

TO THE FARMERS

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 198, Charlottetown.

KNOWLEDGE AND THE TEACHER

(Selected.)

What a teacher does not know he cannot teach. What a teacher does not know he cannot teach well. To know a subject well, it must be known in its relations to kindred subjects. A single isolated fact, or principle, is not knowledge; to become knowledge, to have any effect or intelligence, it must be grasped in its relations. It follows, then, that an instructor must know far more of a subject than he intends to teach. If in Mathematics, for example, he is ignorant of Algebra, he cannot teach Arithmetic so well as if he were a skilled Algebraist. If he knows only the four fundamental rules of arithmetic, his teaching of these will not deserve the name of teaching. Indeed, since all knowledge is one, it may be truly said that the broader and more thorough a teacher's scholarship is, the better he will teach even the elements of knowledge. He will know his topic better; he will be more fertile in illustration and all skilled devices of the teacher's art; he will impart some educative value even to the simplest lessons. They are clearly wrong, therefore, who take the ground that "some primary teacher need 'know' only what he is going to teach. The primary teacher, it is sometimes argued, is to give the elements of reading, writing and numbers; and if he can read, write and cipher, he is qualified as an educator; the minimum of knowledge to be imparted fixes the maximum of knowledge for the teacher. If this view were acted upon, primary instruction would be of the most mechanical kind. The teacher is, himself, without interest in the subject which he feebly comprehends; his own powers have never been called into vigorous action, how can he awaken interest and incite to vigorous effort? The truth of the matter is, that just because the primary subjects have in themselves but little culture value, it is the more necessary that the teacher should have a liberal culture as well as the power of insight into human nature. For in this stage of development above all others, it is the method, rather than the matter, that is of greatest value. "The child is to be trained towards the perfection of manhood, his

nature brought into fullest activity on all sides, and his powers developed in harmonious completeness, so far as time and circumstances will permit." This view of primary work is not an ideal one which we may imagine but never hope to realize. The standard aimed at is easily within the reach of the earnest cultivated teacher; it is far beyond the crude empiric whose fitness for the teacher's high vocation is an imperfect knowledge of the mechanical trivium, reading, writing and arithmetic. In that advanced work, it is a truism that good knowledge is necessary to good teaching. The teacher must command the confidence of his class; they must have respect for his character and admiration for his attainments. Thoroughly master of his subject, he moves along with conscious yet unpretentious power, and his pupils look up to him as soldiers to an able leader. Briefly, in all grades of teaching, from the Kindergarten to the University, wherever there is to be true teaching, wherever power is to be developed and character formed, the ought to be broad and accurate knowledge and a good degree of general culture.

Educators are often stung by unfair criticism founded on the necessary incompleteness of their work. What an idiot would that man be who should object to the workmen who are laying the foundation of a house, or are even finishing its walls, that they have not yet put on the roof, nor laid the carpets! Such idiots cannot be found.

What idiots are those men who criticize the teacher because what pupils do not know, ignoring what the pupils have learned and ignoring what the teacher purposes in his perfected scheme to teach in the future. Such idiots abound. Some of them edit educational periodicals. Some of them write to the daily press. Some of them collect the crudities, the absurdities and the verbal substitutions that every examiner meets with in examination papers, and then publish them to the world as the results of school work.

THE FARM

SPRING GARDEN NOTES

(By W. T. Cook.)

A farmer friend wrote me a few days ago: "Get me a few packets of the best Sweet Peas. We love the flowers so their color and their fragrance." I envy such a note as this. It shows that the farmer is beginning to appreciate a little bit of garden, and thus provides a hobby, so difficult to obtain in this part of the world. Now, the Sweet Pea is a flower that seems to ask one to take care of it, and it is largely exhibited at the shows, besides being much used for personal adornment. The farm offers greater facilities for its proper attention than a town plot, because there is naturally greater choice of situation. Buy the seed now and sow them when frost is out of the ground, three inches apart either in rows or in groups, whichever inclination directs, but not against a fence or wall or in a place fully exposed to the sun. Sow in good soil, that is such as a geranium likes or a musk melon, and in a shallow trench about two inches in depth, putting in the bottom some good horse manure. There is generally some spare for such a purpose, this, and then soil. The manure must not come in contact with the seed, but place underneath the layer of soil for the young roots to find in due course. Putting slender sticks to the roots is, of course, a simple matter, but a point of great importance is to pick off every flower directly its beauty is over. Seed production and a continuance of flowers do not go together. The mixed seed gives sweet peas of many beautiful shades, and the cost is only about 10 cents a packet, but

there is a host of varied kinds. Begin, however, first with the mixture. A covering in the course of the summer, round about the plants is helpful.

PLANTING EVERGREENS—SPRING THE SEASON

(Selected.)

Spring is the correct season to plant evergreens or firs, and the most care is necessary to avoid failure. They are the most delicate of all trees and shrubs to handle. More thought should be given to the Juniper and the Blue or Colorado Spruce, which lightens up considerably the space in front of the homestead. An evergreen hedge of much beauty is made by planting the American Arbor Vitae, which has, however, no protective value. It has many advantages, among them great hardiness, adaptability for the majority of soils, and a warm, attractive coloring. But unless the shrubs, which should be at the time of planting not more than eighteen inches high, are planted very carefully they will not live. Firs of all kinds detest manure, and after planting they must not be allowed to get dry at the roots. Another advantage possessed by this Arbor Vitae is that it stands pruning or shearing well, and, therefore, forms more quickly a hedge of dense growth to act as a screen or to divide some portion of the grounds. It may be said—

SEED EARLY

(Selected.)

Early seeding has a distinct advantage in the conserving of soil moisture, very important in most seasons. Not only does early tillage form a mulch on the land, preventing to some extent, rapid evaporation but the crops germinating, and commencing to grow requires considerable moisture, and this moisture is often used by the growing crop, thus preventing evaporation which would surely take place if no crop were growing to use the water in the soil. The crop may also save some water from being lost by percolation, and in so doing may cut off a loss of plant food which might be washed out with the water lost in this way. Early seeding, provided the land is dry enough to cultivate well, and warm enough to ensure a strong germination of the seed, is always advisable. Days are valuable in seeding, and mean much towards full granaries in the fall.

EARLY DUCKLINGS.

Ducklings are very easy to rear in brooders; they grow so quickly that the lamp must be constantly turned lower, and the temperature reduced, where there is a creek or pond for the ducks this helps to secure fertile eggs. Ducklings for market require no swimming water; they can be sold at nine to ten weeks, and are a profitable line.

THE DAIRY

DAIRY BREEDS.

(Continued.)

The Ayrshire herd comprised 9 cows and heifers which gave an average profit per cow of \$13.35 in twelve months. The Jersey herd consisted of 5 cows which gave an average profit of \$18.58. The Holstein herd was made up of twelve cows and heifers which gave an average profit per cow of \$13.90. The Ayrshire cow giving the largest profit was a 7 year old cow which made \$34.88. The one making the smallest profit was a 11 year old cow which made \$6.77. The Holstein cow making the most profit was a four year old with \$32.98 to her credit. The one making the least was a 11 year old cow with a

balance of 10 cts. to pay for taking care of her for twelve months. Next to her in the Holstein herd came a 7 year old cow with \$3 cents to her credit, and next to her came a 6 year old cow with \$1.23 profit. The profits in either case are only small due according to the report from the shortage of summer feed, which had to be supplemented by high priced feed. Now, these facts do not corroborate the statement that fully ten out of every twelve Holstein heifers will turn out to be profitable cows, nor do they corroborate the ridiculous statement that possibly two out of twelve Ayrshires may turn out good. It is records of this kind which go to show the real worth of dairy cows, as it is the profit and not the fun of it we are after. Now I do not say that Holsteins are not profitable, but I do say that Ayrshires have and are proving themselves to be more profitable, if the tests which I have cited are to be relied upon.

Mr. Lea has pointed out very clearly the real ration fed to Milkmaid 7th while in the Amberst test "24 lbs. of meal, not bad for a little cow," also the "three times a day milking necessary to make good records." Now for some reason or another the ration fed to these large producing Holsteins are not often made public, but occasionally this important information is given.

The following is a quotation from a write-up of Mr. Harry Davis' Holstein herd "New York," published in Farm and Dairy of Oct. 17th:—"One of the rations which Mr. Davis found to be well adapted to his work in official testing he gives as follows: Biles **** 186 lbs. (this is a by-product of a breakfast food manufacture and has a fairly high per cent of protein), bran 105 lbs., oats 78 lbs., gluten 71 lbs., hominy 57 lbs., oil meal 20 lbs. Of this mixture he feeds at the start 16 lbs., feeding 4 lbs. at a feed and of course feeding each time he milks, four times a day. Of this mixture he has fed as high as 40 lbs. a day. In addition to this he supplies cotton seed meal. This will give some idea of heavy feeding and also milking four times a day instead of three.

(To Be Continued.)

THE TURF

HORSE NOTES.

Fred. Cameron is getting the good four-year-old colt Lloyd Achille by Achille 2.16½ to train. "Lloyd" was second in the 3 year old stakes at Halifax last year in 2.24.

Challis Jr. 2.21½ by Chahallis 2.04½ is now under the excellent care of J. A. Henderson at Charlottetown. He has his record in a winning race at Fredericton last season. He was a competitor in our fall races and drove Cherry Ripe to his mark of 2.21 after breaking him in the first heat in 2.22½. Just keep your eye on him. He was never tracked until 1912.

The fastest yearling on Allen Farm is Brenta, a full sister of Bottom 2.23, Berka 2.14 and Biala 2.18. Brenta gives proof of 2.15 speed before the fall, so says the American Horse Breeder of last week.

Devilish Dorothy 2.18 and George Cresceus 2.24 had a lively brush down the speedway the other day. "George" was driven by his owner Mr. Frank Beales while Fred Cameron piloted Dorothy. "Cresceus" seems to be fit to race for his life this year and his condition is highly creditable to his caretaker.

That good four-year-old Aquiri Boy is going to be a splendid entry for the slow classes this year. He was up to a mile in 2.25 last fall when he unfortunately sprained a ligament. He is O. K. now.

Tom Fallon's Aquiri colt is now being handled by J. P. Irving. "Jack" considers him a promising candidate for the three-year-old stakes.

Frenchy 2.25 has been sent to the "master hand" J. P. Irving for a preparation for June 3rd. "Jack" got him straightened out before and no doubt can do it again.

The Rexall Girl owned by John MacDonald put in her first appearance in the city since Mr. MacDonald purchased her. She was hitched to a speed cart and "wrecked" off some last sprints over the roadway.

Shrub 2.34 was sent to J. P. Irving last week to prepare for the 2.30 class June 3rd. Shrub is one of the best 2.40 pacers in the Provinces and will no doubt get a 2.20 ticket before fall.

T. O. Edgett, Secretary of the P. E. I. Horsemen's Association, received a very courteous reply to the request of the Association for Island judges on the stand at Halifax races. The Exhibition managers there are out to please and give fair play to all and reasonable and fair suggestion meets with their approval.

The list of stakes for Halifax includes:—
2 Year Old Trot..... \$400
3 Year Old Trot..... 400
2.40 Trot..... 400
2.40 Pace..... 400
2.19 Trot..... 400
2.19 Trot..... 400

Every class for June 3rd will surely fill and the best day's racing for years will be the result of the combined efforts of the Horsemen's Association and Exhibition Association working together.

Vesta Boy 2.05½ will remain under the expert care of Dan Steele and will be a very glad sight. Some of the Summerside boys hunt him and intend to campaign him this season.

Anyone who saw Dannie drive him last year at Halifax must have arrived at the conclusion that no one else can equal him with the only Vesta Boy. May the new owners have the very best of luck in our sincere wish.

Mamie P. 2.18½ is looking fine and seems to have perfectly recovered from her injury which lamed her last winter. We hope to see her start this fall.

People say they never saw so much interest in breeding as is being shown this spring. Every stallion owner has the same story, more inquiries than ever before. There seems to be a genuine breeding boom for 1913. Prices of all light harness horses will no doubt be much higher in the next few years and speed prospects are worth almost any figure you ask, providing they are the real goods.

Peter Conroy arrived in the city Tuesday and will locate here for the summer. He has been promised quite a stable of speed prospects and says he will make it a record year. He will have the speedy Rexall Girl and Hilda S. and two sons of Brazilian, and also two good green pacers.

Duncan Robertson, North River, has probably bred more fast horses than any other man in the Maritime Provinces. Everyone remembers Alice Belle, Ferpillon and Iona Girl. He has some young ones now that will make future stars or the writer is greatly mistaken. We are particularly taken with a four year old pacer. Duncan had this fellow on the speedway last week and he showed phenomenal speed. He also has a three-year-old Brazilian, a natural "frotter," and a two-year-old Cresceus that can show a forty dip. Anyone looking for future racing material should visit Mr. Robertson's stock farm.

Prospects were never so bright for the light harness game here. People who never took any interest in the sport are going to patronize it this year. The boom is on, let us keep it growing and have all the fun we can in the "sport of Kings."

Horsemen everywhere in the Province will be immensely pleased to learn that Frank R. Hartz has been elected to the Presidency of the Charlottetown Driving Park Association. "Frank" is an energetic young man who loves horses and will make the Driving Park a big success. He is up-to-date and believes in encouraging the horsemen in every way. Witness his splendid purses for the ice races last winter.

"Jack" Irving has a barn full of speed prospects and with Jack to condition and race them it is safe betting that he will bring home a big slice of the money.

BINGARETS.

No horse living or dead can compare with Bingara for achievements at 11 years. He promises to be the greatest sire the world has ever known.

Kadika, the dam of Bottom 2.23, is the dam of Biala (3) 2.18; Berka 2.14; Brie and Bavian, trials of 2.30, and also the sensational yearling Brenta. Isn't she some speed producer?

Don't fail to note that all of Bottom's full brothers and sisters are very fast. He is absolutely sure to prove an extremely great speed sire with such a speed inheritance.

Bottom has as much beauty and style as any horse that ever stepped on Island soil. He has two minute speed on the trot, is young, strong and vigorous.

Opportunity knocks at the breeder's door. The chance to breed to a sire like Bottom has not been your privilege too often. Why not seize it, if you have a good brood mare!

Bottom 2.23 will after the stud season be conditioned to beat his mark. Barring accidents, he will surely do it.

Brenta, Bottom's full sister, is said to be a sensational yearling trotter. See last American Horsebreeder.

Look up the last week's American Horsebreeder and see what it says about Kadika, the dam of Bottom.

HORSE NOTES.

American horsemen mourn the loss of the great family holder Bingarets 2.06½, but he has left a family of sons who are doing honor to his name. Prince Edward Island, The Garden of the Gulf, and horse factory for the Maritime Provinces, has some good descendants of the great Bingarets. Catech owned by Mr. Waite of Summerside is a well bred son. He is represented in grandsons by Commodore Ledyard by Admiral Dewey owned by Dr. Strickland of this city; Aquiri 2.27 by Aquilin, owned by Mr. J. M. Nicholson; Bottom 2.23 by Bingara, owned by Capt. D. A. MacKinnon; Mayor Todd by Todd 2.14, owned by Mr. Hammond Kelly, Southport. Bingarets 2.06½ left some greater in speed producing power than himself. Todd 2.14, the greatest of all his great grandsons, now being dead Bingarets moves to the front and stands today the foremost of all the great sons of Bingarets through the death of Todd 2.14 at the early age of eight years. American horsemen suffered a great loss as no horse living or dead ever sired as many 2.10 trotters as he did for the time he lived, and breeders of high class road and trotting stock are to be congratulated on having such a good representative of the great Todd 2.14 on Prince Edward Island. Mayor Todd as a show horse and frotter is hard to beat in Canada.

GOOD ROADS

SURFACE DRAINAGE.

(Selected.)

It is obvious that the water which falls on the road and which flows upon it from adjacent lands should be got rid of as soon as possible. Culverts should be built at low points where outlets are available, and existing streams should always be utilized for outlets. The water should never be carried in the gutters or in side ditches any farther than is necessary. When the volume of water is small, it may often be carried across the road in tile pipes buried sufficiently deep not to be broken by vehicles upon the road. If it is necessary to lay a pipe within 2 feet of the surface of the roadway, iron water pipe or gas pipe should be used. For larger volumes of water culverts of rubble masonry or Portland cement concrete may be built. Very often it will be found to be more economical to use the concrete, particularly if it is reinforced with steel.

Large culverts and bridges should always be designed by competent civil engineers and constructed under their supervision. Indeed, very often the advice of such an engineer in regard to the smaller waterways might be sought with profit. Money too often wasted from a lack of knowledge concerning the proper sizes of pipes and culverts.

In many localities it is the custom to have the main road and driveways from adjacent lands intersect at the same center grade. This practice makes it necessary to carry the gutter water under the driveway in a pipe. Nearly always it is possible, by regrading such a driveway, to make it coincide with the gutter grade, so that the surface water will flow by the macadam. This should always be done when possible. Pipes with open ends laid at the gutter grade are always unsatisfactory, since they fill up quickly, with leaves and sand and with slush in winter time, and thus the surface water is forced out upon the macadam and soon gullies it. When a pipe is required, a catch basin should be built on the upper side of the driveway, the pipe should be laid to connect with it, and carried sufficiently far underground to discharge properly into the gutter below the driveway.

In cuts where the grade is in excess of 3 per cent and where the soil is loose or sandy it is sometimes necessary to pave the gutters with cobblestones or with paving bricks or paving blocks to prevent the formation of gullies in the shoulders and in the macadam. Usually a gutter 3 feet in width laid on the same or a little greater slope than the macadam, with an outer row of large stones about 1 foot high laid vertically against the bank of the cut, is sufficient. Such a gutter usually replaces the shoulder, and it should not be constructed until after the macadam is substantially completed.

SHAPING THE SUBGRADE.

It is not enough that the roadway shall be graded with reasonable care. The surface upon which the broken stone is to be placed must be hard, smooth, and carefully crowned. If the foundation is not hard and firm the stones will be pressed into it by the roller and wasted. If not crowned, an unnecessary quantity of stone will be used. When the macadam is to be of uniform thickness throughout its cross section, the crown of the subgrade should be the same as that of the finished road. If the macadam is to be thicker at the center than at the sides, a part of the crown will be in the macadam itself and the center of the subgrade should be raised enough to produce the contemplated surface crown when the stone is in place. In shaping the subgrade, a road machine can generally be used to advantage.

Usually sufficient material is left on the sides to form the shoulders without interruption. This should always be done when possible. Pipes with open ends laid at the gutter grade are always unsatisfactory, since they fill up quickly, with leaves and sand and with slush in winter time, and thus the surface water is forced out upon the macadam and soon gullies it. When a pipe is required, a catch basin should be built on the upper side of the driveway, the pipe should be laid to connect with it, and carried sufficiently far underground to discharge properly into the gutter below the driveway.

Free! Free! Free!

For The Asking

I will mail absolutely Free to any horseman or breeder a twenty page catalogue, printed in colors, of Bottom (41818) Race record 2.23 1-4.

This book is the handsomest Stallion catalogue issued in Canada this year. It contains pictures of Bottom 2.23 1-4, Baden 2.05 1-4, Bingara (34707) the world's greatest money winning Sire, Kremlin 2.07 3-4 one of the world's greatest brood mare sires. Also photo of Fred J. Cameron.

The catalogue contains valuable reading matter which will appeal to any student of breeding.

A post card brings it to you by return mail.

Address

D. A. MacKinnon

Care Mackinnon Drug Co
Charlottetown, P. E. I.

Maya Ef, Mstf

TODD 2.14 1-4

Sire of 82 Standard Performers

Sire of 12 with records of 2.04 1-4 to 2.10

Sire of

MAYOR TODD

(47893) trial 2.18 last half 1.08

MAYOR TODD 47893

TODD 35323 2.14 3-4
Sire of 12 in 2:10, inc. Bob Douglas 2:04 1-4, Northern Man 2:06 1-2, Gordon Todd 2:07 1-4, Iowa Todd 2:07 1-2, Geo. Todd 2:07 3-4, Todd Mac 2:07 3-4, Al Stanley 2:08 1-4, etc.

ALCLAYETTA
Record 2:26 1-4.

BINGEN 20567, 2:06 1-4
Sire of 11 in 2:10, inc. Uhlán 1:58 Admiral Dewey 2:04 3-4 King Cole 2:05 1-4, John Ward 2:05 3-4, etc.

FANELLA 2:18
Dam of 5, including Sadie Mac 2:05 1-4, Magowan (2) 2:10 3-4, etc.

ALCLAYONE 12308, 2:20 1-4
Sire of 19, including Louise G. (4) 2:08 1-2, Lella Wilkes 2:14, 12, William H. 2:15 1-4.

WILKETTA
Dam of Alchayetta 2:26 1-4.

MAY KING 10272, 2:20
Sire of 27, including B'ngo 2:06 1-4

YOUNG MISS
By Young Jim 2000.

ARION 18000, 2:07 3-4
Sire of 7 in 2:10; dams of 4 in 2:10 etc.

DIRECTOR 2:19
By Directress 1889.

Dam of 1; grandam of 5.

ALCYONE 782, 2:27
Sire of Martha Wilkes 2:08 Bush 2:09 1-2, Harrietta 2:00 3-4, etc.

CLAYRENE
By Harry Clay 45, 2:29, Dam of 1 in list.

KY. WILKES 1854, 2:21 3-4
Sire of 28; dams of 23.

LAMBRETTA
By Daniel Lambert 102.

Mayor Todd is a very handsome and extremely good bred trotter, stands 15-3 1-2 hands, weighs over 1100 lbs and a good son of one of the best horses that ever lived. He was trained a little on the track at the Johnson farm, and trotted a mile 1.18 last half in 1.08. Intending breeders should look him over before booking your mares. Terms \$15.00 for season. For further particulars apply to the owner.

HAMMOND KELLY

Box 215, Charlottetown