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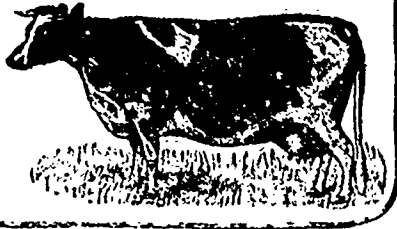
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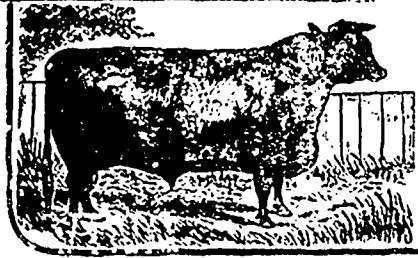
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JUNE  
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The



# Maritime ♦ ♦ Agriculturist.

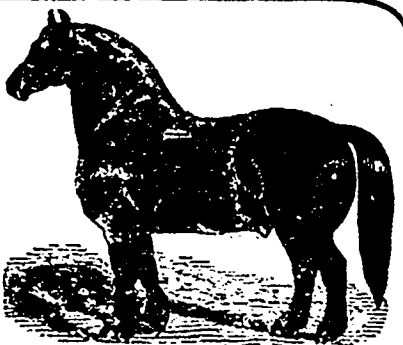
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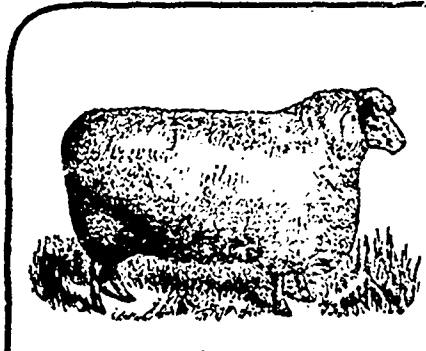
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VOL. 9.  
NO. 9.



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**H. GARDNER.**

Government Immigration Agent

St. JOHN, N. B.

# THE MARITIME AGRICULTURIST.

Devoted to the Interests of the Farmers, Stock Breeders and Horsemen of the Maritime Provinces of Canada.

VOL. 2.

DORCHESTER, N. B., JUNE 16, 1890.

NO. 9.

## THE MARITIME AGRICULTURIST.

Published Semi-Monthly at Dorchester N. B.

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PROPRIETOR.

### For Our Readers'

These receiving this issue will observe that the place of publication has been changed from Sackville to Dorchester, and that we have established a printing office of our own at the latter place. Circumstances, which it is unnecessary to mention here, compelled us to make this change, but it would not be amiss to state that the growth of this journal fully authorized us to purchase a plant of our own, and we will hereby be in a position in the future to bring our numbers out without those vexatious delays which hitherto we have been subjected to. Our staff has been increased, the editorial department being under the efficient management of Mr. B. Eaton Paterson, B. S. A. graduate and associate of the Ontario Agricultural College, Guelph. A number of experienced and responsible canvassers are now in the field and we hope that they will meet with the reception that is due representatives of a laudable enterprise of this nature, and be the means of greatly increasing our already large circulation.

We may also inform those of our readers residing in different sections of the maritime provinces who are stock breeders, that we are in a position to print catalogues, posters, &c., setting forth the merits of any animal which they wish to be either patronized or sold. Job work of every description can be executed in this office at regular rates.

In conclusion let us add that this journal is published in, belongs to, and is the champion of the maritime provinces of Canada, and we look to the farmers, stock-breeders and horsemen of this country to treat us accordingly.

### The Grange.

At the last annual session of the Maritime Provincial Grange held in Halifax a resolution was passed making this journal the official organ of the Order for the Maritime Provinces. We therefore will devote a portion of our space to matters appertaining to the Grange, and would ask the Secretaries of the different District Granges to contribute reports of their meetings and news items that may be of interest to the fraternity.

TANTRAMAR GRANGE, SACKVILLE, N. B., now meets at Powell's Hall. In future the assemblies will be held on Friday evenings once a fortnight. The question "does farming pay?" is now absorbing the attention of the members. It is an interesting subject for discussion and doubtless will be the means of throwing some light upon those methods which do pay in contrast to those which do not.

NAPPAN GRANGE, NAPPAN, N. S., meets regularly on Saturday nights. Its meetings are well attended particularly by the young. It is alive and undoubtedly the banner grange of the division. Westmorland and Cumberland ought to have at least fifty such granges.

Dr. G. M. Twitchell, whom so many of the maritime provincial people know, is lecturer for the State Grange of Maine. He is a live man and employed by a live order. The Grange seems to be making good headway in the neighboring state.

UNION IS STRENGTH.

Mr. Editor.

DEAR SIR:—When shall the time and place of the meeting of the Division Grange be appointed? We ought to know soon so as to have the programme laid before the Granges. The meeting should be an enthusiastic one, and some

measures ought to be taken to revive the dormant Granges in the Division. Where are the Fort Lawrence and Point de Bute Granges? They both flourished once and should be restored to their original vigor. Come brothers and sisters look to your own interests. Just now the papers are full of reports of what the labor organizations throughout the world are doing. They are all taking steps to gain more pay and less work. The manufacturers also are making great combines and trusts in order to secure more profits and rid themselves of all the burdens they can. The farmer, what is he doing?—Why, sir, he stands ready to take upon his shoulders all that which these classes are striving to run away from. This ought not to be so. We must organize, organize and organize until we can obtain sufficient influence to have the tariff made to suit the majority of the farmers, until we can place more farmers than any other class in our legislatures, and until we can control the Markets and keep prices up to a proper figure. If the Grange at present does not afford a suitable medium to that end we should and can make such changes in its mode of working to enable it to meet the requirements of the times. We require a good rousing meeting of the Division Grange in July next.

Yours &c.,  
F. A. DIXON.

Sackville, May 29 '90.

### A New Firm.

We learn that the Messrs. A. C. Polchampton and Cecil French, of Truro, N. S., have joined hands in business under the name and style of Polchampton & French. They are importers of improved large Yorkshire swine and Black Chinese Langshans. Both members of the firm are Englishmen, and as they are young and energetic we have every reason to believe that success will crown their efforts. Their business card appears in the advertising columns of this issue and those of our readers wishing to communicate with them will address their letters to Ightam Court Farm, Truro, N. S. The swine and poultry of this country can stand improvement and this journal congratulates the new firm for their enterprise in this direction.

## Correspondence.

## The Silo.

*Editor Maritime Agriculturist.*

DEAR SIR:—I am glad to know that your enterprise is meeting with success. A good practical farming journal carefully and honestly conducted, in which our farmers may freely discuss methods of farming, feeding and breeding and record their experience for mutual benefit is the missionary of co-operation among farmers so ably advocated by your late editor Mr. W. J. Gilbert (deceased).

You can command my pen, sir, for I consider it the duty of all interested in agricultural pursuits to freely give their experience, feeling that "He who makes two blades of grass grow where one grew before is a public benefactor."

Regarding the soiling of cattle I agree with most of the *Student's* reasoning, that it is practical. But I want to see our farmers go further and adopt the silo and ensilage. I have tried both and know whereof I speak. I advocate ensilage as an improvement on Josiah Quincy's soiling. Feeding the stock in the barns and barn-field as practised by Quincy is certainly—in my opinion—more economical than pasturing, but the weak point in such soiling is in the quality of the fodder. The plants after getting their growth continue to lay up the necessary constituents to produce their seed, grain or fruit which when matured, of course, leaves the plant exhausted of most of its strength—until the plant has attained its growth and stored the constituents for its fruit, it has not reached its highest value for fodder and as it is not practical in feeding directly from field to stall to let the plant reach this stage the weak point in soiling is very apparent. I think I can exemplify this in any farmer's mind by reminding him that grass cut before it has its growth and highest strength makes poor hay. Now I shall try and show you how ensilage meets this and other objections to soiling. To do so I must go into the ensilage question somewhat for the benefit of such of your readers as have not had experience in that line. The silo is no longer an ex-

periment but a demonstrated fact and I claim that grass, peas, oats, rye clover, buckwheat, corn etc. can be more easily, surely and economically ensilaged than they can be converted into hay, straw and grain. I do not mean to say that no more hay should be made, or grain raised, but I do say that for stock feeding the plants properly ensilaged are cheaper and better fodder for producing beef and mutton or milk, butter and cheese. Any of the crops mentioned may be ensilaged, and when you know the proper time to cut grass to make the best hay you have the secret (open to all) of cutting any crop for the silo, for the object is to preserve the whole plant when it is at its greatest feeding value. If pease, the pod should be formed; if oats, rye or corn, the termination of the milk stage, or when the milk commences to thicken in the grain. As you may have to spend from one week to three weeks filling your silos you must use your judgment and commence a little earlier so that the last part of your crop may not be too ripe, and if it is, better make it into hay or stack for grain. But use judgment and cut the most forward crop first and you can nearly always get all you intend into your silos. You can cut your crop, haul it in, cut it up and put it in the silo much easier, cheaper and quicker than you can make hay, straw and grain. It will take less barn room. It will be in condensed form and more easily fed out. It will produce better milk and butter, and better beef and mutton for less money and leave you the manure at your barn to be applied to the land in such quantities and at such time as required. Keep in mind that I mean that the cattle be fed ensilage summer and winter and that their exercise should be had in a barn-field or large barn-yard. If you grow the proper crops to make a correct ration for beef or milk you do not need to use much, if any, ground grain. Aim to produce a combination of crops equal to the best pasture grass and you can produce butter in mid-winter equal to June production. If you feed properly you have no waste. I fear I am making this letter too long and feel I must cut it short here. It has been proved by experience

that soiling a la Quincy, is better than pasturing and my claim is that stall feeding combined with ensilage is an improvement on soiling. I will be pleased to answer from experience any questions in reference to the silo and ensilage.

Yours,

T. C. WALLACE.

Fairville, St. John Co., N. B.

## Marsh Making.

THE GREAT TANTRAMAR GROWING IN MAGNITUDE.

SOME INTERESTING FACTS GLEANED FROM MR. W. F. GEORGE OF SACKVILLE, N. B.

One of our representatives when in conversation with Mr. George a short time ago gathered the following facts and figures from him, which will be of interest not only to marsh proprietors but to those of our readers who have only heard of 'marsh making' from a distance, as it were:—

"You cannot" said Mr. G., "have a really correct idea of the way we make marsh until you personally visit the field of operation. There are thousands of acres of bog or marsh land at the head of the Tantramar, hundreds upon hundreds of which have been converted into excellent marsh, and large tracts of it are now under the process of formation. The moss, growing upon those great wastes is in some places 4 to 5 feet deep, and black mud to a considerable depth is as a rule found beneath it. Most of this bog is above high water mark, and its value depends entirely upon the location. If it is far removed from the rivers it is worth about \$2 per acre, but if near them and consequently easy to drain the price is set at about \$8. When this bog land is drained it settles several feet, and then large canals are dug, leading from the nearest river, through which the tide flows, decaying the moss and leaving a rich deposit of mud behind it. The bogs are generally to be found lying between the marsh and the upland, and consequently in most instances the canals have to penetrate the marsh first. This brings the water on hay producing property which is an objection to some,

but to my mind flooding is just what the marshes of this country require. These canals are wider at the top than at the bottom and quickly fill with mud, great trouble being experienced in keeping them cleaned out. The rush of water has a tendency to wear away the banks and make the canals wider. One of them is now a recognized river, and from its appearance it is difficult to believe that it was originally made by the hand of man. It requires 3 to 5 feet of mud to be deposited on the moss in order to make good English marsh. The canal is the main ditch and smaller ones run off from it to the centre of the bog. It takes 10 to 15 years to obtain a sufficient amount of this deposit to grow fair hay, and then another 15 years before good timothy can thrive. There are some curious scientific features about the grass growing on these bogs. Sir William Dawson had the matter referred to him for explanation, but he gave it up as a mystery. It seems that even when there is only six inches of mud laid down on the moss a peculiar water grass will grow of its own accord. The third year, when two or three feet of mud has accumulated, a mixed grass springs up and thrives, and after a sufficient depth has been secured to authorize one to shut out the tide, and the newly made marsh has been drained, English hay will appear and thrive without any seed being sown. Now the question is, where do these different varieties come from? It almost looks like a process of evolution—the water grass, the mixed grass and the English grass. The germ of all these are apparently in the soil, and make their appearance according to the depth of the mud. This mud comes from the Bay of Fundy and is the washings of the cliffs on its shores, and how grass seed can generate as it were from this is more than any man can conjecture.

A number of people have seriously considered marsh making as a bad financial enterprise to embark in, and assert that those engaged in it are only benefiting the country and the general public at their own expense; and would be much wiser men if they laid out the same amount of money so expended in, buying up marsh already under cultiva-

tion. I have made a good deal of marsh in my time, and have figured the matter closely and have concluded that it decidedly is, as an investment, both profitable and safe, whereby you can enrich yourself and at the same time become a national benefactor on what may be termed a small scale. These figures will show you how I make up my calculations in this matter."

Mr. George here hastily wrote out and handed his interrogator the following table which the reader can examine and place himself in a position to arrive at a conclusion:—

Cr.	
By 10 years grass averaging \$74 per year	\$740.
grass grown when draining 5 years	
averaging 37 tons per year @ \$2.50	462.50
receipts for grain and grass next five years	1,600
marsh at this time is under the plough	
and seeded down and averages 2½ tons	
to the acre, and is worth no less than	2,500.
\$100 per acre	\$5,302.50.
Dr.	
To 25 acres of moss land @ \$2 per acre,	50
15 years of flooding and ditching	
and if done properly @ \$100 per	7,500
year	
expenses next five years in drain-	
ing and making marsh fit for	
the plough @ \$1. per acre for	250
that time	
compound interest @ 6% on above	
outlay for the 20 years amounts	200
to about	2,000.00
Total balance of profit=	\$3,302.50

"This total" continued Mr. George shows a satisfactory profit, and should be made much larger, for if compound interest can be added to the debit side the credit side should also receive the same advantage. I have made those calculations hastily and have to a certain extent figured approximately, but whatever other people may think I am convinced that money judiciously laid out in marsh making will yield a good return."

Some Interesting Facts.

One of our regular correspondents recently approached Mr. T. C. Wallace of Fairville, St. John Co., N. B., and gleaned from him the following notes:—

PEA FODDER.

"There is a black-eyed pea which looks like a bean: it is a southern pea, grows a heavy, straight stalk with large leaves and does not need any other grain grown with it as the stalk supports it. I have had them in brown and white with black eyes and called them the southern corn pea. They will give the best satisfaction for fodder.

BORN FEEDERS.

Unless a man has an aptitude for feeding stock he had better hire some one that has. Good feeders are born, not made. I have had the training of a good many and invariably find that those who do not take to stock feeding quickly and show good judgment never make a success of it. If one of the boys shows an aptitude for feeding the stock well, encourage it and give him charge of the barns.

SILOS CHEAP.

Many farmers think the silo expensive. They are wrong. Fifteen feet square and fifteen feet high will easily hold seventy tons and may be made to hold more by weighting, which by the way, is not necessary for the preservation of the fodder but will do no harm. The silo need not be underground in fact it is better not to be, but the bottom of it should go beneath frost level and the drainage should be good. The sides can easily be made air tight with boards and tar paper and a dead air space between it and the outside boarding of the barn. The sides must be strong enough to withstand the pressure from within outwards of the ensilage as it packs. Every part of the work can be done without hiring a mechanic. Hay barns to hold the bulk of fodder dried cost many times more."

[In another part of this issue a letter over the signature of Mr. Wallace may be found. We would advise our readers to peruse it, as it proceeds from the pen of a gentleman who has had practical experience in the matter upon which he writes, not only in this country but in New York State as well.—Ed.]

A Free Trip to Europe.

The publishers of *The Canadian Queen* will give a free trip to Europe to the person sending them the largest number of words constructed from letters contained in the name of their well known Magazine "*The Canadian Queen*." Additional prizes, consisting of Silver Tea Sets, Gold Watches, China Dinner Sets, Portiere Curtains, Silk Dresses, Mantel Clocks, and many other useful and valuable articles will also be awarded in order of merit.

Webster's Unabridged Dictionary to be used as authority in deciding the contest.

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### The Potato.

BY ELI E. JOSSELYN M. D., ASSISTANT  
PHYSICIAN PENNSYLVANIA HOSPITAL.  
FOR INSANE PHILADELPHIA.

[Written for the Agriculturist.]

The potato may rightly claim to be the most valuable esculent root with which we are acquainted. As an article of food it occupies a prominent place in the daily diet of the majority of the people living in temperate climates. It is highly nutritious for man or beast. It can be palatably cooked in a variety of ways. Although much more productive in some localities than in others it gives a fair increase in a great diversity of soil and climate and under widely different modes of cultivation.

Notwithstanding it is now commonly known as the Irish potato and is in general cultivation in the countries of the Old World, it is purely American in its origin. At the time of the Spanish conquest under the leadership of Pizarro, the potato was found under cultivation by the Incas near Quito, and grew indigenous to the lower ridges and high table lands of the Andes in Chili and Peru. A Spanish monk by the name of Hieronymus Cardan is supposed to have first introduced it into Spain. A book published at Saville in 1553 entitled *Cronica de Peru* by Pedro Cieca contains the first printed account of the potato in any language. The natives of Chili are said to have called the plant "papa" which the Spanish corrupted into "battata". This their neighbors in Portugal softened into "ba-ta-ta" which ultimately became spelled and pronounced, potato.

In 1584 Sir Walter Raleigh was granted a patent by Queen Elizabeth "for discovering and planting new countries not possessed by Christians." Thomas Harriott accompanied the expedition to America and sent home the description of a plant called "openawk" found in Virginia, where it had probably been introduced by the Spanish in their intercourse with the early settlers, as there is no evidence to show that the potato is indigenous to either Virginia or California, "having round roots

hanging together as if fixed on ropes and good for food either boiled or roasted." On the return of Sir Walter in 1586 he took with him some of the roots, a portion of which were afterward planted at his residence in Youghal, near Cork. This was the first introduction of the potato into Ireland. The *Cyclopedia of the Society for the Diffusion of Useful Knowledge* published in London states that long after the potato was introduced into Ireland it was introduced into Lancashire, by a shipwreck at North Meols, at the mouth of the river Ribble and from there gradually spread through Great Britain.

De l'Esclure whose latinized name was Clusius, a botanist living in Vienna in 1588 wrote of the potato. He received two tubers from Flanders, which had previously been brought from Italy where they had been received from Spain. He describes the plant under the name of *tatouffis*.

The next author of note to write about the potato was Gerard an English botanist, who had a garden near London in 1597. He describes them in his *Herbal* as "being roots which do strengthen and comfort nature and are used to be eaten roasted in the ashes, some, when they be so roasted infuse them and sop them in wine, others, to give them greater grace in eating do boyle them with prunes and so eat them."

The illustration of the potato in Gerard's *Herbal* is said to be the most accurate of any given by the early writers.

After the potato had been introduced into Europe its cultivation continued very limited, being grown only in the gardens of the rich as a novelty or as a delicacy.

Potatoes were provided for the table of Queen Elizabeth at 2s per lb. in 1619. In 1663 they were brought before the Royal Society of England as a vegetable of national importance, yet the *Complete Gardener* which was published by leading London nurserymen in 1719 made no mention of them. The *General Agricultural Report of Scotland* in 1725-6 states that the potatoes cultivated in the gardens near Edinburgh were left in the ground from year to year, only a few of the tubers

being removed in the fall for use, the remainder being covered to protect them from freezing in the winter. About 1732 they were cultivated in Scotland as a field crop. The most important publication on gardening issued in 1771 mentions only two varieties of potatoes.

At the present time it is difficult to understand why the potato made such slow progress toward popular favor. One of the reasons urged against its use principally by the Puritans, was that as no mention is made of it in the Bible it must be unlawful to eat it. Strange as this objection appears to the present generation it is hardly less unreasonable than the opinion entertained of it by the people of New Hampshire in the early days of that state when it was considered unwholesome and not suitable for daily use. This idea is said to have been so generally held in the state at one time that articles of agreement drawn relative to apprentices that a clause was sometimes inserted forbidding the apprentice to be compelled to eat potatoes more than twice in one week.

It is not improbable that the learned men at the time of the introduction of the potato into Europe may have had some hesitancy in recommending it for general use as food because belongs to the family of plants designated as *solanums*, the botanical name of the potato is *solanum tuberosum*, which contains among many others such poisonous plants as tobacco, henbane, stramonium and belladonna. The potato being found in such questionable company was probably regarded with some degree of suspicion. The vines contain a poisonous substance as do the tubers under certain conditions as when they grow above ground. The action of the sun's rays changes the chemical constituents of the potato as well as turns the tuber to a greenish color. The bitter taste in these greenish potatoes is produced by the poisonous element which is never developed in the tuber if it is grown under ground and not exposed any length of time to the sunlight. The poison is called solanine and four grains of it have killed a dog. However large the amount of solanine in the vines or in potatoes exposed to the sun, in properly grown tubers it does not exist, although it is found in the sprouts. It may be interesting to note in passing that this family of *solanums* contain such other esculents as the tomato and egg plant as well as the potato.

*To be continued.*

## The Horse.

### Horse Breeding in Canada.

In aiming to breed the light harness horse as a business, speed is the trait too often sought—beauty of form, soundness, attractive action, size, are hardly thought worthy of a place in selecting the stallions to breed to our road mares. The hope of drawing a winning card by breeding something fast is the great aim, while if a horse is only sired by something fast, that can trot in the 30 list, or has a brother or a sister a winner, or is bred in the same line as a horse that has just lowered his record, it matters not about the other useful and necessary qualities. They may hobble all over the road be curly legged, like the \$105,000 Axtel and his sire, or any other blemish that will at once block the sale in \$75 horse, yet if they have fast blood in their veins they will pass muster at a trotter, with the hope that one in 500 will be fast enough to pay for training. Now against the trotter that America has made a special production of, we have not a word to say, provided size and other qualities have not been overlooked. The gentleman's driver is one of the luxuries that are most saleable among horse flesh—very few of our business men but indulge in something of this kind. But why not allow some other quality than speed to be the first to look to. There are among our standard bred horses those that have lots of size, any amount of quality, good color, beauty of form enough to please the most fastidious, and some of the knowing ones are just now making a specialty of breeding them. They say they will get a trotter once in a hundred times, you may get one in fifty, but we have a horse that, if only one in a hundred draws a prize, the other ninety-nine will sell at a good profit; while your fiftieth sells at a good long price, you have forty-nine horses that are next to useless—poor, worthless weeds that are out of place wherever they are placed. It will take two of them to draw a moderately heavy buggy, and then they will lag on anything over an ordinary journey. On the highly finished half-mile track they will do, but on the country road they are entirely out of place, while on the street in the city they are worse. That there is a vast difference between the trotter and the gentleman's driver, it is well known and recognized by breeders of experience. The inexperienced breeder, however, fails to grasp the importance of the difference. We see labored articles in which the writers have advised farmers to breed their mares to standard stallions, with the purpose of getting trotters; failing to get trotters, they would get roadsters—the next best thing. Many stallions with fast records are inferior on the road, and are even unpleasant drivers themselves. They may get trotters when properly mated, but never good roadsters. Let us briefly consider the main point of difference between the two classes of horses. The trotter, to be valued as

such, that is, for turf purposes, must be a horse with pure trotting action, or easily made to acquire the action by means of weights and scientific shoeing, must have speed 5 to 10 seconds better than his record. But if once out classed by being forced to a record which represents the extreme limit of his speed, or through bad engineering obtain a record they cannot again approach, they have very little show of a share of the profit when started in a race in which they are eligible. What becomes of them? A few are kept on the turf by men who are sanguine enough to hope they will yet acquire speed to win. The mares, if well-bred, may find their way into the breeding ranks, and so, too, the stallions, but what of the geldings? The percentage that will make good roadsters are readily sold to wealthy men at big prices, but unfortunately the percentage is not one in fifty. The rest are often lost sight of, some of them find their way into the hands of unscrupulous owners, who give them new names and make "ringers" of them at some fourth-rate track, or they do to fill up the attractions of our fall exhibitions; the rest eventually wear the work harness, and haul scavenger's wagons on our streets. The roadster, as a success, is a horse with fairly true trotting action, with a gait moderately open, so as to be easy for himself; a strong constitution, good legs and feet, plenty of nerve; good style, carrying his head well; good color; well broken; good mouth, not a puller, yet holding the bit well; ready for a brush on the road, or willing to trot along at a four or five-minute gait; quick to respond to the word or line, and altogether a pleasant animal to drive—in fact a gentleman's horse all over. How many trotters answer this description? It therefore appears that for profit farmers would find it much safer to breed for the points necessary to fill the bill as a good roadster. In the past our horse breeders have sought more for some imaginary ideal, rather than come down to cold, hard facts. The chances of breeding a fast horse that will ever pay the cost of raising and training is a matter of extreme improbability. It may serve as a pastime to men of capital, but to farmers it is a very doubtful means of increasing their yearly profits.

The rich harvest that breeders are now reaping, in some of the lines of horse breeding, is a proof of what close attention to the useful points may attain. For instance, in heavy draught horses the Clydesdale men have now produced a horse weighing up nearly a ton, that can trot, of showing, easy carriage and attractive action, when shown upon the line, that will put to blush many of the light horses. Being extremely practical, they have paid such attention to the form of legs and feet, as well as quality of bone, that their horses are sought after from every country that is on the road to improve ment. The present is especially a practical age, and those who produce a horse for a purpose must at the outset breed with a definite purpose.—*The Farmer's Advocate.*

### Fast Walking Horses for Farmers.

If those who are breeding draft horses would seek fast walking sires in place of fast trotting draft sires, they would be doing the right thing. An exchange has the following good-sense talk on this subject:

In purchasing or hiring a plow horse, stake off a mile of the road. Mount the horse and see how many minutes it will take him to walk a mile. A horse that will walk three miles an hour is worth three times as much as a horse that walks but two miles. The three-mile horse not only does as much work in two days as the two-mile horse does in three, but he enables the man behind the plow to do 50 per cent. more work in a day than he can do behind a two-mile horse. And the man and horse consume with the slow team 50 per cent. more rations in doing the same work than the fast walker does. In twelve months the man would do no more carting and plowing with the slow horse than he would do in eight months with the fast walker.

Suppose a farmer to hire a man and a two-mile horse to do an amount of plowing and carting that takes three months to perform, and pays \$3 a month for his feed and \$18 for a man, who boards himself; \$24 a month; three months, \$72. If he hires the same man \$18 a month and pays \$3 for horse feed, and \$4 for a fast walker, he will do in two months what the slow team does in three. Two months, fast team and feed and plowman, at \$25 a month, \$50. Direct loss by the slow horse, \$22; besides, the work done by the slow horse is not so well or seasonably done—the seed may be put in the ground too late, the grass may get ahead of the plow, and the indirect loss by the slow team may be serious, besides the \$22 loss stated above.—*E.r.*

### Management of Farm Horses.

The following is an extract from a prize essay on this subject written by a practical farmer and horse breeder of Ontario, and is well worthy the careful perusal of every thoughtful horse owner:

Farm horses should be fed at all times liberally with good hay; two thirds timothy, one third clover is best. They should have cut sheaf oats with meal on it twice per day, with one gallon of oats at each feeding. A few carrots once per day is good for them, and it gives them an appetite. They should be watered before being fed three times per day, and well cleaned every morning; and in the evening after working, their legs should be well rubbed and their feet cleaned out, so that there will be no mud or stones in them. Their shoes should be removed at least once per month. Care should be taken that their shoulders do not get sore, and to prevent this, their collars should be rubbed with a smooth stick and cleaned before putting them on. Hoof ointment is good for suck sores on horses. Horses when working steady should have their man-



gers filled with hay at night, and in the morning they should be given all the water they will drink. Then give one gallon or over of oats. Cleaned and harnessed after this they are ready for work as soon as their oats are eaten till noon. Water them before putting them in as they are mostly too thirsty to eat if not watered. For dinner, give half a bushel of cut sheaf oats with one gallon of meal on it, then after the teamster has had his dinner give each horse two heap gallons of oats. One hour and a half should do them at noon. At night water them before putting them in and feed same as at noon. Take off their harness, rub them down well and clean out their feet, fill up their manger with good hay, and give them plenty of clean dry straw to lie down on. The bedding should be all thrown out in the morning and the floor scraped out clean. A good meal chop for horses is made by chopping ten bushels of oats, five bushels of peas, and five hundred pounds of bran mixed. One gallon is enough for each horse with the cut feed. They should have exercise when not working.

**The Pig.**

**Selection of Breeding Pigs.**

[C. L. S. Journal.]

In commencing the breeding of pigs, as of all other live stock, the first thing to be considered is, have we the right kind of stock to make a commencement with? Perhaps, therefore, a few words on the points most essential to a good brood sow may not be out of place.

Professor Long, in his admirable work on swine, "The Book of the Pig," quotes that famous old English writer of 200 years ago, Markham, as saying: "In the choice of your swine let them be large and long of body, deep sided and deep bellied, thick thighs and short legs, high, clean, thick neck, short and strong groin, and a good thick chine, well set with strong bristles." Such is the description of a good pig as given by an agricultural writer of the 17th century, and I do not know that we, in the 19th century, can improve on it very much; for, if our pork packers and bacon curers are to be believed, the pig they want for their trade to-day is the long, deep pig, with medium hams and a preponderance of bacon side.

Having, therefore, decided to select a sow that answers as nearly as possible to this description, what other points are we to look for in her? Well, first of all, if possible, select one out of a large litter, and endeavor to make sure that not only her mother, but also her more remote ancestors, have been famous for their prolificacy, and while considering this point, do not forget to make sure that your sow has twelve teats at least, as without that number she will be unable to raise a large litter of young pigs successfully. In addition to this, a good breeding sow must possess a strong, vigorous constitution, and it is also very essential that her temper be gentle, as it is, in my

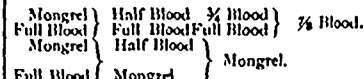
opinion, an almost hopeless task to attempt to raise a litter of pigs successfully when the dam is either too nervous or too savage to allow herself and her pigs to be handled quietly.

Last, but not least, if possible, try and obtain a sow that possesses a good, straight, unbroken pedigree, for by this alone you can be in any degree certain that she will transmit her own good qualities to her offspring.

Having now decided on the various points that we desire in our sow, the next consideration is, how old must she be before we allow her to commence breeding? On this point we find that opinions differ very considerably. Some well known breeders, such as Mr. N. Benjafield, of English Berkshire fame, and Mr. Fred Coate, equally well known among fanciers of Black Dorsets, recommending the mating of yelts with the boar at the age of six months, while others, among them Col. Platt, the well known breeder of Large Whites, prefer not to allow their yelts to breed before they are twelve months old. The greater number of breeders, however, appear to take a course midway between these, and advise coupling young sows with the boar when they are eight or nine months old. Our own experience leads us to believe that this is the best age, provided that the yelt be strong and well grown; if otherwise, we should recommend allowing her to run a couple or three months longer, and in no case would we recommend breeding young sows before they are at least eight months old. Having now obtained a sow, that is, in our opinion, suitable to form the foundation of our herd, the next thing to do is to select the boar to breed her to, and here we require to exercise as much, if not more caution, as we did in selecting the sow; and yet, how often do we find it otherwise. A farmer will go from sale to sale and finally purchase a sow that is, in shape and appearance, all that can be desired, and then, when the time comes to breed her, does he take the same amount of trouble to find a boar that will mate well with her? No, indeed; in nine cases out of ten he will send the hired man with her to some boar that he has never even seen, and that may, for aught he knows, possess exactly the same weak points as the sow does that he is about to be coupled with.

I would, therefore, impress upon my readers as strongly as possible the fact that, as in cattle breeding *the bull is half the herd*, so in swine breeding *the boar is to be considered at least of paramount importance.*

In choosing your boar pig, always select one that, in addition to the necessary qualifications of form and shape, is perfectly pure bred, and no matter how perfect in form he may be, never allow yourself to be persuaded to use a boar that is the offspring of other than pure-bred stock on both sides. The following diagram (copied from "The Book of the Pig"), shows very clearly how different will be the result of breeding from pure-bred and from half-bred sires:



In the first case by using pure-bred boars continually, we get in three crosses an animal containing a very small admixture of impure blood; while in the second case, by using half-bred instead of pure-bred males, and mating them with common stock again, the progeny dwindles down to almost its original state. And yet, in how many cases do we find this practice carried out by our Canadian farmers. Sooner than pay one dollar for the use of a pure-bred boar of one of the improved breeds, they will use a half-bred boar at fifty cents because he is a good looker, quite regardless of the fact that he is as likely to throw stock taking after the most worthless ancestor he has on his dam's side, as he is one taking after himself. Let me, therefore, impress upon the beginner in pig breeding the necessity of never using any but pure-bred males, and also of satisfying himself that the boar possesses those points in which the sow is lacking, as should the sow and the boar possess the same failing, what failing is certain to be reproduced in marked degree in the offspring.

BLUE BLOOD.

**Feeding Young Pigs After Weaning.**

Before the young pigs are weaned, they will be able to eat nicely where they have been allowed access to food beyond the reach of the sow. If a little skim milk is put in a low trough thus situated, the young pigs will learn to drink it before they are two weeks old. It should not be allowed to remain long in the trough at a time or it will sour. After a few days some wheat middlings may be stirred in with the milk. Where this is not at hand oatmeal will answer, but is costly, and ground oats will also answer, but not so well, as they are too coarse.

Where the pigs cannot be thus fed apart from the sow, if the trough in which she feeds is low, or if planks are laid in front of it, the young pigs will soon learn to eat with the dam, but the food in such instances is not likely to be quite adapted to their young stomachs.

They may be weaned at six weeks, but are all the better to remain with their dam until eight weeks old, providing she is well fed, and when weaned, they should at first feed four or five times a day, of the same ration given them before weaning, that is, wheat middlings and skim milk or buttermilk, or when these are scarce, swill from the house.

Various other kinds of meal may be added alone or in combination, taking care not to make the fat-producing foods too prominent in the mixture. These are such as peas and corn. The object should be to make the young pigs grow rapidly without fattening them.

The following mixture will certainly answer well if milk or house swill, or even water, is fed along with it, viz., equal parts of ground peas, ground oats, ground barley, and wheat

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middlings. As they become older, the proportion of the peas may be increased until it is doubled. The meal should be stirred in the liquid before being fed.

Now boys, try your hand at raising young pigs. Don't be content to get the "runts" of the herd to experiment with, for runts never pay well, no matter how skillfully managed. If you could weigh your pigs once a month, or oftener, it would add much to the interest of your work. They should gain quite a bit more than a pound a day for the first few months, and when six months old should weigh about 150 to 200 lbs.

I must not forget to mention that you must be particular to feed them only what they will eat clean, and try and feed them as regular as clock-work.

I will probably tell you how to manage them when grass comes plentifully about the first of June.—C. L. S. Journal.

**What It Costs.**

The *Rural New Yorker* gives the result of an experiment by one of its readers. Here is the daily food for 225 hens and eight chickens one-third grown:

12 quarts of skim milk.....	\$.12
9 pounds of meal.....	.09
2½ " scraps.....	.05½
1½ " poultry food.....	.15
5 " oats.....	.07
7 " cracked corn.....	.07
2 " wheat.....	.03½
1 " oyster shells.....	.00½
3 " clover rowen.....	.02
15 " corn.....	.16
6 quarts of small potatoes.....	.04

Cost per day..... .81½

The writer also adds the following as an exultation of the fact that the hens can beat the cows:

"I claim that I can take care of this flock of hens with less labor than two cows require. Drive up your \$94 worth of cows and show up your figures from them!"

The above is very encouraging to those who know how to make poultry pay. Like everything else the poultry business demands work and attention. The hens cannot be neglected any more than the cow. The writer cleared about \$400 from less 200 hens.

It will be seen that the skim milk is figured at one cent a quart, the grain at about what it would cost here, the clover rowen at \$13 a ton, and the small potatoes at about twenty-five cents a bushel. By these liberal estimates the cost is materially increased, but the ration is a profitable one to study. Striking out the poultry food, and fixing the value of the second crop and potatoes at what they are worth here, the cost per day would be about two mills and one-third per head.

**A Live Town.**

Amherst is admitted to be one of the most enterprising towns in the Maritime Provinces. It supports industries of almost every description and the inhabitants are patriotic in the extreme.

There are many things in and about the town to interest the tourist as well as the general travelling public. The gigantic undertaking of constructing a ship railway across the isthmus of Chignecto is now in progress, and Amherst situated at one end of the works gets the full benefit of the expenditure of capital. Old Fort Cumberland is not far off and is considered a romantic spot to those who are inclined to be antiquarians. But enterprises of this kind and relics of the past are not the only interesting features of the place. To the lovers of a good horse and pure bred stock entire satisfaction can be given. Amos B. Etter, J. R. Lamy, Frank H. Black, Frank Page, C. C. Black, George O'Brien and many others can show to the visitor as fine a lot of horses and well bred cattle as can be found in any part of this country. Hotel accomodation is not wanting. The Lamy House can bear a favorable comparison with what may be found in our cities. Mr. W. B. Ganong is the proprietor. He is a young man, but knows his business and is aware that reasonable rates, an excellent table, first class stables and central situation can do. All these and much more the Lamy Hotel possesses.

**The Division of Labor in Agriculture.**

It is a matter of common knowledge that in large manufactories the cost of production is lessened by limiting the extent of the work performed by each individual so that each requires to produce more than would otherwise be possible. Thus the man who manufactures nails is employed at nothing else, or it may be that more than one is thus employed, each having his particular part of the work to do. The result is more nails are produced than if each person requiring nails were to occupy himself at their production for an hour and have some other employment for each hour of the day.

Upon attempting to apply this to agriculture it is at once apparent that no such mode can be adopted. The farmer must sow in the seed time and reap in the harvest. He cannot plow all year, neither can he cultivate beyond a certain period. There is a reason for doing everything and everything should be done in season, or it may as well not be done at all.

At this point the application usually drops. I think, however, that a closer consideration of the subject will show that a relationship exists between the producer who is a manufacturer,

and the producer who is a farmer. They appear both to be subject to the same conditions and the remedy would seem in both cases to be the same.

The great consideration with the manufacturer is to secure a market. In order to obtain this he must produce an article equal to those already offered for sale, which he must sell at a price as low. His success in the former will depend upon his inventive genius, that of the latter upon his ability to reduce the cost of production. Whercin competition is a "spur to prick the sides of my (his) intent." One mode of securing this end we have already noticed.

The produce of the farmer is also subject to competition. He too must reduce the cost of production. He must acquire a dexterity in some line which will enable him to increase the quantity of his produce. And not only the quantity but the quality as well, for it is the nature of a competition that the best should win. The best always follows the application of the best methods and the greatest care. Then, too, it is necessary in order that the best article may be produced that the natural facilities be favorable for the production of that article.

If this be true the natural conclusion is that the farmer should work on an intensive system, cultivating no more land than he can thoroughly manage, and producing only those articles for which his circumstances are adapted. Should it be necessary to cultivate a less number of acres there will be no loss sustained. Besides the advantages we have indicated there are many of a practical nature which would result from this division of labor. Weeds would be less prevalent than they are, and others which are at once apparent.—W. Russell Bishop in *Ontario Agricultural College Review*.

**Provincial Farmers Association.**

The semi-annual meeting of this association is to be held at Woodstock on July 3rd and 4th.

The following interesting subjects will be discussed on Thursday:—Sheep Husbandry; Pork Raising and Packing; and Fruit Culture.

Prof. Jas. W. Robertson, dairy commissioner of Canada will attend and on Friday will address the meeting on the following subjects: Morning, Dairy Farming for the Dominion; afternoon, Fodder Corn and the consideration of Silos; evening, Agricultural Education.

A large gathering of prominent farmers is expected. To those who are anxious to see this country take its proper place in agricultural pursuits, the meeting will be of especial interest. Ladies are not excluded, but on the contrary are cordially invited to grace the sessions with their presence.

## The Dairy.

### Milk and Butter.

Prof. James W. Robertson, Dominion Dairy Commissioner has just issued a bulletin in which he deals with the question of milk and butter. Prof. Robertson's reputation as an authority on dairy matters is well known and his writings are ever replete with valuable information. He says in the course of this work:

**FAT GLOBULES IN MILK.**—While her milk is being elaborated by a cow, the ends of the cells which line the inside of the milk ducts and vesicles in her udder, seem to enlarge. Each one forms a small globule, and when that is perfected it drops off into the serum of the milk. Each bud or globule, so formed, is a globule of fat; from them is made all the butter from cows' milk. These tiny buds of fat seem to grow on the surface of the cells, partly by the destruction of the cells, and partly by conversion of some of the substance of the blood into fat. They trickle down in and with the milk, and are held in suspension not in solution as are the other solids in it. They mostly come during the latter part of the milking, probably because they do not move so quickly or easily as the liquid part of the milk. The fore-milk is thinner than the strippings, because the globules of fat do not free themselves from the internal linings of the milk ducts so quickly as the liquid of milk. If one finds, sending milk to a cheese factory, a man who is of so modest and retiring a disposition that he will not keep at home for table use a quantity of the average milk given by the cow, but always and only the last quart, his modesty should not be respected or trusted too far; such modesty may not be found compatible with honesty. The condition of the cow's blood and her nervous system very largely affect the quantity of the milk she gives. Bad feeding, foul water or the absence of salt will induce in the cow a condition in which she will not yield good milk; a similar condition, with its consequent effects, may be caused by neglect, exposure, abuse, or excitement. A cow has a peculiarly delicate organisation, and must be handled with kindness, and any man who abuses a cow beats out the profit, for she will pay him back by giving less milk, and that of a poorer quality. The globules of fat, before mentioned, are so numerous that in a three-gallon of milk there will be found millions of them. It is estimated that there are at least one thousand millions of them in every cubic inch of milk. From these specks of fat the butter is made.

**CREAM SEPARATION.**—To get them out of the milk is the task of the butter-maker; they are too small to be strained out with the finest sieve; fifteen hundred of the largest of them placed side by side, like a row of marbles, would not measure more than one inch. If milk be left at rest they will rise to the top because they are lighter than the liquid in which they float. The heavier parts of the milk are

drawn down by the force of gravitation, and as the serum of the milk, composed of water, casein, sugar, albumen, etc., moves downward, it displaces the cream globules and forces them toward the top. There are two methods of separating these fat globules from the milk; a natural method and a mechanical method. In the natural method, the power of gravitation is used to pull the heavier portion of the milk down, with the effect that the lighter part, the fat globules are pushed upward. In the mechanical method, centrifugal force is applied to attain a like result. When a quantity of milk is put into a rapidly revolving vessel or cylinder, the heavier parts will be forced outward against its resting side or inner surface with sufficient pressure to push the lighter particles, the globules of fat, towards the centre of revolution. In that way the water, casein, albumen and the other heavier constituents of milk, find their way to the outside of the quantity being treated in a revolving cylinder, while the globules of fat are collected in concentric form on the inside surface of the quantity being treated. This is the law that the cream, mainly composed of fat globules, travels in a direction opposite to that of the force exerted upon the milk, whether the force be centrifugal or centripetal.

**EFFECT OF TEMPERATURE.**—If ordinary milk in a deep setting pail be left at a temperature of 60° Fahr., it would take these small specks from three to six days to get to the top at the rate which they would move. They can be helped to move faster. The milk at a temperature between 90° and 98° is slightly enlarged in bulk, and by putting it into deep-setting pails at a higher temperature, (90° to 98°), the advantage of a falling temperature from above 90° to 40° or 45° may be gained. That treatment will expedite and facilitate the upward movement of the globules of fat. The rapid cooling of the milk is also believed to prevent the formation of a delicate mesh of lacto-fibrin in the milk, which would hinder the globules from rising freely.

**CREAM.**—The cream itself is only that part of the milk into which the globules of fat have been gathered in large numbers. Cream has no regular or constant per cent. of fat; the range is from 8 per cent. to 75 per cent. In one hundred pounds of cream there may be only eight pounds of butter, or there may be seventy-five pounds according to its quality of richness. The globules of fat have no skin or organic coverings distinct in constitution from their own substance. Like drops of quicksilver that have been separated from each other they have no pellicle. But sometimes the serum of the milk becomes so viscous that a quantity of it will adhere to the surface of the globules and like a coating of gum will prevent their movement upwards when the milk is set, or their movement inwards when the milk is treated in a centrifugal machine. If a quart of warm water be stirred into every pailful of milk when it reaches the dairy room from the stable, the separation of the cream will be facilitated. The water may be at a temperature anywhere between 150° and 180° Fahr., and should be warm enough to raise the temperature of the milk to above 90°

### Feeding for Butter.

HENRY STEWART.

One by one the scientific authorities are helping to put a quietus on the misleading and injurious statement that the proportion of butter in milk can not be increased by feeding. It is strange that such a heresy should have obtained currency among those to whom dairymen look for instruction. The writer, led by long experience to differ from the prevalent belief, has singly fought the error and has sustained the opposition to it alone for some years past. And now the professors are coming to the rescue, one by one, and already a powerful influence for the good of dairymen is exerted to encourage them to feed rationally for increasing the fat solids in the milk. First, the Wisconsin Experiment Station, in a bulletin, declared that by suitable feeding the proportion of butter fats in milk may be increased; then Prof. Phelps, of the Connecticut Station, and now Prof. Caldwell, of the New York Station follows in making the same statement. Eight or ten years ago I gave a detailed account of the effects of various foods in this direction, observed through a whole year's experimental feeding, which has been reprinted in the "American Dairymen's Manual," and which shows how various foods, rich in oil, tend to increase the proportionate quantity of the butter in milk, and how they also affect the quality. This last effect has been recently noted by the chemist of the agricultural department at Washington, and reported in a bulletin, and this is exceedingly noteworthy as showing the importance of choosing those foods whose fat will not deteriorate the quality of the butter.

This point may be worthy of some explanation. For some years past physicians have known that fats in food or in medicinal preparations, when taken into the stomach, are not digested, but are mixed with the digestive fluids in the form of an emulsion, precisely in a similar manner to the mixture of the fat globules in cream, and that this emulsion is absorbed without change by the villi of the intestines, which are very fine tubes, set so closely together

as to leave the appearance of the pile of velvet, and whose office is to absorb the nutriment and pass it into the thoracic duct, the large vessel which is found passing along the spinal column and close to it, and which conveys the nutriment directly into the blood, so that the minute globules of fat in the food thus pass directly into the blood, by which they are distributed to the various parts of the body, and of course to the minute glands of which the milk is formed. And when this glandular substance is broken down to form the milk, these same particles of fat are let loose and escape into the milk and form the butter.

Thus, tracing the fat in the food in which it exists in the form of minute drops or globules in the cells which make up the tissue of plants or grains, we can follow it directly into the milk, without change; and thus are able to account for the effects on the milk of the various kinds of foods given.

This knowledge is of fundamental importance to the butter-maker, and the whole subject is worthy of the most careful study. It relates too, to the varying ability of the cows to extract the fats from the food, for cows vary very much in this respect, and some can healthfully dispose of twice or three times as much fat as others, and some, as in the case of the Jersey cow Princess the Second, may be able to actually convert seven pounds of fats in the foods into butter in one day. This is a physiological function and ability, and is thus to be inherited and conveyed by breeding, while it is excited and encouraged—educated, as it may be said, or led out, as the words signifies—by feeding and training. Thus, it may not be right to think or speak of such cows as phenomenal, any more than we should call the extraordinary young horses Axtell and Sunol phenomenal. They are not so at all. They are instances of the result of human power skillfully exerted over the domestic animals, and every one of the numerous examples of this successful exercise of man's dominion over creation should be an incentive to exertions in the same way by every intelligent dairyman in the improvement of his herd, and in his pursuit of success and profit in his business.—*American Agriculturist.*

Stock Notes.

John L. Bancroft, of Roundhill, Annapolis, N. S., has sold his short-horn heifer Gypsy, No. 339, to N. P. Whitman, of New Albany, N. S.

Andrew LeCain, also of Roundhill has sold his short-horn bull-calf, Duke of Albany, No. 420, to the New Albany Agricultural Society.

Conductor John Coffey of Moncton owns a ten month old colt sired by Dearborn and out of a mare by Gold-leaf, the property of William Hodge of same place.

Mr. J. D. Wilbur, of Shediac, reports that his Ayrshire cow Nora B. 191 N. B. H. B. dropped a heifer calf the 1st April last by Alexander 301, N. B. H. B.

The number of horses with records better than 2.30 is now 3,851. 794 of this number obtained their records the past season, either reducing their records or getting new ones better than 2.30.

It is to be hoped that the management of the St. John exhibition will offer prizes for "best stallion and four (or five) of his colts" in each section. For it is the sire that has the ability to get the best stock that is eminently valuable to the country.

There has been thirty-five horses to enter the 2.30 list in Canada the past season. They were either bred in the Dominion or obtained their records on Canadian tracks. The fastest was the stallion Gold Ring by Eden Golddust, bred by D. Davis, of Alymer, Ont., who trotted in 2.18.

Mr. Herbert Hall, of Roseneath, Gagetown, N. B., has shipped his Clyde filly to Egerton Stock Farm, Stellarton, N. S., to be served by that noted Clydesdale sire "Jamie the Laird." We predict success for Mr. Hall in his enterprise in his enterprise in shipping his mare such a distance to meet a horse of the "Laird's" merit.

The proprietor of Egerton Stock Farm reports the birth of a calf from another of his imported Holstein cows. This time it is a bull calf sired by the grand old bull "Emitt," bred in Holland. This is a chance to get a good Holstein bull cheap if taken soon.

John McIntosh, of Stellarton, N. S., had two Clydesdale mares served by "Jamie the Laird" last season. The youngest mare presented him with a beautiful young stallion the latter part of April. This colt is a most promising one and gives evidence of being a good acquisition to the stock horses of Nova Scotia some day. We hope to see some enterprising young man secure him soon.

Mr. Amos Vernon, of Minudie, N. S., has been presented this spring by his brood mares with the following foals:—

April 1st, brown colt by Good Luck 6612, dam of unknown breeding property of Willard Dawson, of Minudie.

April 4, bay filly, by Sir Charles by Mambrino Charta, 2.30¼ he by Mambrino Chief 2.34¼, sire of five with records better than 2:30, dam, Topsy, thoroughbred, this filly is bred in the same lines as Maud C. 2.32.

April 18, dark brown colt, by Good Luck 6612, sire of Delight 2.29½, he by Hermando 2.37½, he by Almont 2.29¾, sire of thirty-five in the 30 list, dam Daisy, by Lauders Knox 2.40, sire of Col. Lang 2.31½, Harry Baker 2.40, Lord Nelson who sired Katie B. 2.30, and Dodge Knox 2.50, sire of Sir Garnet 2.34. This is a very large and fine colt resembling his sire.

April 21, chestnut filly, by Heck 5354, he by Melbourne King 2.37½. dam, Gypsy, by R. R. Morris sire of J. P. Morris 2.20¼, Senator 2.26½ and eight others with records better than 2.46, 2nd dam by Crown Prince 2.25.

Press Notice.

We are in receipt of a copy of the first issue of the *Daily Press* published at Amherst, N. S. This is another proof added to the list that this little town is determined to have a place in the front ranks. The proprietors of the new paper were the founders of the *Weekly Press* which they still continue to publish. They are energetic men and deserve success. The AGRICULTURIST wishes them well.

**WOODSIDE FARM.**

The following Stallions will stand this season on this farm (commonly known as the Jardine place) situated on the Marsh Road, one mile from the city.

**SIR CHARLES, 2745**

Terms \$50 sure colt. \$25 for the season, with the usual return privileges.

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SAME TERMS.

**DAVID BISMARCK,**

By Victor Von Bismarck, 745, the sire of Edgemarck, 4 year old record 2.16 Terms \$20. Sure Colt.

**MAMBRINO WILKES,**

By Commodore Wilkes, he by George Wilkes. Terms \$20. Sure Colt.

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Birds of best strains imported from England by Nova Scotia Poultry Association. Unequaled as layers; non setters.

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Human Hair Goods of Every Description kept on Hand.

Gentlemen's Wigs a Specialty.

I challenge competition with other Goods made in this or any other country.

**American Hair Store,**

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Up one flight.



**LANGSHANS.**

(Croad Strain) 1st prize, Maritime Exhibition, Moncton 1889. Eggs for hatching \$2, per setting. Hardy. Easy kept in confinement. Grand winter layers. Egg & table qualities combined. Cock "Black Prince," imported from England last year at head of my flock. Broken eggs replaced. Also English La. Brahmas and Yorkshire Swine. C. FRENCH, Truro, N. S.

**Wilkes Filly**  
**FOR SALE.**

She is two years old, good size, color black. Sire

**HARRY WILKES.**

Dam is by Lord Nelson out of a full bred mare.

For further particulars apply to

**E. S. HALL,**

ST. JOHN, N. B.

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Readers will find it to

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Mention the

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CAPITAL - - \$5,000,000.

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THE Following are EXTRACTS  
FROM TWO LETTERS

"Your letter of - received, I will take the care of oil you offer; "Send at once two Bbls. Gardenia. I have never used such nice oil before, and as long as I can buy it you can count on me as a customer; you can also depend upon it; I prefer to patronize a business whose success and profit is not dependent upon other's ruin. This is not in my catechism."

The above speak for themselves and should be sufficient guarantee of the superior quality of Gardenia. During the past seven years I have improved the quality of the oil imported into the provinces at least fifty per cent., and being a thoroughly practical man and following my business from A to Z. I will continue to improve the quality of the oils imported. I have held the confidence of my trade almost to a man, and I refer to them for the superior quality of my oils and for the treatment they receive. I keep in stock all kinds of Oils, American and Canadian, Animal, Vegetable and Mineral, for which I respectfully solicit orders, which will be filled at lowest prices consistent with the quality of the goods I sell.

**J. D. SHATFORD,**

ST. JOHN, N. B.

**SPECIAL PRIZES.**

**First.**

OFFERED BY,

**THE MARITIME AGRICULTURIST.**

ROBERT. JARVIS GILBERT,

Publisher and Proprietor, Dorchester, N. B.

**A SILVER GOLD-LINED CUP;**

to be awarded to any Son of a Farmer residing in the Maritime Provinces for the best essay written by him on the subject.

**"The Best Means of Inducing the Boys to Remain on the Farms."**

All essays to be sent to the Secretary of the Exhibition Association St. John, N. B. on or before the first day of September 1890, and judgement to be passed by the Editor of the above Journal and two directors of the said Exhibition. The successful candidate will receive his Prize during the holding of the Exhibition and his essay will be published in the Columns of the Agriculturalist in the issue following the closing of the Exhibition.

The Exhibition Association, in addition to the above Prize will award a

**"First Class Diploma."**

under the same conditions of competition.

**Messrs. Manchester, Robertson & Allison**

offer the following Prizes for butter, with a view to stimulate and increase the knowledge of good Butter making in the Maritime Provinces, and their wish is that the money should go to the Farmer's Wives and Daughters.

First Prize \$50. Second \$30. Third \$20. Forth \$10.

Butter to be in crocks or ferkins holding not less than 25 lbs.

**Girls Prize.**

Butter made by Farmer's daughters not over 16 years of age. First Prize 20. Second Prize \$10. Third prize \$5.00.

Butter to be in crocks or ferkins holding not less than 15 lbs.

The above Prize will be given to each Province, New Brunswick, Nova Scotia and Prince Edward Island.

Each Province to compete separately and will be judged by an unprejudiced expert.

Butter must be the product of a Bona Fida Farmer who is engaged in no other business.

A further prize of \$50 to be called the Sweepstake Prize will be given for the best 30 lbs. of Butter or over in crocks or ferkins. This prize will be open to all three Provinces and will not be confined exclusively to Farmers, but must not be creamery Butter.

**FOR SALE.**

**Building Property and Wilderness Land  
SITUATED IN THE CO. OF WESTMORLAND N. B.**

Lot of Wilderness Land, known as the "Intervale" containing 250 acres more or less, and situated about ten miles from Moncton near the Buctouche and Moncton Railway. A large stream and the Main Road intersect it at different points. Also contains excellent grazing land and valuable timber.

Lot of Wilderness Land known as "Gilbert's Mills," containing 240 acres more or less, and situated at the head of the Shediac River, about seven miles from Shediac. Valuable mill site and timber, also contains several acres of cleared land recently cultivated.

Lot of Wilderness Land known as the "Kouchibouguac Lot" containing 250 acres more or less, situated near Dickie's Mills and about five miles from Shediac

Lot of Wilderness Land known as the "Abougaggin Lot" containing 200 acres more or less, situated about fifteen miles from Shediac on the Main Road leading to Cape Tormentine.

Two Building Lots, situated on the beach below Shediac numbers 17 and 18 respectively,

One Building Lot, situated at Shediac Cape, containing one acre more or less, and being the site of the residence of the late W. J. Gilbert, Q. C., stone foundation for new building, garden, orchard, a well and fences on the premises. Fine view of Shediac harbour. Only a few hundred yards from the beach where excellent bathing can be had. Churches and school houses in the neighborhood.

For particulars apply to ROBERT JARVIS GILBERT, Manager of this journal, or WM. B. CHANDLER, Barrister-at-Law, Dorchester, N. B.

### Scientific.

#### Some Noxious Insects.

Within the past few years there has been a very notable increase in the numbers of certain insects, whose depredations to a farm crop tend greatly to decrease the profits accruing from the farmer's labors. Several insects which formerly were present only in small numbers and whose ravages were inappreciable, have increased so as to present in many cases a serious obstacle for the producer of the affected crop to overcome. It is only a few years since the potato bug made its appearance and greatly increased the cost of that popular tuber. Several years ago clover seed was a staple crop in some sections, where to-day the seed is rarely produced on account of the visits of the tiny, yet mighty, clover midge. These changes have in some cases been brought about by foreign insects coming to our shores in ships, as did the Hessian fly, and also by some natural agent which facilitated the multiplication of the pests.

Below will be found a short list of some of the most common insect pests of the farm, with the most popular and practical remedy with which to meet their attacks. In all cases it is well to apply the remedies as soon as the injury is detected rather than to delay the operation and give the insects time to become numerous.

**The Onion Maggot.**—The mature insect is a little two winged fly, which early in summer lays her eggs on the leaves of the young onion close to the ground. In a short time the egg becomes hatched into yellowish white maggots, tapering in shape and without legs. These maggots, or larvæ, soon eat their way into the bulb of the onion at the lower part and their presence then may be easily detected by the sickly appearance and yellowish tinge of the plant. They feed on the onion for about two weeks when they enter the earth and become changed to the form of a pupa, a small oval body, with a brown exterior, in which state they remain torpid for about twenty days, when they emerge in the form of a

mature insect and at once commence laying eggs for a second generation. It will thus be seen how rapidly they multiply. In dealing with this insect, two preventive measures are recommended: don't plant in the same ground succeeding years, and in planting the onion, if in sets, plant deeply so that the fly cannot deposit her eggs near the root. Another efficient remedy is in spreading about the onion plot a substance, the smell of which is objectionable to the fly. A preparation made by boiling two quarts of soft soap in rain water until dissolved and mix with a pint of crude carbolic acid, when ready to apply mix one part of this with fifty parts of water and sprinkle the plants. When the plant is seen to be affected burn it out at once. If allowed to remain it will soon become a mass of maggots which will threaten the whole crop.

**The Squash Bug.**—This creature is well known to every grower of squashes. As soon in spring as the young squash plants become large enough, the female, a six-legged, triangular headed insect, with a very objectionable smell deposits her eggs on the under side of the leaf, to which she usually adheres. This is done usually in July and in a short time the little bugs make their appearance and commence their work. Like all bugs, they live by suction, having a long slender beak which they thrust through the skin of the leaf and pump out the sap. It will readily be seen what a vast amount of damage may be done by a horde of such insects in a short time. As they are found mostly on the under side of the leaves they may be removed by hand picking and by crushing the eggs. Where the plant is cultivated on a large scale this is impracticable. A mixture which has been found to be exceptionally useful on a large scale is that of two quarts of plaster of Paris and about a tablespoonful of lamp oil. This placed about the plants will drive the bugs off. If one application is not sufficient repeat the dose. It is safer than Paris green and is equally good for the attacks on melons and cucumbers.

**The Leaf Caterpillar.**—Every orchardist has noticed the webs of this insect

and how soon a small arm of caterpillars which emerged from its exterior would devastate the leaves and twigs in the vicinity. There are two insects bearing this name, but having slightly different habits. One makes its web on trees in cultivation, while the other attacks trees and bushes in the woods. The eggs may be detected in the winter or when the tree is destitute of foliage and no little trouble will be obviated if all that are seen are destroyed. In the spring they hatch and at once commence the building of the lini-like webs. The larvæ are when full grown about an inch long, very hairy and having running the entire length of their backs a white streak. In the forest variety this streak is broken into dots. The remedy consists mainly in removal. When the tints are discovered the knife should be used and the twig or branch cut off and burned. In this case, as in others, if a concerted action were taken by all orchardists, and these pests destroyed as far as possible, a visible decrease would soon be apparent.

### Homestead Stock Farm.

I HAVE FOR SALE

#### A NUMBER OF FIRST CLASS PERCHERON HORSES,

Both sexes, imported and home bred ranging from sucklings to five year olds. These horses are as good as the best and are of the very choicest breeding, most all being grand children of the Great Brilliant 755 which has a world-wide reputation. At the exhibitions of 1889, he won honors never before accorded to any sire in the annals of live stock breeding at the Great Show of the Society Hippique Percheron of France where ninety prizes were awarded every first prize animal in every class was of Brilliant blood. Brilliant XXII, 14729 French S. B., 11077 American S. B. A magnificent black stands at the head of my stud. As a stock getter he has more than met our highest expectation. In both grand and thorough-bred classes wherever shown his colts have stood first.

I have selected my own horses from the best and most reliable breeders in France and will guarantee every animal sold.

Correspondence solicited, inspection invited and visitors always welcome.

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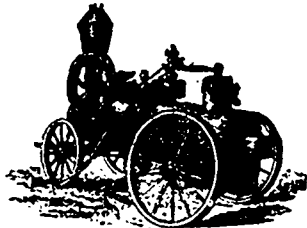
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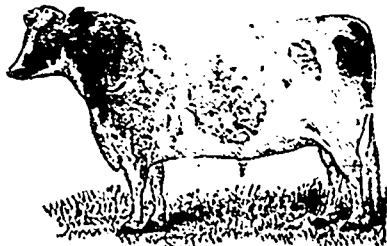
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**1890. SUMMER ARRANGEMENT 1890.**

On and after Monday 9th June, 1890, the trains will be run daily (Sunday excepted) as follows:

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Fast Express for St. John.....	2.09
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227 All trains run by Eastern Standard Time.  
D. POTTINGER,  
Chief Superintendent.

Railway Office, Moncton, N. B.,  
6th June 1890.

**BUCTOUCHE & MONCTON RY.**

On and after Thursday JUNE 12, trains will run as follows:

Leave Buctouche.....	7 15	Leave Moncton.....	15 30
Arrive Moncton.....	9 45	Arrive Buctouche.....	17 30

C. F. HANINGTON,  
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Moncton, June 10, 1890.

**Eggs for Hatching.**

Silver Laced Wayandottes, \$1.25 per setting, White and Brown Leg-horns \$1.00 per dozen.

Our Poultry took all first prizes at the Exhibition held in Amherst in 1889.

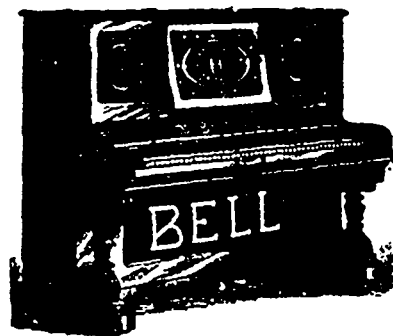
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Correspondence solicited.

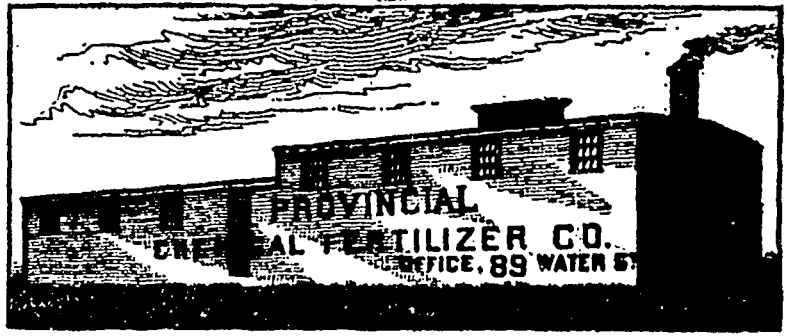
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**IMPERIAL SUPERPHOSPHATE, POTATO PHOSPHATE, LONE MEA.**

We are offering the following Prizes this season to the farmer obtaining the best results from acre by the use of our Potash Phosphate \$20 in Gold. To the farmer obtaining the best crop of Buckwheat from 1/2 acre by the use of Imperial Superphosphate, \$25 in Gold. Send for Catalogue.  
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**IMPORTED and HOME-BRED**



**STALLIONS and FILLIES.**

We have the best selection of STALLIONS ever offered for sale in the Maritime Provinces of Canada, and at prices to suit the times. Royal Victor, 2 years and 10 months old weighs 1625 pounds. Scotsman 2 years and 8 months old weighs 1460 pounds. Weights range up to 1850 pounds which is heavy enough for crossing on our mares. We make individual merit and quality our special object. At Moncton out of three stallions exhibited, we carried two firsts and a second. At New Glasgow, seven colts sired by our stallions were exhibited, and carried four first and three second prizes home. At Truro in '88 they were equally successful. And at Pictou in '89 every prize offered in our class was carried by our stock. Our MARES and FILLIES are also of the best breeding and a uniformly good lot, being prize winners on both sides of the Atlantic. Our HOLSTEIN BULLS now offered are of the best milking strains. We still have four left including the imported bull "Emitt." We guarantee all stock sold. If blemish exists we always point it out to our customers. Prices right and terms easy. Correspondence punctually attended to and visitors cordially welcome.

**J. B. MCKAY.**

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**MANUFACTURERS & BUILDERS**

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**WROUGHT IRON PIPE & CASING**

Best Scotch Make, Black, Galvanized and Enamelled.  
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**PUMPS OF ALL KINDS,**

Including Lift, Force, Well and Fire Pumps.

If you are thinking of putting a Pump in your House, or conducting Water over your Farm, send us a rough sketch showing distances and ground level, and we will tell you the kind of Pump to use and what it will cost to fit up.

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**INCUBATORS FOR SALE**

(MACHINES FOR HATCHING EGGS.)

At the request of several parties we now manufacture small Incubators of the following capacity:

	Price.
Incubator, 100 Eggs....	\$ 50.00
" " 200 " ....	60.00
" " 350 " ....	75.00
" " 600 " ....	125.00

N. B.—We manufacture them only to order.

With these incubators any description of Eggs can be hatched at the same time and temperature.

For the coming season we have reduced our Pekin Duck Eggs to \$1.50 for 13, or \$8 for 100.

A. TOUSSAINT & Co.  
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**For Sale.**

Eggs for sitting purposes of the following varieties at the following prices per sitting of thirteen eggs.

Plymouth Rock, Single Comb,	\$1.00
" " Pea " "	1.00
Wyandotte Laced	1.00
" " White	1.00
Light Brahma	1.00
Brown Leghorn	1.00

Varieties guaranteed. Eggs packed securely and will go safely any distance.

Eggs forwarded promptly on receipt of order accompanied with prices.

W. E. ROSCOE.

Kentville, N. S., March 17th 1890.

**RIGBY POTATO DIGGER.**

The Only Successful Potato Digger Ever Invented

Durable, Easy to Work and Satisfactory in results. Is being used in the great

**Aroostook Potato Region**

Will be manufactured the present year at Houlton and Upper Stillwater, Me., and Woodstock, N. B. Send for circulars giving testimonials and full particulars.

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**LIVE PULTRY WANTED,**

I want to purchase April hatched Chickens of the heavy laying breed. Also a few Pullets.

Address **J. H. PEPPER,**  
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(Late of Norfolk, England.)

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Solicits owners of good Farm Property (For Sale) to enter for his Monthly List at once for Advertisement in England.

Small Registry Fee charged. All particulars on Application.

**Kentucky Prince Stallion.**

*May Prince, 5096.*

**STANDARD UNDER RULE 6.**

Golden Chestnut, high hind ankle white, stands 15¾ hands high and weighs 1150 lbs. Foaled August 4th, 1883. Bred by Charles Backman at Stony Ford, New York. the breeder of Electioneer, Sire of Sunol, 3. y. o. 2. 10½

May Prince, 5096, is by Kentucky Prince 2470, sire of Guy, 2. 10¾ and 14 others in 2.30 or better and of several others with trials from 2.18¾ to 2.30, and sire of the dams of Saxon, 2.22½; Princess Russell (2 y. o.) 2.36; Luby, (3 y. o.) 2. 28; Elland, trial 2.20½, and several others with trials below 2.25. His sons have sired 8 in the 2.30 list, three of them with records of 2.20 or better. Every son of Kentucky Prince, having colts 4 years old, has representatives in the 2.30 list.

May Prince's first dam was Queen of May by Hambletonian, 10, the sire of Dexter 2.17½ and 40 others in the 2.30 list, and of the dams of 61 in that list; grandsire of Maud S., 2.08¾, Jay Eye See, 2.10, Sunol, 2.10½, (3 y. o.) St. Julien, 2.11¾, and over 715 others in 2.30 or better, and great grandsire of Axtell, (3 y. o.) 2.12; Patron, 2.14½, Nelson 2.14½ and 815 others in 2.30 list.

Queen of May is full sister to Coralie. (Dam of Borden 2.29¾, 4 y o., trial 2.28½, last half in 1.10 1-5) and full sister to Meredith, 1367. Two of these colts have shown trials better than 2.30. Mr. Backman says "the indications are that 6 of Meredith's colts will enter the thirty list this year."

May Prince's full brother Hudson, took first prize last Autumn in his class in the horse show in Boston. A leading Boston paper referred to him "as a horse of magnificent parts and fashionable breeding." Though never trained, Hudson trotted a mile in stud condition in 2.32. One of his two-year-olds in 1888 trotted a half in 1.21½ and in 1889 another of his two year olds showed a mile to wagon in 2.45. May Prince has never been hitched to a sulky but twice, and on the first hitching he showed a full quarter in 42½ seconds. Next year he will be developed for speed, and, barring accidents, he will no doubt enter the 2.30 list.

His oldest colts are now about ten months old and they are good sized, well shaped, and otherwise promising. An offer of \$500 was refused for one in the State of Maine last autumn. He will stand at Dr. Jakeman's stables at Halifax until about May 13th. He will then stop at Hill Top Farm, Lower Stewiacke, for ten days or so, and then at Peter Carroll's stable Pictou, for about 20 days; then return to Halifax and make regular trips over the same route until the season is ended.

TERMS: Single service \$15; Season, \$20; to ensure, \$35. Usual return privilege where bred by the season if ownership of horse and mare remain unchanged. Mares sent from a distance will be cared for at moderate rates, subject always to owners' risk.

**Peter Carroll,**

Halifax, April, 1890.

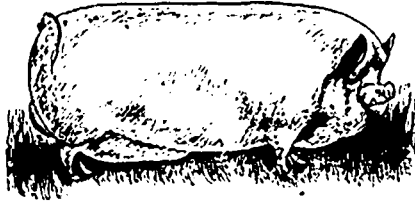
In Charge.

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**Improved : Large : White : Yorkshire : Swine**

Also Black Chinese Langshins (pure or ad strain) We were the first importers of this breed into New Brunswick and Nova Scotia. All our breeding stock especially selected from the herds of S. J. Hine and F. Walker Jones, England. Another importation just arrived. Stock for sale at all times.



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Breeder of pure bred Hereford Cattle.

AM NOW offering for sale a fine yearling pure bred Hereford bull, by Ledbury 25,993, dam Peach 24,411 A. D. R. Correspondence solicited.

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## Harry Wilkes, 1896.

The Standard Bred Stallion, HARRY WILKES, 1896, will stand during the

### SEASON OF 1890.

AT THE

Gov't Stables In Fredericton.

TERMS \$35 for the season; \$10 to be paid at the time of Booking, the balance at the Time of Service.

Mares coming from a distance of twenty miles and upwards will be kept three weeks without charge. Mares will be at owner's risk at all times.

Harry Wilkes, 1896 (Sire of Rosalind Wilkes, 2,144) by Getrge Wilkes 519; dam Belle Rice by Whitehill, by North American.

CHAS. H. LUGRIN,

Secretary for Agriculture.

Department of Agriculture, Fredericton.  
March 31st, 1890.

**BRICK AND TILE MACHINERY**  
BEST IN THE WORLD.  
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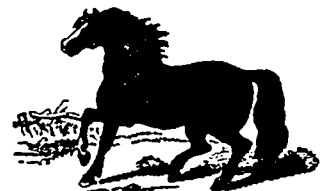
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A Large Stock Prize-Winning Stallions and Mares of the different Breeds for Sale.

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Shares from Best White Iron Chilled at 35c. Each.

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We Manufacture the **FITTINGS** for all the Different Kinds of Plows used in the Maritime Provinces, including the following:

Record, Moncton,	Plows all numbers of Shares Soles, Landsides and all other parts.
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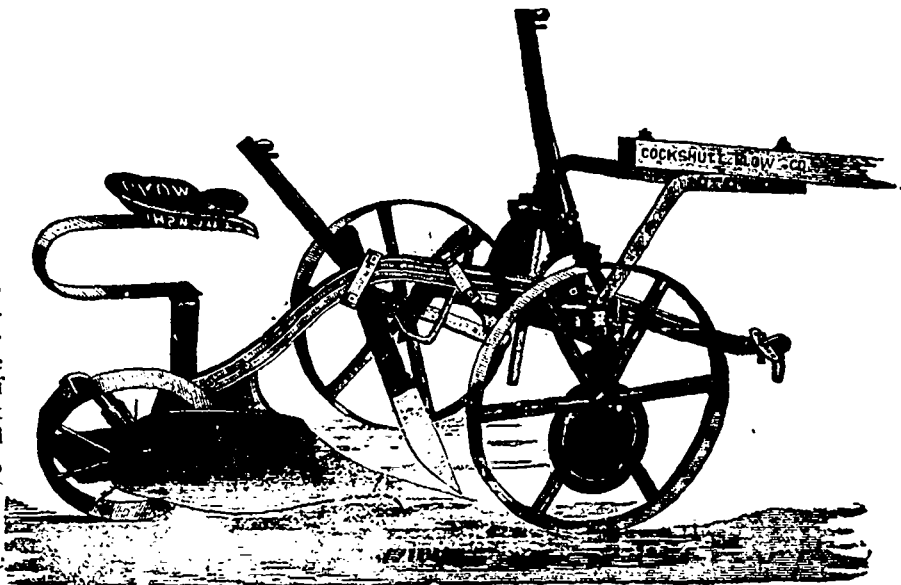
Also parts for Louise Plows Ar Bona plow, solid comfort Clipper Leader.  
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Shares and Landsides will be delivered F. O. B. Cars, Moncton, in any quantities at prices quoted. Send for circular and list.

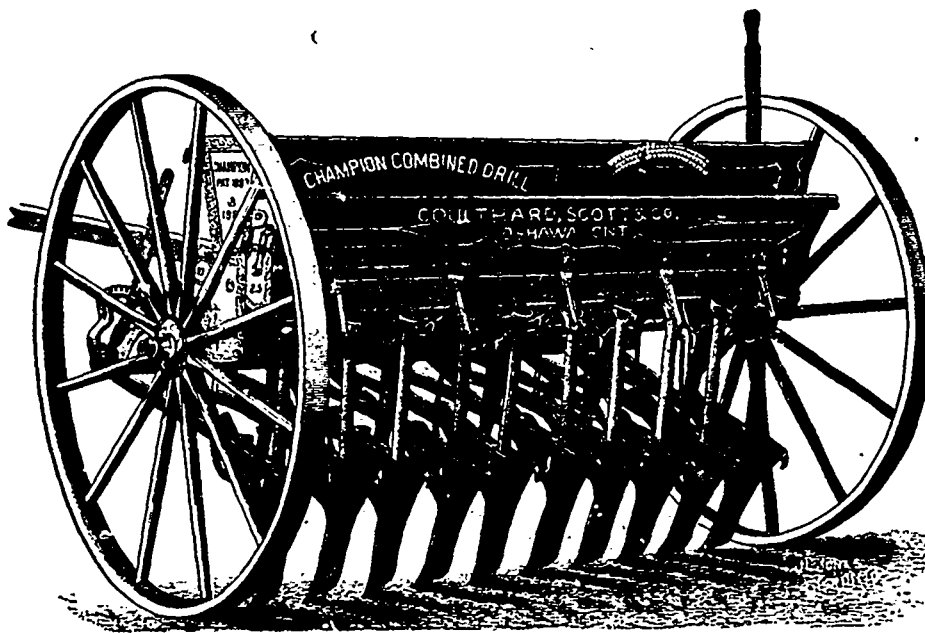
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There have been sold in the Province of Ontario more of the J. G. C. Riding Plows than all other patterns of Riding and Sulky Plows together. It is the most practical, Lightest Draft and Easiest Handled Riding Plow manufactured. It is so evenly balanced on the wheels when in work that no plow can cut or be held to cut an even furrow bottom, making it impossible for the point of the share to dip beyond the sett of the ratchet. The best plowmen and most practical farmers of the Dominion, state that it will do more work in proportion to the skill and power expended than any plow they have ever used.



**The Champion Combined Drill and Seeder.**



The Strongest, Simplest, Neatest, Handicraft and Most Durable, Most Easily Operated, Most Perfect Drill and Seeder made. Sows all kinds of Grain, either in Drills or Broadcast and Grass Seed, either before or behind the hoes. Descriptive Circulars and full information free on application to

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