

THE MACAZINE GUARDIAN For Parents, Teachers, Pupils, Dairymen, Farmers, Horsemen

TO THE FARMER

Farmers and others interested are invited to contribute to The Farm, The Dairy, The Turf and Good Roads departments of the Guardian either by question, correspondence or otherwise. Answers will be given by experts to all questions of general interest and space will be given to any articles that will in any way help to advance Prince Edward Island interests.

Contributors are asked to have their articles at this office early each week, as only a short emergency item can be handled as late as one p. m. Wednesday. All received after that hour cannot appear until the following week.

THE SCHOOL AND THE HOME

Contributors for this department should be addressed to President Teacher's Association, Guardian's School and Home, P. O. Box 188 Charlottetown.

IN THE KITCHEN

To remove fruit stains from the hands rub them with the juice of a tomato.

Cauliflowers should be boiled with the stalk uppermost to prevent the scum from discoloring the flower.

To prevent mould from forming on top of the liquid in which pickles are kept, put in a few pieces of horse-radish root.

When making a boiled pudding be sure to fill the basin quite full, otherwise the water will get in and the pudding will be heavy.

A cup of moderately strong tea, in which two or three slices of lemon have been infused, will frequently cure a nervous headache.

When making roly-poly sprinkle a few breadcrumbs over the paste before the jam is spread. This will prevent the jam from boiling out.

The deposit which settles round a goldfish bowl and is so difficult to remove speedily vanishes if it is rubbed with a cloth dipped in vinegar.

If your feet are blistered from long walking rub them before you go to bed with alcohol mixed with tallow dropped from the warm candle into the palm of the hand.

When making apple pie the flavour is much improved, and the apples will keep in good color, if a few drops of lemon juice are squeezed over the apples just before the crust is put on.

Before frying the bacon for breakfast, cut off the rind, and dip each rasher in flour, then fry or grill quickly. This prevents the fat from running, and gives the bacon a better flavor.

When the top of your silver inkstand is covered with ink and you want to clean it, mix a little chloride of lime into a paste with water, rub the silver top smartly, and it will be brighter than ever.

Put all your potato peelings into an old tin, and bake them in the oven until they are crisp. When you lay the fire put them amongst the pebbles with a few sticks, and you will find that the fire will burn up very quickly.

An ordinary pie-chimney in the centre of a pan of milk prevents its boiling over. When coming to boiling point it does so through the little chimney, and there is not the slightest chance of the milk boiling over the stove.

It is not generally known that a large bowl of water placed in the gas oven, after the joint is removed and the gas turned out, not only cools the kitchen, but is almost at boiling point for the washing up when the meal is finished.

Hair brushes should not be cleaned with hot water and soap, as this softens the bristles. Use soda dissolved in cold water, as the soda will remove the grease and dirt. Do not dry in the sun or by the fire, but stand on the handle in the shade to dry.

THE DAIRY

COW RECORDS.

The form and temperament of a cow are a fair index of her worth as a milker. When it is merely a question of selecting a number of dairy cows from the stock of the country, there are peculiarities may be taken as fairly accurate guides to the milk producers from the evident flesh formers or from the functionless scrubs that cumber our fields.

The would-be successful dairy farmer must aim higher than this, however, for no matter how carefully the selection be made, there is almost certain to be included a considerable number of unprofitable cows in the herd got together in this way. The only certain method for determining the real value of a dairy cow is the use of the weight scale and the Babcock test.

Common observation teaches us that different cows produce different amounts of milk and butter fat in the same period of time, but it is practically impossible to estimate within 1,000 lbs. of what a cow will do in a year by merely watching the amount of milk given each day. One thousand pounds of milk more or less than a certain standard means a very real profit or a serious loss. Hence the importance of knowing what each cow is doing.

To really know what each cow is doing necessitates the keeping of a record of the amount and quality of the milk produced during the whole lactation period. This record might

be, and had better be made day by day, but valuable information may be secured by weighing and recording the morning's and night's milk of the cow on the 1st, 10th and the 20th day of each month. The multiplying by ten of the total amount so recorded during the lactation period will give a good idea of what the cow has really been doing. Tests as to the fat content should be made from time to time.

Blank forms whereon to enter the milk produced by each cow at each milking are supplied free of charge to all applying for them. In starting out to build up a good dairy herd, it is necessary to know exactly every cow in the herd. To know 'about how much' a cow can do is of very little value. Exact knowledge of the power of each cow as a milk and butter producer is absolutely necessary if the best results are to be obtained.

Many farmers who have been keeping. He notes the great difference in port very strongly in favor of this line of work. As soon as the farmer sets to work to know what his cows are doing by keeping a record, he finds himself much more closely in touch with his business. He sees at once the effect of better care and better feeding. He notes the great difference in returns between the best and the worst cows in the herd, and cannot help but determine to get rid of the poor ones and replace them with good ones. Because better feeding is almost certain to be tried. And quite certainly poor feeding is responsible for many of our unprofitable dairy cows and even many unprofitable dairy herds.

As an example of the interesting information that can be collected through the keeping of cow records, the following record made by one of the Ayrshires at the Central Experimental Farm is worth reading.

A DISEASE OF CALVES.

Every year large numbers of calves are lost through some kind of complaint associated with diarrhoea. There is an inflammation of the stomach and intestines affecting older calves known to the veterinary experts as gastro-enteric catarrh, the main symptom of which is diarrhoea, and which, in the great majority of cases, is distinguished from what is known as white scour.

Calves suffering from this complaint will refuse to seek the mother, to take the udder or drink the milk, and have generally a very tired appearance. Fever may be present, and diarrhoea appears, becoming the most prominent symptom, and is often the first to make its appearance.

When standing the animals exhibit a curved back, with feet planted underneath the abdomen; the abdomen is tucked up and the flanks sunk in, though they are sometimes distended. If the diarrhoea continues for some days rapid emaciation and exhaustion set in, the calves become quite apathetic, their bodies feel cold, and chronic diarrhoea may result, or the animal ends with death.

The causes are many and varied. It may result from an unsuitable quantity of milk fed to the young animal, or it may happen that certain plants eaten by the mother act as laxatives to the sucking calves. Other things to be taken into consideration are the possibilities of diseases of cows' udder affecting the calf. In hand reared calves, the trouble may be due to some additional foodstuffs has been added to the milk.

Where calves are not allowed to have the colostrum, that is, the milk given by the cows during the first few days after calving, the trouble may be expected. Putting the calves into cold damp places is also a contributing cause. Certain worms in the small intestines will also cause the trouble. One or more of these things will upset the digestion of the calf, acids and poisons form, and the diarrhoea follows as a necessary effect.

It is often difficult to find out precisely what causes the disease, which accounts for the large mortality amongst calves in this country particularly, but, in a degree, in all countries. Treatment may be divided into three classes—preventive, dietetic and curative. The first thing to be done is to endeavor to remove the cause, and if this is done satisfactorily it will often end in overcoming the disease.

Separation of the sick from the animals that are well is the first thing to do, followed immediately by thorough disinfection and cleansing of all premises where they have been or are likely to be.

If the navel cord is disinfected after tying with a 0.4 per cent. watery solution of alcoholic iodine and colloid it will prevent diarrhoea resulting from navel infection. Another good plan is to rub the navel string of the calf with a piece of copper sulphate or bluestone.

Where the cause of the trouble cannot be definitely recognized, the first thing to do is to change the food and pasture of both cows and calves. The sucking calves should have access to their mothers at more frequent intervals, and the quantity of milk must be regulated. The substitution of a foster mother for a sick calf is sometimes recommended.

The very first thing to do in all cases of diarrhoea, after isolating the beasts, is to cleanse out of castor oil, by administering a dose of castor oil, followed by a mucous liquid, such as barley water, a decoction of linseed, starch and similar things. To these may be added opium (from seven and a half to fifteen grains), or chalk or magnesia powder (from three-quarters to one and a quarter drachms).

Various antiseptics are given, such as salicylic acid (fifteen to thirty grains), iodoform (fifteen to thirty grains), camomile tea, are specially recommended. Other disinfectants are naphthalin (fifteen to thirty grains), salol (one and a half to two drachms), creolin and lysol (from one to one and a half ounces). If the calf is valuable, stimulants in the shape of raw eggs mixed with a little alum and brandy are recommended.

We have heard of good results having been received from the use of an iodol, a French antiseptic, which has been highly recommended by French scientists. Where worms are found to be present bluestone may be given in a dose of seven and a half to fifteen grains, or turpentine in a dose of one tablespoonful mixed with raw linseed oil.

On one often hears of people at their wits' end to cure this complaint. As a rule they do not even know the rudiments of a treatment, and it is safe to say that if one or other of these formulas were followed out the results would be as surprising as they would be profitable.

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POULTRY

TIME TO HATCH

The time of year for hatching the chicks that are to be matured for profitable winter layers should receive careful attention. The retarded hatching of the chicks is very often the direct cause of partial failure, even when

experienced poultrymen, for time enough is not given the growing pullets to come to complete normal maturity before the extremely cold weather commences in the fall, which is usually about the last of November. The exact time for hatching will depend, under average conditions, upon two factors.

First. The breeds kept. Second. The method of growing and the conditions of the range. The light, active Mediterranean breeds are good quicker growers, maturing on much range in from four to six months. They can be hatched, therefore, later than the heavier general purpose breeds, which require about four to six weeks longer to reach maturity. The Leghorns can be safely hatched from the middle of April to the middle or last of May; while heavier breeds like the Plymouth Rocks, Wyandottes, R. I. Reds, etc., will do better if hatched from the last of March to the middle of May. The hatching period as given above may be modified to some extent if it is necessary to hatch three times to secure the required number of chicks.

POULTRY AND PROFIT.

Of the many get-rich-quick schemes there is perhaps none more delusive than that of poultry raising on paper and yet, with the proper facilities and applied intelligence, possibly as handsome returns can be had from poultry raising as from any other industry in proportion to the amount of capital invested, and the readiness with which results can be obtained. This means that the farmer, or often as an interesting and profitable occupation for the boys and girls on the farm, poultry raising offers great opportunities. The value of the egg as a food is gradually but surely being recognized, with the result that the market for eggs is rapidly increasing. This means a vigorous demand for poultry products are sure to be realized.

Recent experiments have shown that flocks with unlimited range, such as they usually have on the farm, have given greater profits per fowl than flocks that were confined. The poultry raiser should have a well fenced draught, and well ventilated, but need not be an expensive structure, as was once thought necessary. With better systems of marketing the products, and with plenty of reliable information regarding the business now within the easy reach of all contented writers take up, the question arises why there should not be a development in poultry raising in keeping with its importance. Splendid bulletins on the subject may be obtained from the Dominion Department of Agriculture and from the various Provincial Departments.

Quite recently it was announced in a daily paper as a startling fact that a poultry keeper was in the habit of giving his fowls a tonic in the shape of a mixture of iron and quinine. The mixture, are quite conversant with the fact that fowls, like ourselves, occasionally need a tonic, and sometimes when eggs are slow to materialize a tonic works wonders. Quinine as a tonic for fowls was advocated by the writer of the notes over ten years ago. It is not so generally used as iron, however. A combination of the two, such as the chemist puts up in the ordinary way, answers admirably, but it requires to be well diluted. About a teaspoonful to a pint of drinking water is about the mark. Quinine is an anemic, which can generally be judged by paleness of comb and wattles, a few days' tonic treatment will make all the difference in the world.

POULTRY POINTERS.

Should you happen to see one of your fowls with a frothy film over one of its eyes, have it at once put in a pen and isolate it, for that bird has a "one-eye cold," and if not promptly treated may fall a victim to roup. The treatment in the early stages is simple, but once let roup get a foothold there will be ructions. Bathe the eye with lukewarm water in which a few grains of permanganate of potash have been dissolved, and repeat until the eye presents a normal appearance. A little rosy powder should be added to the soft food. Very often a cold of this kind is set up by exposure to draught. Look to it that there are no crevices in the roosting house, or attempting a cure will be next useless.

PIGS

HE HELPS HOGS.

Dr. Marion Dorset, one of the younger scientists in the Government Bureau of Animal Husbandry, is preparing hogs to come to their deaths pure and unadorned. He is not especially concerned about their morals, it is their material welfare that concerns him. It's a mere business proposition to aid both the producer and the consumer. But he's not going to get this pecuniary saving. What real scientist ever did reap the rewards of his discoveries? It's the farmer who reaps the benefits of Dr. Dorset's important investigations.

Dr. Dorset has charge of that branch of the bureau which makes a study of the causes and prevention of animal diseases. He has turned his attention in particular to hog cholera. "Though too small to be seen, the germ is utilized in a very practical and successful way by a method which Dr. Dorset invented. This method depends upon the fact that, when blood from a cholera-sick pig is injected into the veins of a hog that has recovered from the malady, the latter is not made sick, but its own blood thereby acquires power to protect other pigs against hog cholera.

So fatal is the complaint that four out of five of the animals attacked by it die. But the one that recovers is thereafter an "immune," and may be used for producing a "serum." The serum is obtained by taking some of the blood, allowing it to settle, and pouring off the watery part from the top. An immunity that is complete and permanent is obtained by simultaneously injecting serum on the inside of one hind leg and virulent blood from a cholera-sick pig on the inside of the other hind leg.

By this simply means hog cholera has already been practically wiped out over extensive areas, and before very long it is destined to disappear entirely. That, at least, is the belief of the Bureau's scientists.

THE TURF

BEST AGE TO WEAN COLTS

A reader asks: "At what age is it best to wean a colt and how do you dry up the mare's milk?" The age at which to wean a colt may vary from five or six months to eight or ten, according to the condition under which the mare and colt are kept. If the mare is bred again promptly after foaling, or is being worked regularly, the colt should probably be weaned at six to seven months of age. If a colt is taught to eat grain and hay when young, which may be done at any time after the colt is a month or six weeks old, such weaning is not so important a matter; but of course milk is the best feed for the colt up to eight or ten months of age and if part of its feed is its mother's milk up to that age it will unquestionably do better. The colt makes about half of its total growth in weight the first year, and it is, therefore, important that it receive a liberal grain ration from the period it will begin to eat until it is at least a year or possibly 18 months of age. While the colt is receiving milk almost any grain food, such as corn, for instance, will be all right; but after it has been weaned it should receive feed richer in protein and mineral matter than corn. A mixture of five parts each of corn and oats and one part of cottonseed meal is good. The mare's flow of milk may usually be dried up by reducing the feed, giving only dry feed, and removing the colt. With mares that live a good flow of milk the colt may be allowed to suck once a day for a few days, then once a day for a few days, then once every two or three days for a time. Or the mare may be milked

on by hand just enough to prevent inflammation of and destruction of the udder. This is probably a better method than allowing the colt to suck, for when the colt is once separated from its mother, both usually do better if they are not allowed to see each other again until thoroughly weaned.

In extreme cases it may be well to rub the udder thoroughly with a mixture of 4 ounces fluid extract of Belladonna and 6 ounces each of alcohol and water to assist in drying up the milk flow; but usually all that is necessary is to remove the colt, reduce the feed of the mare and milk out the udder a few times by hand at intervals of a day or two apart.

FEEDING THE HORSES.

The Agricultural College at Ithaca, New York, publishes a bulletin in the Farmers' Reading Course on "Feeding the Horse." It says:—The importance of regularity in everything that pertains to the management of the horse cannot easily be overestimated. This applies particularly to feeding. Wherever feeding stuffs are employed in the ration, the horse should be fed regularly and uniformly at all times. The horse animal should not be compelled to become nervous if it is delayed. He neighs and coaxes for his food with great regularity. The horse's digestive system and his vital activities become accustomed to a certain order which must be followed if one is to be successful.

Since the grain of the ration is rich in digestible nutrients, it should stay in the stomach as long as possible, for the digestion of one of the most important of the nutrients is more complete there. From this it would seem that the horse should be given water freely, and that should be followed by hay, the grain being withheld until at least part of the hay has been consumed. There are, however, very serious objections to this practice, as the horse is unsatisfied, is anxious and very nervous till fed his grain and should not be compelled to wait for the grain. A middle ground should be taken by watering first, feeding the grain sprinkled with a small allowance of moistened, chopped hay, if possible, and watering again after the ration has been eaten.

The work horse has a hearty appetite, a vigorous digestion and responds as does no other animal to intelligent care. He should be fed liberally and frequently, the amount given being regulated by the size of the animal as well as the amount and kind of work he is required to do. In general, all that should be supplied with something over two pounds of provender daily for each 100 pounds of weight.—Our Dumb Animals.

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SHEEP

SOME SHEEP POINTS.

It often occurs that men who never have kept sheep, but who wish to become interested in that branch of farming, are at a loss to know what kind of sheep would be best adapted to the particular localities in which they live. Because they are so long certain they are held back for a long time about making the venture. It is in the hope that I may throw a bit of light on this question that I am writing this article, says E. L. Vincent in the Inland Farmer.

legs and face grayish-black, well capped with wool. They will travel anywhere and eat green stuff that some other kinds of sheep would turn from. I have known rams of this kind to weigh 225 while the ewes go some 50 pounds less. I do not know of any better sheep for a country such as I have described, or that will bear more lambs during its lifetime than the Shropshires.

But in saying this, I know the friends of the Hampshire, will bring me to account, claiming for their favorites that they are even better than the Shropshires. It may be because I never had any of the Hampshire, but I place the Shropshires first. But I have seen these sheep and know they are certainly fine, beautiful creatures. These, too, are from one of the South of England counties, and are named after that county. The downs or broad ridges of undulating land of Hampshire County, bear excellent grass for pasturage, and hundreds of thousands of these sheep may be found there. Like the Shropshires, the Hampshire have no horns, are black in the face and legs, and grows to a rather larger size than do the Shropshires, and that they bear lambs just as readily. If I were to exchange my Shropshires I think I would try the Hampshire.

Still another sheep to get from the South of England is the Southdown. As a matter of fact, I suppose all the so-called "downs" are offshoots of the Southdown. It is a pretty sheep, with a well-formed body, very trim in appearance, and when well bred up having coarse, rather light wool. You take a southdown and cross it with one of the really heavy breeds and you get a sheep that can hardly be beaten for meat qualities. The wool is not so desirable, neither are they as prolific as either the Shropshires or the Hampshire Downs. Indeed, the former sheep was found out at the Wisconsin station to bear more lambs in a given space of time than any other sheep, with the exception of a fourth cross of Shropshire rams and Merino ewes.

The Shropshires bear close, oily beautiful wool, and their fleeces weigh as high as nine pounds at times. Another highly desirable mfwyp mfwyp other highly desirable quality of all three of these breeds is that they do not seem to be as apt to get sick as some of the other breeds.

Now, there are other breeds which might be mentioned for farmers situated as many in this part of the country are, with hilly pastures; but I will not stop now to speak of them, lest I confuse the prospective sheep-grower. By getting some of any one of these sheep one could hardly make a mistake. But it would be well to begin carefully. That is, buy a few sheep and work into a large flock gradually. It is well to get experience at first hand. That is the best as a rule.

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THE FARM

SPEECH ON INCREASED PRODUCTION.

Prof. W. J. Reid.

Before the Short Course in Agriculture.

In coming before you to present my allotted part of the subject on Increased Agricultural Production it is hardly necessary for me to deal at great length with the urgency of the situation. The gentlemen who have preceded me have emphasized this point, and all I wish to do is to add my word of sanction to their remarks.

Most surely, we are facing a situation that demands urgency. The British empire has been drawn into the greatest war in the history of the world, and among the nations Canada is giving aid in the form of men and supplies. The men going to the front are accepting a responsibility that is of vital importance, but they are fully dependent on the men who remain at home to furnish supplies of agricultural produce. It has been said in full faith that "men fight on their stomachs."

The United Kingdom is largely an importing country which emphasizes the fact that if there is a decrease of supplies, especially while she is feeding the troops of the Empire, the result will be hazardous. The annual imports of the United Kingdom in meat supplies are enormous. In 1912 they were:

Table with 2 columns: Item and Value. Beef £13,674,157; Mutton 9,575,783; Pork 1,011,088; Bacon 14,555,548; Ham £2,720,379; Hides & Skins 13,690,120. Total of £55,440,120.

This means a total of approximately two hundred and sixty millions of dollars, worth of material of which Canada is responsible for a large part. Taking the years 1910, 1911 and 1912 we find Canada's trade with the United Kingdom as follows:

Table with 2 columns: Year and Amount. 1910 \$88,215; 1911 \$28,217; 1912 \$5,650.

It will be noticed that Bacon was not included in this list. Figures from the same source concerning the bacon were not available. However, we find that during the year 1912, Canada sent 42,492 cwt. of Bacon to the United Kingdom, 27,643. cwt. in March 1913 and 18,512 cwt. in March 1914, with this we find 8,128 cwt. of Hams being sent from Canada in March 1913 and 7,148 cwt. in March 1914. It will be noticed that a marked decline is evident in all branches of this trade. This is accounted for by the growing home trade of Canada. To make up for this decline the United Kingdom increased her imports from elsewhere. Denmark was supplying greater quantities of Bacon each year but at this present time her branches of trade cannot be depended on the demand will fall largely upon the United States and

Canada. In other agricultural exports as well Canada will be expected to increase her supplies, and thus we can find necessity for immediate increased action. With a growing home consumption and a broader foreign market our present production will not commence to fill the demand. At present the Live Stock of P. E. Island is valued as follows:

Table with 2 columns: Animal and Value. Horses \$4,270,822; Cattle 2,246,920; Sheep 364,876; Swine 336,918.

This and a total almost seven and a quarter millions of dollars and we find that during 1914 the following Live Stock and products were sold, in or from the province: