEST AGRICULTURAL PAGE

## VARIATION NOTICED IN THE TESTING OF CREAM

Perhaps the most common cause for dissatisfaction among creamery patrons is the variation in test of cream delivered. This is especially true when each can of cream is tested separately at the creamery. There may be quite a variation in the test of the separate cans while the average test for the different months may show very little variation. To the average farmer or dairymen who has not had a very extensive experience with cream separators, the variation in test of his cream is quite a puzzle. He naturally thinks that if the same separator is run by the same man all the time and if he has not changed the cream screw, the test ought to remain the same all the time.

But the test of the cream does vary from time to time, and this fact does not in any measure indicate that careless testing is being done. It is practically impossible to run a separator without having the cream vary and one should consider it more suspicious if the test always remained exactly the same, than when there is a variation. There may be several causes for these variations. Brief mention will be made of the more important ones.

First: There may be variations in the speed at which the separator is run. This at once effects a change in the per cent. of butter fat in the cream. When the separator is run faster, there is a greater amount of skim milk thrown out and a smaller amount of higher testing cream. The slower speed gives a larger quantity of thinner cream.

Second: There may be variations in the rate of feeding the separator. The fact that there is a float governing the inflow of milk does not necessarily insure an equal rate of feed at all times. Sometimes the faucet may not be entirely open, and this will decrease the amount of pressure on the supply and also lower the rate of inflow. A difference in the amount of milk in the supply can make a difference in the rate of feed for the same reason. Whenever the rate of inflow is increased there will be a larger amount of thinner cream.

Third: Improper washing of the bowl may be another cause. The cream outlet is very small and if not thoroughly cleaned after each separating a crust of dried cream may form around the edges. This will probably make the opening smaller and a less amount of higher testing cream results just the same as if the cream screw were changed. Then some times this crust will probably be removed and there is a sudden change to a larger amount of thinner cream.

Fourth: A variation in the amount of water or skim milk used for flushing out the bowl is a very common cause for variation in test. It is easy to carry the amount of water or skim milk used for this purpose sufficient to change the test several per cent.

Fifth: It is a well known fact that the test of the milk from a herd of cows may vary from time to time. Changes in weather, excitement, etc., may cause these changes. This change in the test of the whole milk will also cause a change in the amount of butter fat in the cream. One authority says that if the milk from a herd of cows testing four per cent is separated so as to give cream testing forty per cent., and the test of the milk suddenly raises to 4.5 per cent., which often occurs, the cream will then test about 4.5 per cent. This makes a variation of two and a half per cent. in the test of the cream caused by a variation of one-fourth of one per cent. in the test of the whole milk.

Thus it may be seen that there are various conditions which may affect the test of cream with which the operator at the creamery has nothing to do, and charges of carelessness or dishonesty should not be brought against him unless founded on something better than just simply a variation in test.

The time is about at hand when the stock will again be turned out into the pastures. All fences should be carefully looked over to find if posts are all good and to see that there are no slack or broken wires. If this is carefully attended to and fences put in good repair before cattle are turned to pasture it will save time and worry later on. Do not leave it until after the stock get the habit of "breaking out." If you do it is probable that several times during the summer nights when you are getting your much-needed rest you will be roused from your slumbers by the bark of the dog and find your cattle in the field, or the orchard, or your wife's garden, and in any case it makes it mighty unpleasant for you. Then, perhaps, when you go to church, or to a picnic, or a fourth of July celebration, one of the boys will have to stay at home and watch the cows while the rest of the family are away having a good time, and that makes it pretty unpleasant for the boy. The probability is that he will spend his time planning on how best to get away from the farm and forget all about the cattle, and when you get home you find that they have been out in your neighbor's cornfield. Wouldn't it be much better to build a good fence and keep it in repair and avoid all such trouble? If you are in doubt just try it.

To think that we can learn anything successfully by mere theory is expecting too much. Correct theory is all right in its place, and we should get all the information we can about the subject in hand, but practice is necessary to complete our knowledge of it. The old adage that we learn to do by doing is a good one.

These principles apply to farming as well as to other lines of endeavor. We need to read and study all we can, but this knowledge should be supplemented by visiting other farms and observing the way in which they are conducted. A visit to the best farms of the same grade as our own will help most, for the care of cows, the milking, caring for the milk, and the marketing must be studied in order to attain the same results as with all other.

By showing an earnest desire to learn the advice and help of the more experienced, may be obtained on special points of inquiry. If you can get a practical expert to come and go through your dairy and give his opinion about each part, your method of feeding and caring for milk and marketing, with other details, you will be exceedingly fortunate and derive great help. At the same time, it must be remembered that you cannot succeed by being a mere copyist. You must take the help proffered and make it your own to be used in your own way. The great idea is to mend your own way by the information obtained from others.

Although people have long recognized the house fly as a nuisance, it has been considered more or less a harmless creature. Later scientific investigation has brought out the fact that the house fly would be properly named if it were called the "typhoid fly," since it is coming to be recognized as the most active agent in the distribution of typhoid fever.

It is suggested, however, by Doctor Howard, of the United States Bureau of Entomology, the term "typhoid fly" is open to some objection, as conveying the erroneous idea that this fly is solely responsible for the spread of typhoid, but considering that the creature is dangerous from every point of view, and that it is an important element in the spread of typhoid, it seems advisable to give it a name which is almost wholly justified, and which conveys in itself the idea of serious disease.

Any person of an investigative turn of mind need only trace the course of the fly to understand how readily it becomes a carrier of filth and disease. Fundamentally the fly must be fought by destroying the refuse about the home upon which it feeds. A secondary course is to strenuously follow the methods known to every housewife for keeping the fly out of the house and away from all food and materials that may be used for food.

### THE HORSE

#### GOOD DRAUGHT HORSES AND THEIR VALUE TO FARM

Mares Should be Sold With Good Bone and Good Disposition.

#### BOX STALLS FOR COLTS.

BY DAVE IMBRIE.

In my estimation the best horse for the farmer to breed is the draft horse, as they can be developed and do a good deal of work at the same time. Having determined to breed horses, don't make any hash of it by using a Percheron for a year or two, then switch over to a Clydesdale and then to a Belgian. But select your breed and stick to it and in a few years you will have practically pure-breds. And the farmers in a community should have the same breed if possible as they will sell for more if buyers can buy a carload without much travel.

To make a success of breeding we must keep our best mares. They should

### DAIRYING

#### PROPER FEEDING OF DAIRY STOCK BRINGS RETURNS

Poor Policy to Starve or Neglect a Cow in the Winter.

#### RICH FOODS NOT THE THING.

BY C. FREER.

One of the most important matters for a dairy farmer to bear in mind is that the returns he gets from his cattle depend greatly on the feed provided for them, and the treatment to which they are subjected. If cows are neglected they will not yield anything like the returns they would if properly cared for. In fact, they would thrive much better if they had less food and more warmth.

### SHEEP

#### PROFITS IN A FLOCK OF ONE HUNDRED EWES

Often Principles of Breeding and Feeding are Little Understood.

#### HOW TO AVOID MISTAKES.

BY J. W. MILLS.

Mistakes are made in handling sheep that result in losses to inexperienced men. The sheep business is all right if handled properly. In selecting the type of sheep for the average farmer to raise, he should take three essential qualities into consideration: early maturity, weight and quality of wool and a hardy constitution.

### AGRICULTURE

#### EXPERIENCES OF INTEREST IN USE OF FERTILIZERS

Over Thirty-Five Years Use of Them for Different Crops.

#### BEST NONE TOO CHEAP.

BY J. J. MILHOUS.

I have been using commercial fertilizers for about thirty-five years. Sometimes I have got my fingers burned, and sometimes I have had most excellent results. I suppose I have tried as many brands as the most of my experience, and I also think I have tried about all the different ways of application.

### ANSWERS TO CORRESPONDENTS

#### NOTE—Not more than one question from any correspondent should be considered at one time. Questions should be specific, clear and concise, and should be addressed to the Editor of the Agricultural Department of this paper. Any person requiring answer by mail must enclose stamped envelope.—Editor.

**Lump on Test.**—W. M. M.—A young cow with her first calf has a lump on one of her teats. What is a cure? **Ans.**—Grease the teat with castor oil each time you milk.

**Bloody Milk.**—J. F.—What would you do for a cow that has a tendency to give bloody milk? She has one test in which milk does not come down in udder? **Ans.**—Fatten for butchering.

**Defects in Bull.**—L. S.—Bull has a lump on jaw. Will his offspring be affected? **Ans.**—The chance of any harm coming to the calves is so slight that you do not believe a valuable bull should be discarded.

**Cow Holds Back Milk.**—G. G. B.—Have an eight-year-old cow that came fresh one month ago; she gives about half her milk in the morning, but cannot get the balance for about an hour. In the evening she is all right. Please advise. **Ans.**—We cannot suggest a remedy.

**Mares Won't Breed.**—W. D.—I have two mares that have been bred three seasons and do not get with foal. They are fat and in good shape. What do you advise? **Ans.**—Give them plenty of exercise and don't allow them to get too fat. Use a young horse, a two-year-old, if you can get one.

**Diseased Tooth.**—L. M.—Cow's jaw is swollen on the outside of upper back teeth; a small lump started there a year ago hard as a bone; now the lump is quite large and some yellow matter is coming out through a small hole. What is the disease? **Ans.**—Possibly a diseased tooth is cause of swelling, etc.

**Worms.**—L. S.—Subscriber—I have colts and horses which have worms in the bowels. What is the remedy? **Ans.**—Pulverized poplar bark in tablespoon doses in feed and inject half a pint of quassia tea into rectum once daily.

**Stocked Legs.**—P. T.—Horse has stocked legs. What can be done for him? **Ans.**—A month or two in pasture will probably cure this trouble. If the horse can't be turned out to pasture he should be given his liberty when not in harness. Give soda hypochlorite pulp in tablespoon doses three times daily.

**Cut on Leg.**—C. O.—I have a colt which was cut in the molar last fall about the fetlock; several cords are cut and he stands flat on his foot; the cut has not healed. Is there any way to cure him? **Ans.**—Dress the wound with purp. borax and cover with pad of cotton and hold in place with bandage. Renew dressing every four or five days.

**Pigs' Eyes Affected.**—F. H. P.—What ail my pig? The pupils of his eyes are white; this spreads over the eye and sometimes the eye bursts. The pigs have daisy spots and die. They are well housed and their digestive organs are in good order. **Ans.**—Use disinfectants about hog house and wash pigs eyes once daily with saturated solution boracic acid.

**Leg Swollen.**—R. J. H.—A mare was alling about two months this winter, but is better now. She had indigestion and one leg was badly swollen; I have used wormwood and vinegar. Gold corn healing oil and a liniment prepared by a veterinarian to reduce the swelling. Am I doing all that can be done? **Ans.**—W believe your treatment is sufficient.

**Legs Swell.**—L. M.—A horse has swelling in the hind legs if left standing in the barn over night. The swelling disappears during the day. Trouble was caused by changing suddenly from heavy oats to ground wheat feeding. **Ans.**—The horse should never be left to stand in the barn more than over night when not at work. Use some good oilment for the sores.

**Teeth.**—W. R.—I have a colt that chews his hay and then spits it out. She eats oats all right, but is getting poorer every day. She will be two years old in May. **Ans.**—Have her teeth examined.

**Lameness.**—C. C.—Horse is lame after he stands in the barn over night; when he runs in the yard all right; it does not trouble him much. **Ans.**—The trouble is due to lack of exercise; turn him out every day and at night also if he can get feed.

**PRESERVING EGGS FOR WINTER.** The simplest, cheapest and best method to keep eggs for family use in small quantities is to cover them with a solution of water glass. It is important that the eggs be fresh and clean. April eggs keep best, May next, and June follow.

The fowls should be well fed and provided with clean water and nesting material in a dry, cool room or cellar where the sun does not shine on them. Place them in the preservative as soon as possible after being laid.

Stone jars with covers are the best receptacles but only water-tight vessels may be used. Put in the eggs carefully, rejecting all cracked or thin-shelled ones. To nine quarts soft water, which has been boiled and cooled, and one quart water glass and pour it over the eggs.

A six-quart stone jar will hold 12 to 20 dozen.

Water glass or silicate of soda is a thick amber-colored liquid which can be obtained from drug stores. It is used in poultry supplies at a cost of \$1 to \$1.50 per gal. This will make ten gallons of preservative fluid or enough to cover 10 to 100 doz. eggs.

**A FEW CHOICE THINGS.** Arkansas Traveler is a good watermelon. They have the merit of remaining sweet during a long wet spell.

Palmetto asparagus will be more largely planted this spring than all other varieties. It is not prolific enough to make it a profitable garden sort, and is unsuited for the market.

Palmetto and Argenteuil are one and the same variety.

The Davis Perfect Cucumber is a cross between White Spine and an English variety. It is a long wet weather cucumber.

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A CASTLE TURNED INTO A COLLEGE: LADY WARWICK'S HORTICULTURAL COLLEGE FOR WOMEN AT STUDLEY CASTLE

This college was founded by the countess of Warwick in 1897, with the threefold object of providing a new occupation for women, checking rural depopulation and encouraging the welfare of the colonies. The wardens of the college is Miss Lillias Hamilton, M. D. It started originally in connection with Reading University, but soon outgrew its quarters, and was transferred to Studley Castle, where every branch of horticulture can be studied. Lady Warwick, under pressure of some necessities, is handing over the responsibilities which she has borne for the last twelve years to a new board of management, in whose hands she hopes the college will still flourish to its most successful work.

be of good weight, not less than 1,400 pounds, and heavier would be better. They should be sound with good bone and a good disposition, then make them with the best stallion obtainable regardless of service fee. What is \$5 or \$10 in the price of a horse? And the difference between the colts from a pure-bred and a scrub stallion is often from \$25 to \$100.

After having the good mares and a good horse, see that the mares are well cared for. They can be worked steadily all the time; in fact, they are better for being worked. If not at work, give them a good tomy yard or field to run in every day when not too stormy.

We work our mares up to the foaling time, then give them a good clean box stall to foal in. Be on hand when the little bellows come, and be sure that the thing is all right. Disinfect the navel with a good disinfectant, such as one-per cent. solution of carbolic acid, and coat with a good ointment. In the case of a mare, give her a mash of one pint of boiling water, acidulated with one dram of hydrochloric acid; when she has drunk this, give her a mash of one pint of boiling water, acidulated with one dram of hydrochloric acid; when she has drunk this, give her a mash of one pint of boiling water, acidulated with one dram of hydrochloric acid.

See that the stall is kept clean and dry. Clean it out thoroughly twice a day and dry it with plaster, and keep the floor clean. Feed the mare lightly for a few days.

We let our mares rest after foaling for ten days or two weeks, and then they are put to work, using them very carefully at first, and bringing them in in the middle of the forenoon and the middle of the afternoon to let the colts suckle. We never let the colts follow the mares when they are at work.

The colt should have a roomy box-stall; if you have two colts, keep them together when the mares are at work, as there is no animal that likes company better than does the colt. As they get older, see that they have plenty of good clover hay and bright oats to eat.

It is well to have a little pasture near the barn and let the colts into this when the mares are at work. Have the pasture fenced with good woven wire, high enough so that they cannot get their heads over it. The pasture should be arranged so that they can run into the barn to get away from the flies. Leave the cover to the oak box open so that they can help themselves.

Keep a pail of water in the stall where they can reach it. After a little, you can mix a little skim milk with the water; later give them clear skim milk but let them have what water they want at all times.

Some colts will take skim milk at once but be careful and not give them too much to commence with—say two quarts at first, and as they become accustomed to it, you can give them five or six quarts twice a day. This goes on to the pasture in the spring in drinking milk at weaning time, there will be no set-back, which always occurs if they are not used to it.

again before she can be expected to come to her full milk, and that is a tedious and wasteful process. It is much easier to keep a cow in good condition than to get one into it. Again, if the cow is dry she probably will be changed with about four months of nursing is required, or it may be that she is in calf and milking also, and in that case the strain upon her system is very great, and unless properly looked after both the cow, the calf and the milk returns will suffer. It will pay much better to keep fewer cows and see that they are properly tended, and have plenty to eat, than to keep a large number that are contenting on short rations.

There is one idea which is still very prevalent, and that is that quality of the milk can be greatly improved by feeding very rich food. The matter of fact, experiment has shown that the quantity but not the quality of the milk is affected by the food.

A cow, by judicious and good feeding, may be made to increase the quantity of her milk up to 50 or more per cent. but if the milk is tested the percentage of butter fat will be found to be unchanged. It is all milk. As an illustration of this the following experiment is instructive.

Three good milking cattle about two months calved were selected, each averaging about twelve quarts of milk a day on ordinary grass feed. They were kept in a small grass field, and in the morning given a large bucket of bran which had been steamed, with four pounds of molasses added to it.

One cow steadily increased in quantity for nine days, and from twelve quarts per day went up to sixteen and a half. The amount of butter fat in this cow's milk before she was put on extra ration was 3.8 per cent., at the end of two weeks the percentage was 3.9 per cent. Another cow increased to eighteen quarts in eight days and there was no increase in the percentage of butter fat.

The third cow, before the experiment gave 4.2 per cent. of butter fat, and at the end of two weeks, when she had increased to twenty quarts, her milk was found to be two-tenths per cent. less, only giving 4 per cent. fat.

Of course, the total yield of butter for the week in each case was very much greater than it had been before, but that was on account of the extra quantity of milk they gave, not in the increase in the percentage of butter fat. The experiment was kept up for a month, and the percentage of butter fat varied very little after the first fortnight.

Your colts and by so doing, you may avoid sore shoulders. If a colt gets sore shoulder, let him rest a few days and heat it up; if you continue to work him and the sore keeps getting worse, you may have a shoulder that will all right when you when he is put to hard work.

We aim to sell off our geldings before they are seven years old. When they are in proper shape—they should be fat, as that is what the market demands. Feed them on good wholesome food. Corn can be fed to quite an extent at this time with bran and a little oil meal.

I then purchased high-grade Shropshire rams and the improvement was noticeable, but not satisfactory. I bought a registered ram and from his breeding my present flock is founded, by selecting each year the best ewes. Each year I select twenty or twenty-five of the best to add to flock, and cull out a like number of old ewes. For fifteen years we have followed this plan, using pure-bred sires, and have succeeded in building up a very profitable sheep business.

One reason why many fail to realize profits from sheep is that they do not understand how to care for them. The average farmer keeps his flock too long on the same field or pasture, and frequently without water or sale. They should be moved to another pasture every two or three weeks and have access to pure water and sale.

A little turpentine frequently sprinkled in the sale box is a preventive of stomach worms. I find sheep do much better by these frequent changes, even if they are off only a week.

As a winter ration for ewes I find the following one very satisfactory: Corn fodder in bundles scattered over clean soil or in racks, fed each morning. Allow flock plenty of time for exercise during the day. At night give a feed of clover hay in racks in barn, and oats. This stimulates the lamb to quicker growth and relieves the ewe to some extent, especially if she has twins.

Clover is an ideal grass for the growing lamb, yet for very early pasture both blue grass and June grass are good. I average 120 lambs to 100 ewes. Lambs are dropped March 15 to April 15. I graze all on good pasture until August or September. At this time the lambs are weaned. One must now be careful to give lambs good pasture and little grain, oats preferred.

When the fall frosts come I prefer to put lambs on a dry feed ration of clover and oats, gradually adding corn and decreasing oats until I have them on full feed of corn. Salt and water must be accessible at all times. Before putting on dry feed I select the choice ewe lambs that are to be added to the flock and separate, but do not breed until a year later.

I usually sell lambs for holiday trade if the market is satisfactory. I sell early they average eighty-five to ninety pounds; if later, ninety to one hundred pounds, provided with wide doors. Let the barn be well supplied with feed racks, dry bedding, pure water, and see that good percentage of increase on wool. I shear in May and the 100 ewes average about eight pounds. My wool brings the top price in this market. The wool with lambs, makes a very substantial profit. I will add here a few important rules.

that if practised, will yield profit to the sheep-grower. 1. Improve your stock by using nothing but pure-bred sires. 2. Select from their get the water and add to flock and sell old ewes. 3. Do not inbreed. 4. Change pastures frequently. Do not put sheep on swamp or wet ground. 5. Avoid leaving them out in cold rains or snow. 6. Give them a well-ventilated, dry barn, provided with wide doors. Let the barn be well supplied with feed racks, dry bedding, pure water, and see that good percentage of increase on wool. I shear in May and the 100 ewes average about eight pounds. My wool brings the top price in this market. The wool with lambs, makes a very substantial profit. I will add here a few important rules.

hand, scatter 300 pounds to the acre in the row. Draw a log chain, or anything else that will mix the fertilizer with the soil in the row before dropping the seed. Cover seed and sow 300 pounds broadcast to the acre. It is useless to put a small amount of fertilizer to an acre of potatoes and expect a big crop—they don't do that way.

For wheat 300 pounds to the acre should be used. The best way to put it in with drill when wheat is sown, but if you have no drill with fertilizer attachment, drag your ground and sow broadcast and harrow into the soil.

For muskmelons I use 400 pounds to the acre. I think the best way to apply it is in the hill, scattering the fertilizer over a space of about two feet square, and thoroughly work into the soil. For these I use a fertilizer 8 per cent. nitrogen, 10 per cent. potash, 7 per cent. phosphoric acid, and 100 pounds are second to none either in size or quality. I grow but few watermelons, but the same application as for muskmelons is all right.

For cabbage, use at least 1000 pounds to the acre, the hill, thoroughly mixing the fertilizer in about one foot square.

For strawberries in about 600 pounds should be sown broadcast to the acre, and 1,000 pounds is all the better. For corn, use 200 pounds in the row, broadcast; for peas and beans in the row, sow 175 pounds in the row before dropping seed, mixing soil and fertilizer together.

Sweet corn demands more fertilizer and field corn, as it has to make a quick growth.

Spinach and kale should have 500 pounds to the acre sown broadcast after the ground has been rolled over made level in some way, then thoroughly harrowed before sowing seed. Beets, carrots, radishes, onions, etc., appropriate a liberal supply; 1,000 pounds to the acre for onions can be used to advantage. If in single rows apply in the row; if in the field, sow broadcast.

In using fertilizer, always remember that the seeds do not want to come in direct contact with fertilizer, for fear of destroying the seed germ.

Now, as to the brand of fertilizer, rather, the properties which you wish your fertilizer to contain. Almost all clay soils are improved by using potash, phosphoric acid and nitrogen. For potatoes I use a fertilizer with about 8 per cent. potash, 4 per cent. phosphoric acid and 2 per cent. nitrogen. Don't think that the cheapest goods in price are the cheapest goods to use. The best of goods are none too good, and are always the cheapest.