

## 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 Teachers' Association, Guardian's School and Home, P. O. Box 138, Charlottetown.

## THE FIRST LOCAL SUMMER SCHOOL OF P. E. I.

(Miss Alice M. Wynne, Queen Square School.)

The first local Summer School, which opened in Prince of Wales College Hall, on July the twenty-eighth, marked one of the most important pedagogical movements in this Province in many years.

When the announcement was made some months ago, that it was the intention of the Government, to give the teachers of Prince Edward Island the opportunity of attending a short course in the natural sciences, many were the speculations about its success.

Some took a pessimistic view, and regarded it as an experiment. Others held the brighter outlook, and hailed the introduction of a course tended to stimulate our interest in nature, and to give us a better psychological view of the pupils committed to our care.

The opening meeting on Monday afternoon helped to dispel the doubts of the most pessimistic. The large and enthusiastic attendance of teachers, the distinguished list of professors on the platform, the optimistic and encouraging address of the Premier, the precision, tact, and foresight directing the arrangement of the classes, augured well for the success of the school.

The practical work of the course began on Tuesday morning, and as the classes proceeded, the interest and enthusiasm of the students grew so strong, that they reluctantly anticipated their close.

The main object of the school was not to impart new knowledge, but rather to teach us the general principle, that we are led from the observation of the commonest objects to general scientific truths. To accomplish this, the greatest simplicity was employed in presenting the lessons, no scientific terms were employed where they could be substituted by the common names. We were taught how to impart to our children lessons in the elements of the natural sciences, in a form that could be easily assimilated by their youthful minds.

Some of the chief purposes of nature study were impressed on us; the principal being:—To train the child's power of observation, to enlighten him in the characteristics and uses of all the objects of nature, with which he comes in daily contact, to give him power to observe and discover things for himself, to encourage kindness to insects and animals, care of trees and plants, and in fact a right attitude to all the objects which affect his life, to lead him to see the relation of plant life to animal life, and to show the connection between the work of the school and the work of the home.

One of our first and most interesting lessons was a study of our common birds.

The general description and classification of our Island birds, the cause and manner of their migration, their nesting habits, and their great economical benefit to man were minutely dealt with. The woodpecker and the robin, regarded by some unthinking persons as bold and greedy robbers, were shown to be great friends of the fruit-grower. Who would begrudge them an occasional feed of luscious fruit, when they think of the thousands of injurious insects they have destroyed, the former in the wood of the tree, the latter among the foliage?

Again, of how little avail would be the farmer's fight with persistent weeds, if it were not for the beneficial service rendered him by our commonest birds? Does he realize that his efforts to eradicate noxious weeds, would be useless, were it not that the birds each year destroy millions and millions of weed seeds?

We were particularly exhorted to impress upon our pupils the necessity of kindness to birds, to teach them how to build nesting boxes, to place near by materials for building, such as bits of string, hair, etc., and to use every means of getting them interested in the care of their feathered friends.

The lessons on insects were particularly interesting, and included their description, metamorphosis, our noxious insects, injury done by them and the modes of destruction, aids in reducing their numbers, such

as, their consumption by birds, toads and reptiles. The study of the ant and the bee displayed the marvelous intelligence and wonderful industry of those insects.

The lessons on this subject were supplemented by visits to the Experimental Farm, where we made practical observations of the noxious insects, the injury done by them, and were told the methods used in their destruction.

Everyone enjoyed the lessons in Botany. This subject was presented to us in such an attractive manner, stripped of all its scientific names and classifications, that it gained the attention of the most disinterested. Special importance was attached to the physiology of plants, their methods of propagation and their value as articles of food.

We were aided in our botanical lessons by some simple experiments, requiring very simple apparatus, and demonstrating very clearly the truths conveyed to our minds.

The afternoon tramps presided over by the professors, were devoted to the observation and classification of our local plants and trees. This part of the work was animated by the explanation of questions and lively discussion as each new specimen was produced for identification. It truly emphasized the fact, that by close contact with, and practical observation of nature, the faculties of the most listless will become keen and active, the interest aroused, and the whole mental organism, as it were, the botanical course, was the history of school gardens, and the most practical way to proceed to establish them in connection with our schools.

Although the school garden is of recent date in America, it has been in existence in Europe for a long time, and gardens are attached to the great majority of the European schools. A detailed and interesting explanation of the method of establishing and carrying on the work of the school garden was given us.

One had only to see the class in drawing at work, to assure himself of the popularity and success of that department of the course. The special educational value of the subject was impressed on us—and we were assured of observation and memory, develops muscle control, and trains the hand and the eye in intelligent co-operation.

The aim of the first lessons was to bring out the imaginative faculties of the student, by representing common objects in various positions. Simple sketches were produced and afforded an opportunity to bring out artistic expression.

The concluding lessons of this course were devoted to perspective drawing. We recognized at once its value when we were shown how intimately it is connected with all art, as without the correctness of a perspective, no picture can be entirely satisfactory. The unanimous attitude of the drawing class at the conclusion of the lesson was one of reluctance to discontinue a course which had proved not only most enjoyable, but most valuable in educational work.

The classes in Pedagogy gave evidence of deep thought, wide experience and most effective work on the part of the directors of that part of the course.

The teachers were initiated into the phonetic system of teaching Reading, which was so attractively demonstrated that many were convinced that it was the most intelligent method, and resolved to make a radical change in their treatment of this subject.

The teachers were also initiated into the work of the admirably graded system of the work and its expansion as the mental development of the child increases. The system involves great preparation, thought and psychological knowledge of the child, on the part of the teacher. To make it a success the teacher requires thorough normal training, a certain amount of originality, and a inventive spirit to enable him to make the work attractive, and an untiring energy. If placed in the hands of a teacher of this style, the phonetic system will surely teach the child to read more quickly and more intelligently than any other system.

The lessons in Arithmetic, the economical side of teaching Writing, and the lessons on School Management, were all deeply appreciated by and highly profitable to the students.

Are there any criticisms to offer on the course? Was the study of the natural sciences, and of the means of making a living too strongly emphasized?

Everyone recognizes that in an agricultural country like this, it is essential that the child should be trained to make the most of the resources of his country, and thus the natural sciences must have a prominent place on our curriculum. But to overrate their value would be to foster the materialistic spirit—the great tendency of our age.

If we regard moral culture as the great aim of education, the deeper subjects of History and Literature must be important factors in our course of study. The noble influence of the study of the ideals in those subjects must ever tend to develop the mind, strengthen the character, and to stimulate patriotism as no other subject ever can.

But let those deeper subjects go, and in hand with our natural sciences, let neither hold the monopoly of our attention to the exclusion of the others, and we will have education in the broadest sense of the word.

The present course has done much to broaden our ideas of education, and to convince us that it is not merely the art of developing the mind, but rather of cultivating all the faculties of man. It has stimulated our interest in nature, has given us an impetus to more earnest work in this study in our schools, has increased our sympathy with our pupils, and has verified the words of Shakespeare:—

"One touch of nature

Makes the whole world kin."

## YOUR CHILD'S TEACHER.

(Selected)

What is your attitude toward the teacher of your child? Do you even know her name? Have you ever called for a moment after school hours to speak with her of the progress made by the child so dear to you or to discuss better methods of dealing with the child? All teachers will acknowledge that from the beginning of one session to the end of it that unless they write to a parent asking for an interview with the idea of discussing some matter of importance in regard to the pupil they rarely see the parents of those in their class.

That in order to do the most efficient work with a child some knowledge of its home and surroundings is most important is recognized by the School Board of New York which has appointed visiting teachers as a visible link, conferring with the parent, teacher and principal. The child is the problem to be solved and various methods are employed for the solution.

If a teacher feels that she has the sympathy and co-operation of the parents in her work, she will exhibit a greater interest in and more patience with the children.

One word of caution or entreaty to the mothers. Don't criticize a teacher before your children. Little children usually care greatly for their teachers and regard them almost as infallible. If you pick a teacher to pieces in the presence of your child you help to destroy the child's ideal, and perhaps to a certain extent his respect, and consequently his ambition to work or to please his teacher is lessened.

One small boy in the kindergarten announced decidedly to his teacher, "My mother doesn't like the color of your hair." Naturally this amused his teacher but revealed the fact that the mother was in the habit of discussing even the minute particulars before this boy of five.

In all the little tales of school happenings that the child brings home try if at all possible to maintain that the teacher is in the right, for without meaning any wrong many a child's version of what happened at school becomes somewhat garbled and twisted in the later telling of it. If, however, there is the slightest cause for doubt that the child is being misunderstood or punished unjustly try to see the teacher at once and get from her the whole facts of the case. If there is perfect understanding between parent and teacher there would be no reason for a child to announce defiantly to the latter, "I'll tell my mother about this," as it happened on one occasion when a child did not receive the number of marks desired.

## LINES.

By Alice G. Cobb.

Oh, for that charity,  
That is humanity,  
That in every face,  
Though bare of any grace,  
Which still in tenderness  
Knows that though sometimes  
Wrong  
All souls to God belong.  
Give me an humble mind,  
Help me, O Lord, to find  
Thy work in all mankind,  
Loving and true.  
Give me that gentleness  
Which still in tenderness  
Seeks for thy loveliness  
Hidden from view.

## THE FARM

### POULTRY KEEPING

I have been asked by several correspondents to give some details regarding the management and working of an incubator, so I propose devoting all my space this week to this very important question. Tremendous strides have been made during recent years in artificial hatching, and it is no longer a luxury but a necessity. Those who would hatch during the winter months—and when properly conducted this is an extremely lucrative branch—have no option but to employ artificial methods, since broody hens are almost impossible to obtain for love or money during cold weather, and when an occasional one is procured she is seldom to be trusted, as upon the slightest excuse she forsakes her eggs. The time of the year is now rapidly approaching when those who are desirous of having a supply of early chickens ready for the spring markets should commence hatching operations, for in order to make the most profit it is necessary to have the birds ready for killing as early as possible in the spring.

There are several points of importance which should receive careful attention when selecting an incubator. For one thing, an abundant supply of pure and fresh air is an essential feature in successful incubation, and the ventilating arrangements should always be very carefully examined. All the parts of the incubator should work easily, since shocks and jars have an extremely injurious effect upon the eggs, during the period of hatching, particularly during the first ten days. While there are certain differences in detail in each incubator, there are a few general principles applicable to all the many and various makes. As a rule, the manufacturers send out instructions with each machine as to its detailed management, and these should be carefully studied before starting operations.

There are two types of incubators on the market at the present time, the hot-air and the hot-water. There is nothing to choose between them so far as results are concerned, provided that they are worked carefully. The heat within the egg drawer, however, requires to be rather hotter in the case of a hot-water machine. The best temperature to work at in this

## URGES FIELD SELECTION OF SEED CORN.

"In the selection of ears of corn for seed," says Professor A. G. McCall, of the College of Agriculture, "it is important that only such ears be selected as have acquired the habit of ripening on time. Also, care should be taken not to select ears from plants or varieties that ripen a long time before hard frosts may be expected, for such plants and varieties will yield less corn than those which use the entire season. However, the intelligent selection of seed corn in the field, as maturity approaches, is helpful if it takes into consideration the immediate environment, particularly the stand of plants. A plant growing in a hill with two other plants should be a much higher for having produced an ear of a given weight than a plant growing in a hill by itself, soil conditions being the same. In other words, the selection of seed corn should be made in the field, where the growing plants may be considered in connection with their environment, and plants growing under less than normal stand or extra-ordinary conditions of any sort should thereby be disqualified, save in exceptional cases. We want to be sure that the excellence we observe is due to something wrapped up in the seed, and not to something which has happened to the seed, for, if we fail to make these same things happen, the excellence will disappear. A larger number of ears than are needed should be selected in the field, so that later culling may leave the necessary amount of seed. It is well to leave the seed ears on the stock until they are well matured and hardened. Plants bearing the selected ears may be marked by topping or with paint, so that they may be noted and the ears saved at husking time."

## HOLLOW POTATOES

The hollowness of potatoes may be the result of many causes. Round potatoes have a greater tendency to become hollow than the kidney shaped or oval potatoes. For market purposes the latter shapes are preferable.

Hollow potatoes may be the result of unusual rapid growth, which in turn is probably caused by an excessive amount of available nitrogen. This is very likely the result of the application of too much fresh manure, or the using of a fertilizer which has a high nitrogen content. The use of too much stable manure is also apt to cause scabby potatoes. The soil should be in the very best of physical condition, and should be in a good state of cultivation in order to obtain the best crop of potatoes.

As is perhaps known, the real food value of the potato lies usually within one-quarter or three-eighths of an inch of the outside, some 90 per cent. of the inside of the potato being composed of water. Where the potato grows very rapidly, the large amount of water in the centre causes the tissue to become broken down, thus resulting in a hollow potato.

## GREEN MANURES

The ploughing in of green manure crop is one of the most effective methods of enriching the surface soil. Green crops contain elements of fertility derived from the air and from the mineral and vegetable constituents of the subsoil on which they grow, as well as what they have taken from the surface soil. Therefore, when green crops are returned to the earth and left to decompose in it, as by ploughing in, they naturally not only restore to the surface those elements that they took out, but also add to it the elements of plant food they secured from the air and subsoil. The plants best adapted for use as green manures are those that derive their support largely from subsoil and grow rapidly and cover the

ground well, and where roots penetrate deeply. The growth of these crops may, with advantage, be largely increased by the use of artificial manure. Buckwheat, rye, rape, clover and cowpeas are chief among the green crops used as green manures, and of these clover and cow peas are the most valuable, because of their habit of deep growth and nitrogen addition. These green manure crops are used most profitably in conjunction with summer fallow, and they should be ploughed in as near as possible to the time of flowering. The improvement which they effect in the texture and fertility of the soil is most remarkable in clays. The use of green manure crops furnishes a cheap and efficacious method of manuring for lands remote from the buildings of the farm.

## POULTRY HINTS.

Chickens should always be kept hunting for grain in the litter of straw or hay covering the floor. Do not place the water dish where dirt or litter can be scratched into it.

When little chicks stand around with drooping wings and closed eyes, they very often have head lice. Little chicks cannot do well when bothered with these pests. Apply olive oil to the chicks' head. This is better than lard, as too much lard on a chick's body will kill it.

Disinfect the poultry house well all summer. A good commercial disinfectant may be used. Spray the roosting quarters thoroughly. Also keep the brooding quarters clean and disinfected.

Egg eating is easily prevented by making the nests rather dark, giving plenty of nest room, and not over-crowding. Keep the hens busy scratching and they will not eat eggs.

Produce the infertile egg—It pays. Sired the rooster—it pays. The hen makes the largest profits in the first and second years, and unless any hen is an exceptionally good breeder she should be disposed of at the end of her second laying season. This should be done before she starts to moult.

Give the growing chicks plenty of shade and feed them well. Keep up the house cleaning, and do the work thoroughly. Both disease germs and vermin thrive in filth.

As soon as the cockerels reach the crowing stage they should be put in a separate run and fed all they will eagerly eat up clean.

Clean out all surplus stock. There is too much loss in feeding stock not needed.

Keep the drinking vessels in the coolest possible place, and have the houses sufficiently ventilated at night.

## THE DAIRY

### JERSEY TESTS

Three more Jerseys have qualified for the Record of Performance. Two owned by A. H. Mensies—Fancy's Dairymaid, 1370, age 2 yrs. 21 days. Produce required—5,568 lbs. milk, 220 lbs. fat; total produced—7,349 lbs. milk, 398 lbs. fat; average per cent. 5.41. Lady Marie of Pender, 1369, age 2 yrs. 43 days; produce required—5,122 lbs. milk, 205 lbs. fat; total produced—6,925 lbs. milk, 412 lbs. fat; average per cent. fat, 5.35. One owned by C. and H. Cam of Chegoquin: Three year old heifer. Produce required—6,884 lbs. milk, 264 lbs. fat; total produced—6,686 lbs. milk, 437 lbs. fat; average per cent. fat 6.43. Bartley A. Bull, Sec., Brampton, Ont.

### COLIC IN HORSES.

Among the numerous ailments to which horseflesh is heir, the so-called colics are probably the most common

at this season of the year. The term colic has long been used to designate an abdominal pain caused by some disturbance of the stomach or intestines, and as these organs are quite complicated in the horse, it is obvious that the word does not signify any special disease. Many stockmen are prone to think that all colics are alike and many conclude that because one horse recovers from an attack without treatment, all other cases have a like chance. This, however, is not the case, as the severity of an attack depends largely on the variety of colic and usually requires an experienced man to make a differentiation.

One common cause of colic is the sudden change from old to new hay. This is relieved by the animal that the stomach becomes overloaded, causing a fermentation and resulting in a distention of the stomach or intestines, or both, by gas. This type of colic is one of the most dangerous and rapidly fatal forms of the disease known. The construction for accumulated gas to escape unless it is aided either by the introduction of a stomach tube or trocar.

It is well to keep in mind that horses are apt to overload on new hay and every feeder should be very cautious and give only a small amount at a time until the animals become accustomed to the change. It is also well to give every horse that receives dry feed a bran mash, either wet or dry, containing a handful of flaxseed meal and a little salt at least twice weekly. Such slight precautions when neglected often result in the loss of a valuable horse.

The symptoms of colic are no doubt familiar to all horse owners, although the symptoms differ somewhat with the various forms of the disease, they may be summoned up as follows:

Pain, which may come on suddenly or gradually. If it harness the horse goes "short," gives way in the hind-quarters, stops, becomes restless, paws the ground and stamps, shakes himself, and can be prevented only with difficulty from lying down. Later on, he often totters, groans, kicks with hind legs at the abdomen, looks round at his hind quarters, whisks his tail, stands over at the knees, arches his back, stretches the head and neck, and places the hind feet under the body. As a rule, the animal lies down very carefully and slowly, or makes attempts to lie down, but sometimes may throw himself recklessly on the ground. He may lie still or roll and kick violently. He may sweat profusely and bloat and die within four or five hours from the outset.

During the onset of an attack of colic it is well to give one quart of raw linseed oil, to which has been added one ounce of spirit of turpentine and two drams of fluid extract of nux vomica. Feed should be entirely withheld for at least twenty-four hours, but allow plenty of water. If bloat is excessive it should be promptly relieved with a trocar by an experienced hand.

## SELDOM SEE

a big knee like this, but your horse may have a lurch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

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