

THE MAGAZINE 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

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

WOMEN'S INSTITUTES

Queries and Contributions for this department should be addressed to Mrs. A. E. Dunbrack, P. O. Box 123 Charlottetown.

FIGHTING THE FLY.

(By Miss A. M. Macfarlane) This is the time of the year when efforts to fight the fly should begin; a little later than this is apt to be too late to take those most valuable of all measures—preventive measures.

There is a belief among some people that flies are useful because they feed on wastes. No greater mistake could be made. Flies light and walk over all manner of unclean matter, and then spread germs and uncleanness over dishes, food and milk vessels etc. They may come to our faces straight from feeding on the spittle of a consumptive or wastes of a typhoid patient.

They may fly directly from some one who has sore eyes to our hands or faces, or to the hands and faces of a little baby that cannot defend itself. There is nothing more dangerous or more unclean than to live among a swarm of flies. There is perhaps no disease carrier more guilty than the fly. It certainly carries a few diseases more serious than those carried by flies. These diseases number typhoid fever, cholera infantum, scarlet fever, tuberculosis, erysipelas etc. Almost any kind of germ may be carried by the fly. Not only do they carry germs on their feet but when a fly feeds on matter that contains these germs the germs are found on matter that comes from its alimentary canal, and then these germs are spread abroad. In one fly speck alone as many as one thousand germs have been found. Therefore now, when first the windows and doors are wide open during the daytime, precautions should be taken not only against the multiplication of flies, but also against the entrance into the house of flies already in existence. There are many such precautions, perhaps the best—as well as one most generally disregarded—is the keeping of all foods, and all refuse of discarded bits of food closely covered. Any housekeeper can take precaution and every housekeeper should take them.

There is no place where a housekeeper has a better opportunity to show her good housekeeping than in the appearance of the rear of the house. An unsightly collection of pails, baskets and above all an untidy garbage receptacle will spoil the appearance of any back yard no matter how attractive it may otherwise be, and also will favor the breeding of flies. A good plan is to have a box made large enough to hold the garbage can and any other receptacle. It has been found necessary to keep a box. The box should have a good hinged cover, but needs no bottom and should stand directly on the ground. Have some holes bored in each side for ventilation, and over these on the inside wire netting should be tacked. Have the box painted the color of the house and it will be quite unnoticeable. If the garbage receptacle is kept clean and covered there can be no opportunity for the breeding of the much detested fly.

Another important preventive measure against the breeding of flies is in keeping the stable fresh and clean. This is precaution that every man owning a stable can and should take. The egg of the house fly is laid in manure about stables, in the garbage, or in decaying vegetable matter. In a day or less the egg hatched into a small maggot, which in the nine or ten days from the time the egg was laid changes into an adult fly. If the breeding place of flies is left undisturbed they will hatch faster than it is possible to kill them.

Under ordinary conditions it is not expensive to remove the ordinary breeding place of flies or mosquitoes in a town, and no money that a town can spend will pay better either in dollars and cents, or in the comfort that will come to the inhabitants, than money that is spent to free a town from these insects. A town cart can remove weekly all the matter in which flies breed, and this matter can be sold for fertilizer for almost

enough to pay for the expense of removing it. Suppose a board of trade could say: "In our town you will not be bothered by mosquitoes and neither you nor any member of your family will have malaria. You will not be annoyed by flies, and you need not fear that while you are looking the other way a fly will leave typhoid germs on your plate." Would not a board of trade that could truthfully say this about its town have some facts to present that would interest persons who are seeking new homes or summer resorts. Is not this one of the vital questions that the city of Charlottetown should look into at the present time?

Both men and women should point out to children the dangers attendant upon carelessness in regard to flies, and should enlist their help in fighting the pest. Begin NOW not only as individuals, but as families, the danger that you will be in of needing to fight the disease carried by flies will be immeasurably lessened.

SPELLING— WITH THE BEGINNERS

(By Ethel J. Cossitt in Educational Review)

The writer of this article found herself not long since, in charge of a little miscellaneous country school in a remote section, where a long succession of untrained teachers had deprived the children of the help of modern methods in acquiring the art of reading and spelling.

Many of the children were not of English parentage, and to them the letters of the alphabet had apparently no connection whatever with the sounds of the words which they spelled.

This was seen as far as grade IV., but of course more markedly in the younger grades, to whom the letters r-e-d, would as likely spell blue or green as the word to which they are generally conceded.

Work was begun with the youngest class. These children knew the names of the letters, and without any particular phonetic drill they were started at word building.

One of them knew that a-t, spelled at. With this word as a foundation, they were given the following list, which they were taught to spell and pronounce distinctly, the class being drilled individually and collectively.

-at Fat s-at -cat hat t-at -bat mat v-at

As far as possible, little drawings, placed beside these words on the blackboard, helped the children to remember the pronunciation, and the drawings were copied as desk-work.

When this list was mastered, which was very soon they were introduced to the a-n family with drill as in preceding list.

-an fan s-an -ban ran -can man t-an

The ad family followed as: -ad lad m-ad -bad had p-ad -dad pad s-ad

Others followed in swift succession as:

-on fin t-in -bon kin s-in -don pin w-in

-it hit p-it -bit kit s-it -fit lit w-it

-ed ned t-ed -bed red f-ed -led wed

-en fen p-en -ben hen t-en -den men

-ot hot m-ot -dot jot p-ot -got lot t-ot

-un nun s-un -bun pun t-un -dun pin w-un

With these lists they had got all of the short vowel sounds, and most of the consonants. They were encouraged to listen for certain letters in words, and when they could spell a new word for themselves, which they could soon readily do, they were very proud.

The sounds of some of the letters were especially noticed, such as the r of r, the h of s, and the panting of h, but for the most part the sounds were left for their care to detect.

While the younger class was struggling with beginnings, the older grades became interested, and requests for permission to make the a-t or the a-n family became quite frequent, each child trying to find the most words in any certain family, till a marked improvement in spelling was noticed in all grades.

After the very simple words were mastered by the beginners' class, the old groups were reviewed, with less well known and more difficult words added, such as: that, fat, chat, bran, than, sled, shed, fed, them, when, etc.

Then words of more complex foundation were introduced as:

-jek w-ick s-lick b-lick -lek w-ick s-lick b-lick -D-ick l-ick t-lick c-ick -pick r-ick ch-ick f-ick

-ing r-ing b-ring -d-ing k-ing s-ring -s-ing w-ing sw-ing -th-ing s-ing

Then followed groups of words having the long vowel sounds, the effect of the final e, being noted thus—

-ake r-ake f-ake -b-ake s-ake sh-ake -l-ake t-ake sn-ake -m-ake w-ake st-ake

and -ine l-ine v-ine -d-ine n-ine wh-ine -k-ine p-ine tw-ine -w-ine sp-ine sh-ine

Groups were developed also from the sounds, -ate, -ite, -ight, -ill, -ail, -ink, -ay, -old, -ood, -ook, etc.

These spelling drills were carried on for about ten minutes each day, and altogether apart from the regular reading and spelling lessons.

Perhaps some new word introduced in the day's reading lesson would furnish the base for a whole group of words.

For instance the -ick family grew out of the sentence "May I pick you?" pick being a new word to the class. Similarly, the word "best" in, "She likes you best of all the flowers," suggested:

-est n-est v-est -best p-est ch-est -jest r-est qu-est -lest t-est z-est

One advantage of this method of word drill is that a teacher needs no Normal College training in order to carry it out successfully, and a young teacher with little or no knowledge of phonetics may see great improvement in her classes through its use.

Notwithstanding all said to the contrary, the great majority of women have a strong suggestion of their spelling in their pronunciation, and continued word drills enthusiastically carried on, will work wonders with the most unpromising classes.

HINTS FOR MARCH AND APRIL

With the spring months comes restlessness.

"When that April with his showres swoote The drought of March hath perced to the roote.

Then longen folk to gon on pilgrimages." So wrote Chaucer five hundred years ago, and it is still true. When the brooks begin to run and we get the smell of earth, we want to do and see something different.

In the schoolroom this spring feeling shows itself in fidgets and slackness about work, and yet it is just at this time that the teacher begins to realize how much has yet to be done, how little time of the school year remains, and that every minute must be made to count.

Do not repress the fidgets too sternly, but try to give the restlessness a vent in frequent marches and simple physical exercises with plenty of fresh air in the room; and give what relief from monotony you can without neglecting regular work. A very little variety means a great deal to a child. A change of seat, a rearrangement of the time-table, a new plant or picture in the room, a change in the opening exercises, in the order or manner of dismissal, or of forming classes, or going to seats—any of these add a little interest and freshness. We have been in schoolrooms where the Christmas decorations were still in place in June and where the same drawings or stencils stayed on the board the year round, betokening a lack of interest on the part of the teacher. Have some pleasant little change in the room to greet the children after the Easter holidays, if not before.

Reviews of the work through the winter may be made interesting by different devices. Where a class is weak at some particular point in arithmetic, spelling or grammar, for instance, invent or adopt some stimulating little competition, and offer a trifling reward, such as a pocket hour-story-reading, a new game taught at recess, or dismissal of the class a few minutes earlier.

Colds are so common in spring that a morning talk might be given on their prevention and cure, and on good manners in connection with coughing, sneezing and use of a pocket handkerchief. Children always long to leave off heavy winter clothing, so discuss the old sayings:

"Till April's dead, change not a thread. Never cast a clout, till May is out. Talk about spring should be kept as closely as possible to the children's own observations. Ask the country children who saw or heard the greatest number of signs of spring on their way to school. What are the spring smells? Spring occupations? Spring games?"

So many suggestions for reasonable nature-study are offered in the Educational Review that we need only refer to them here. The following references in literature might be studied:

1. Else had the spring Perpetual smiles on earth with verdant flowers. Equal in days and nights."—Milton

2. The uncertain glory of an April day Which now shows all the beauty of the sun, And by-and-by a cloud takes all away. —Shakespeare.

3. When well apparelled April on the heel of winter treads. —Shakespeare.

4. It was not summer yet, but spring; and it was not 'gentle spring, ethereally mild' as it is in Thomson's Seasons; but nipping spring with an easterly wind, as in Johnson's, Jackson's Dickens', Smith's and Jones's Seasons. The shrubs wrong their many hands bemoaning that they had been over-persuaded by the sun to bud; the young leaves pined; the sparrows lamented their early marriages; the colours of the rainbow were discernible, not in floral spring, but in the faces of the people whom it nibbled and pinched.—Dickens.

Suitable poems are: The First Mild Day in March.—Wordsworth. *Lines Written in March.—Wordsworth. Home Thoughts from Abroad.—Browning. *March.—Bryant. *The Robin.—Whittier. Early Spring, last four verses.—Tennyson. Sir Lancelot and Queen Guinevere, last two verses.—Tennyson. *Spring, from the French.—Longfellow.

Those marked * are suitable for young children and a very successful primary teacher tells me that her grade I children love to learn Browning's "Oh to be in England."

The word April comes from a word meaning to open. "I open wide the portals of the spring

To welcome the procession of the flowers."—Longfellow. The customs of April Fool's Day sometimes give trouble in the school-room. Where this is likely to be the case, be beforehand with the children by a little talk about practical joking and the dangers of unkindness, rudeness, and sometimes real pain or injury. Put them on their mettle to play no trick that is unkind. Any one can make up a silly story, or a practical joke, but a sense of cleverness to make a pleasant and funny surprise. If the teacher can illustrate this by inventing a pleasant little April Fool surprise for the class, so much the better. This method is better than a solemn lecture. But the custom is in abeyance, let it stay there.

Last month we told how to find when Easter comes. Last December the writer heard two men discussing the date of Christmas Day. One said: "It comes about the 24th or 25th."

The other said: "Think it's the 25th and the 26th. I don't know, but I think that while Christmas is a fixed day, Easter is what is called a movable feast, and its date is regulated by the moon. They should also know, as historical facts, why Good Friday and Easter Day are kept, and that they have been kept from very ancient times. The word Easter is found only once in the New Testament. Where is it?"

The observance of Flag Day in different places rouses special interest in the flags of our Allies. The French tricolor of red, white and blue, stripes running vertically, i. e. parallel to the staff, is a combination of the colours of the city of Paris—red and blue—and the white flag of the Bourbons, and it has been used since the beginning of the French Revolution. The Russian ensign has a blue St. Andrew's cross on a white field. The Belgian merchant flag is like the French tricolor, but the red and white stripes where France has white, and the Royal Standard has the royal arms in the yellow stripe of the tricolor. Servia's tricolor is like Russia's, i. e., the stripes run horizontally, but red at the top, blue in the middle, and white at the bottom. The flag of Japan that we see here is the merchant flag, a red disc in the centre of a white field. The Japanese naval flag adds red rays to the disc.

POULTRY

GOOD CHICKS FROM GOOD EGGS ONLY.

The normal egg is one weighing about two ounces, with a smooth surface, and oval shape. The fresher the egg, the more suitable it is for incubation. As eggs become old and gems become weak. For all practical purposes the eggs may be held for two weeks and will still hatch well.

Eggs kept from hatching should not be exposed to either extreme heat or extreme cold. The best temperature in which to keep eggs for incubation is from 40 to 50 degrees occasionally. Poultrymen would save a great deal if they would test their eggs before putting them under a hen or in an incubator, and take out all eggs which would not produce good chicks.

Every egg which does not produce a chick is not infertile, however, that in fertile eggs may be selected out of those to be incubated. There is no known method, except by incubation of determining whether an egg is fertile or infertile.

REARING DUCKLINGS

Although the rearing of ducklings is very simple, as far as merely keeping them alive goes, yet it repays study. When the conditions are of the most favorable and the requirements of growth and of subsequent fattening, the profit is greater in proportion. Most things that are worth doing at all are worth doing well. We have seen that they can be hatched by hens or incubators and reared by either natural or artificial methods. Full liberty should never be given to those intended for market. Stock ducks require exactly the same treatment for the first month, after which they are better on a grass range with a pond or a shallow stream in which to take exercise.

A stream is to be preferred in furnishing more food in the shape of worms from the banks, small fish, insects, and a great variety of aquatic plants. In rearing the best stock ducks exercise and variety of natural foods are of more importance than being always fed with foods from the granary. Indeed, a moderate amount of exercise is best. A different set of muscles is required in swimming to those used in walking and the strongest and best-knit frames are always built up when the exercise is varied and complete. The cleanliness is also a powerful asset. Ducks cannot keep clean without swimming, as they always get dirty on land in altogether a different degree to fowls.

Food similar to what we give growing cockerels will do for them, that is, always rather on the nitrogenous side. There are only three diseases which seem to trouble ducklings—cramp, sunstroke, and breakdown. The first can only come when there are kept under the most unsuitable conditions. Damp brick and stone houses are the chief cause, small, dirty, soil runs, and wet bedding. I have met cramp when people have attempted to rear ducklings in towns but very rarely on farms. Sunstroke can be guarded against by giving shade.

When the ducklings are hatched late, towards midsummer, not only should the run be shaded as much as possible, but even a shallow pan of water may be allowed in the run, as it is not cold enough to give them a chill, and may prevent heat apoplexy. Breakdown or limb weakness is caused by insufficiency of phosphate of lime in the food. Ducklings grow so rapidly as compared with chickens that they are building up frame at an enormous rate, and if the boneforming material is not present in sufficient

quantity, cripples cannot be avoided. This is more especially seen in the large breeds, such as the Aylesburys. We find fish meal which also contains a large amount of fish bone, the best thing to prevent, as it not only contains the proteins for forming flesh and the necessary salts to grow the bone, but is easily digested.

THE FARM

FARMER SHOULD PLAN NOW FOR A SILO.

In order to appreciate the full value of a corn crop the farmer must feed this crop as silage. A sixty bushel crop of corn fed as silage is worth as much as one hundred bushels of corn feed in the usual way. In other words, about 40 per cent of the food value of the corn crop is in the corn stalks when fed as silage.

Every farm on which any number of cattle is fed should have a silo. We recommend every farmer who keeps a number of cattle to study the advantages and disadvantages of the silo, and then, as soon as economic conditions warrant, build a silo or a number of silos, according to his needs. The silo will make \$60 worth of corn feed as much as \$100 worth fed before. Not only this, the silo will make 10 acres of good corn when supplemented with clover or alfalfa take the place of 40 to 50 acres of pasture for cattle.

The dairyman was the first to fully appreciate the value of silage. High priced mill feeds and dry seasons with short pastures took from his hard work the small margin of profit. With a herd from 12 to 20 cows, a small silo will furnish a good succulent feed during both summer and winter. The silo, however, is not the entire solution. Silage represents one part of feed such as corn, and must be balanced with a protein feed such as clover hay, alfalfa hay, or some other protein feed.

The silo, however, has been found to be valuable for the beef producer then for the dairyman. It makes it possible to have a large amount of feed on hand early in the fall when cattle can often be brought to good advantage. With good corn silage, straw, sottonseed meal and corn, the farmer has at hand a cheap combination for making cheap beef. On the other hand, if there are no objections to a long feeding period, and corn is high priced, feed the first 90 or 120 days silage, alfalfa or clover and cotton seed or oil meal; the next 90 days the cattle should receive corn, which may be ground or shelled, and fed with the silage, and straw as a substitute for the hay. Many combinations are possible, and market prices of feed and cattle will determine the best thing to do.—Professor W. G. Eckhardt, Illinois.

OATS SHOULD BE FED TO STOCK.

I believe the modern method of handling and feeding is undoubtedly wrong so far as the entire oats crop is concerned says a writer in the "Indiana Farmer." That is to say, the modern method requires the oats to be threshed. Then the grain is fed and the straw as far as getting any good results as stock food is largely a loss. Horses, cattle, sheep are all very fond of oats. When either in sheaves or cut down and cured like meadow grasses and then put through a straw cutter, stock eat up cleanly both the grain and the straw, and grow and fatten nicely with but little other grain or hay. Animals are compelled to eat the straw while getting the grain. This straw gives bulk to the feed.

The time was when every farmer grew large fields of oats, and outside of what was required for seed, the remainder of the crop was cut an fed to stock in the spring time the work horses were fed liberally on the cut oats, but during the heavy work season "chop" was made. That is to say, the oats were cut, they were dampened and mixed with fine corn meal, wheat bran and middlings. A good ration of oats so prepared and three to five ears of corn, with some good hay at night, kept the teams in good flesh and strong for the hard labor.

Such a vast quantity of food is produced to the acre, and the stock do so well, that if the farmers will quit threshing their oats, and feed the entire crop oats growing will find a better place, and be more profitable than the present method. For the milk cows the "chop" feed as recommended for the work horses is fine, and but little other grain or hay is found necessary. All know that threshed oats and then

THE MARKETS

TORONTO, MAY 12

Butter Market

Farmers' Creamery Separator Prints

Cheese Market

Egg Market

Grain Market

Cattle Market

Sheep Market

Hog Market

TORONTO, MAY 12

Hogs, off Cars

TORONTO

Butter

MONTREAL, MAY 12

Deduct Commissions

BUFFALO

NEW YORK

THE MICROBE IN AGRICULTURE

An invisible government controls us—the minute organisms, the germs, microbes, and bacilli, that enter into so many of the processes of life and of physical nature. Knowledge of this world of invisible life is the aim of the department of microbiology—the study of the life of microscopic organisms.

We need a knowledge of microbiology, thinks Dr. Charles E. Marshall, director of the graduate school and head of the department of microbiology in the Massachusetts agricultural college, not only for personal but also for business and public reasons. Microbiology is important in personal hygiene in sanitary and public health, and in the practice of agriculture. Its great importance in a griculture arises from the fact that so many soil and plant activities are largely micro-organismic.

Micro-organismic operation is based almost entirely on bacteriology. In food preservation the drying, and canning and other processes of preservation foods, is a matter of bacteriological control, and decomposition a matter of its lack. Fermentation of bread, vinegar, an distillate is begun by microorganisms. Purely of water supply, healthful disposal of sewage, and many other matters of daily importance, involve a knowledge of germ life.

So fundamental does Dr. Marshall regard the subject that he would have every student take at least an introductory course in microbiology. The present regular courses are outlined to provide both introductory and special work, and plans are being considered for the introduction of elementary sanitary science, dairy bacteriology, and the like, in increasing the amounts in the short course.

"To adapt microbiology to all agricultural needs, that is my hope," said Dr. Marshall, "it has been realized once. I should like to realize it now at Massachusetts agricultural college.

HOW TO MAKE BORDEAUX SPRAY

Bordeaux is one of the best known fungous sprays. It is made by combining four pounds each of copper sulphate and fresh stone lime and adding fifty gallons of water. The copper sulphate should be dissolved in hot water or from a coarse bag suspended in cold water. In another receptacle slake the lime slowly and then dilute to about 20 gallons, adding to this diluted solution the copper sulphate solution which has also been diluted to about 20 gallons, stirring the mixture with the union is being made. Strain it into the sprayer and add additional water to make 50 gallons. That is the way it is made on the farm, but you will be able to secure ready-made bordeaux in almost any sizeable town. To this it will be necessary to add water. Necessity directions accompanying the package.

FOR CHILDREN ON RAINY DAYS.

So much has been written regarding entertainment for little folks on rainy days, one would suppose all had been said. Not so, for little people will take great delight in the following pastime, which is so easy that the mother will feel well repaid:

Take an old magazine, on its pages carefully paste cuttings; some have illustrations, which make the book quite attractive. Save the best and other stories which are published in the Sunday newspapers; ask a friend or children with blunt pointed scissors and a jar of paste; the result will be many happy hours, and an amusing as well as instructive book.

Or cut out a blank book or a scrap book is more substantial, but for economy and pastime an old magazine will answer.

Pictures from old calendars are good, as they usually picture some noted spot about which mother or nurse can readily weave some story starting with the time honored "Once upon a time."

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