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March 1913

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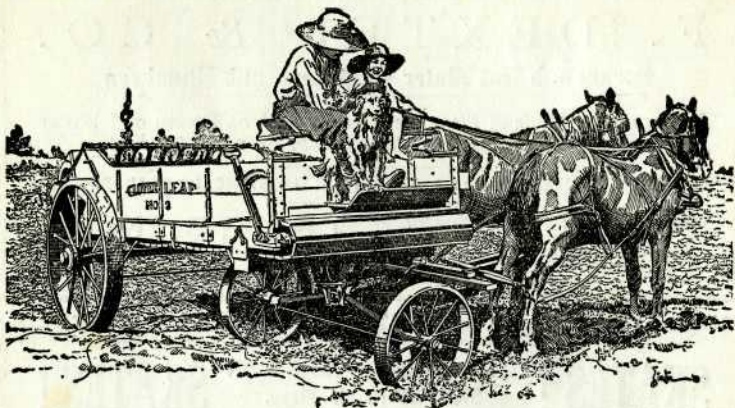
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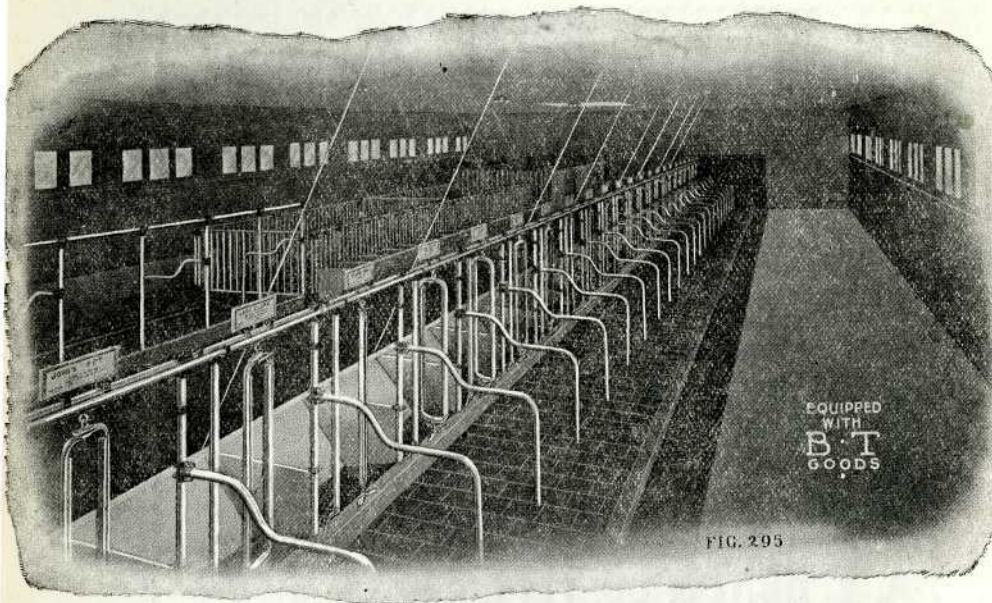
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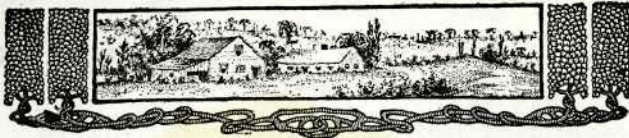
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The *Maritime Students' Agriculturist* is published by the Students of the N. S. A. C., at Truro.

Five issues are put out during the college year.

Annual subscription, 65 cents. Single copies, 15 cents.

Subscriptions should be addressed to the Subscription Manager, P. O. Box 100, Truro.

Advertising rates on application.

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The
MARITIME STUDENTS' AGRICULTURIST

Vol. V.

Truro, N. S., March, 1913

No. 5

Editorial Staff:

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H. P. MUNRO, Horticulture

N. L. LAURENCE, Dairy and Poultry

A. G. DUSTAN, Athletics

MISS H. WOODROOFE,

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College Life and Locals

C. F. PETERSON, Business Manager

W. SHAW, Assistant Bus. Manager

H. BUCKLEY, Advertising Manager

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E. C. SPICER,

Subscription Managers

EDITORIALS.

The following are two extracts taken from a speech in Parliament given by the Hon. Martin Burrell, with reference to the bill which is at present before the house, regarding the Dominion grant for agriculture.

“The crying need in this country is for men—men who are eminently fitted and trained to teach others. At present we are pursuing the old plan of robbing Peter to pay Paul, and there is a continual transfer of the good men from Agricultural Colleges to departments of agriculture and from departments back again to the colleges or to other departments. The harvest is plenteous but the laborers are few.

“It is proposed by the bill to strengthen all lines of instructional and educational work—to bring mind into co-operation with muscle. Help again in an educational direction will not only mean better farming but better farmers, and better and happier men and women.”

These paragraphs seem to strengthen greatly the arguments for a four year course at the Nova Scotia Agricultural College. The number of students attending the college with so large a per cent who wish to continue their studies and receive a B. S. A. degree certainly warrants the establishment of such a

course in the near future. The equipment at the college needs comparatively few additions at the present time to be adequate for a four year course. Nova Scotia, like the other provinces, is daily calling for more college graduates, and why, if she has the raw material, should she refrain from completing her machinery and turning out the finished product for her own use. For several years students have been leaving the province to complete their course and too great a per cent of them have never returned. We constantly hear the argument from the narrow minded man that the addition of two more years to the course would induce too many students to leave the farm. The student who has taken two years is in most cases able to judge for himself which road calls for him. If he chooses the farm all well and good, he will go back and keep in touch with his college and the departments of agriculture and constantly increase his useful and practical knowledge. Again, if he decides to go on and take up scientific work he will take two more years at college and will in a different way benefit the agricultural industry. The opportunity should be afforded to every man to choose for himself his life's work, and if he is fitted for the farm there he should stay, if he is fitted for experimental work, teaching or any other occupation he should decide to take up that line. But as to preventing him from having the opportunity of completing his course because he might be led from the farm is in our estimation not consistent. Again, we do not mean by the adoption of the above mentioned course to have every student who intends going back to the farm take the complete course if he felt it would not be of any great benefit to him, or if for any other reason he did not wish to continue the same, a two year course would be of equal value to what it is now. In fact, a large majority of the students who are not intending to go into scientific work would take only two years. What better use could part of the funds which are to come to this province, if the bill is passed, be put to than the establishment of a four year course leading to the degree of B. S. A.

This being the last number of the M. S. A. for the college year, the editors wish to thank those who have kindly contributed articles and thus helped us to make the magazine both instructive and interesting.

We hope that all those who have subscribed in the past will continue to do the same in the future and especially the graduating class.



A SPECIAL LINE OF FARMING vs. MIXED FARMING.

By a *special* line of farming, I mean the carrying on of one branch of farming alone ; by *mixed* farming the carrying on of several or all the different lines of agriculture.

There are many arguments in favor of each, and there are also some objections. It is generally claimed that a man can only profitably undertake one branch at a time, and this may be true of some men, who seem to be so fitted for one branch of farming only, but as a general rule men would rather carry on mixed farming, simply because it is not so risky a business.

There is no question but that there is a large percentage of the special farms being conducted on a larger scale than the mixed farms, but as these farms are oftentimes run by men who are engaged in other business, it is rather difficult to say whether farms thus operated are making a profit or not.

Sometimes you will hear of a man starting in to raise poultry, and the chances are that, if he is not an expert, he fails. While it does not necessarily require a specialist, yet a man has to keep his eyes open to make a success of not only poultry, but of any special line of farming.

The sheep industry of the Maritime Province is suffering to-day, because people think that sheep ranching and dairying cannot be carried on profitably together.

It is generally admitted that a man carrying on one branch of farming, will give more attention to it, and study it out better, and perhaps be more interested in his work, yet one branch cannot be economically carried on, without the help of the other branches, and when it comes to this I do not know that a man can be said to carry on one branch, although he would be more or less specializing in it. Take dairying for example ; a dairyman absolutely has to run his dairy farm in connection with other branches of farming to make a success.

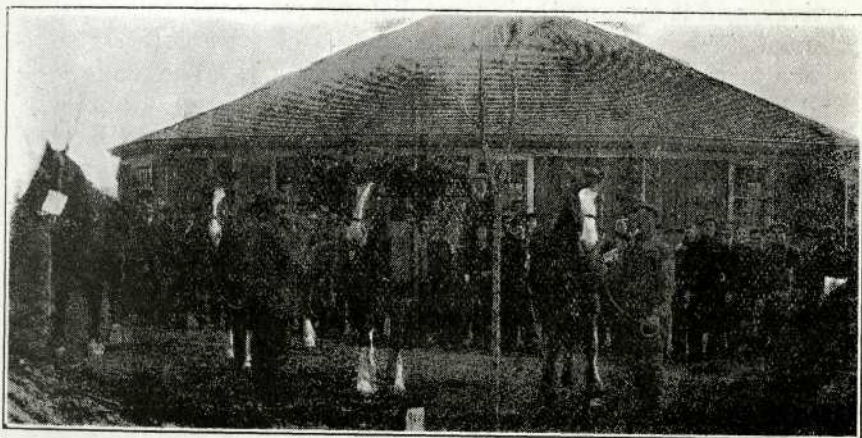
There is, as I have stated, more or less risk in a special line of agriculture. A farmer may spend years of hard labor in building up a good dairy herd, and the first thing he knows his

cattle are infected with tuberculosis, and he may fail. If he were more of a general farmer, such a loss would not be felt so strongly.

Too much specializing along certain lines is apt to overcrowd the market and consequently the prices will drop, and profits be small.

There is another advantage of mixed farming, and that is that the farmer's sons get a better idea of farming, and if there should be any lines that they like better than another, they can follow them, whereas the sons of a man engaged in a special line may not care for that phase of the subject, and perhaps desert the farm altogether, simply because they did not have a general knowledge of the subject.

I do not by any means condemn the specializing in certain phases of Agriculture, where it can be successfully carried on, but it seems to me that for the average man, general farming is best suited, and it is the kind I would like to undertake myself. I see no reason why mixed farming cannot be carried on successfully, a great deal more so than special farming. B. '14.



A CLASS IN HORSE JUDGING AT N. S. A. C.

FARM BOOK-KEEPING.

This is an essential operation of any good business, which should be of especial interest to the farmer, yet, strange to say, is very largely neglected by him. This is the keeping of an accurate record of the expenditure and incomes, with the cost of producing the various finished and raw products which go off the farm.

We are prone sometimes to speak of our farms as manufacturing plants turning out butter, cheese, beef, pork, etc., as finished products and in many instances such a conception is perfectly justifiable. But whoever heard of any manufacturing concern which was run successfully on such loose business principles as many of our farms. The manufacturer demands that a close record be kept of all the cost of production and the selling price of his goods so that he may calculate wherein his profits lay and where the leaks occur. Why then should not the farmer keep equally close records? Is it of no interest to him to know which branches of his business are paying and which are eating up the profits? Or is it a case where there are no leaks to stop and from every side the wealth rolls in, so that our friend, Mr. Farmer, is so busy counting his gains that he has no time to consider the very important questions of "Whence comest thou" and "Whither goest thou." Until this happy condition arrives, and it apparently is some distance away yet, this question of "Farm Book-keeping" should be of great interest to every farmer. Go to one of the orchardists in "The Valley" and he will tell you with pride of his enormous crop of apples but when he is asked some such pertinent questions as "How much did it cost you to raise them? How much did you sell them for and what are your net profits?" he will meditatively insert one or more fingers under his cap and say: "Well, I really don't know, but I guess about so much per barrel." Or go if you will into the barn of any of the average farmers as he tends his stock and ask which of his row of cows gave him the greatest net returns last year, or what it cost him to feed his cows for one year and if he is honest you will get about the same answer.

The leaks are not discovered but are left open, and the profits from one source are running out at another, and the only

way to discover them is by the keeping of a careful record. But our practical farmer says at once "Why should I go to this trouble? Will the fact that I know how much it cost me per bushel to raise potatoes enable me to raise them cheaper next year?" The object of every farmer is to decrease the cost of production and any legitimate means whereby he can do this is perfectly justifiable. Let us suppose that our farmer has been planting ten acres of potatoes yearly. He drops these by hand and covers with a plough or horse hoe. By keeping a record he discovers that the cost of planting by this means is abnormal and with a little calculation finds that by using more machinery he can lessen the cost of planting his fields. The same might hold true in spraying his crop or in digging and so we justify our claim.

Again, let us suppose that this farmer is considering the insertion of a drainage system. The only factor he need consider is, "Will it lessen the cost of production?" In order to find this out he keeps a careful record of the cost per bushel of his crop, puts in a small part of the system and if by doing so he decreases the cost of production sufficiently to justify the expenditure he puts in his drainage system.

We will dispense with a multiplicity of examples and say that for field crops a book-keeping system is absolutely necessary if the grower wishes in any way to cut down the cost of production. Let us now go a little further, and see if it is of any value when making the raw product into the finished article. Let us take for instance a herd of dairy cows producing milk. The feeder has calculated the cost of producing the fodders he is giving them so that he knows the exact cost of feeding each cow, then by means of carefully weighing the milk and testing with the Babcock test he can determine whether the cow is paying her board or not and so can weed out the unprofitable cows in the herd, also by this means he can determine the amount of fodder to give the cow for the most economical production of milk and butter. Nor is a book-keeping system valuable in the dairy stable alone. There is no other method whereby the feeder can determine the amount of profit he makes in feeding steers or the most economical type of steer to feed. In fact, the farmer's books should determine the line

of breeding he will pursue, whether for beef or dairy and the individual breeds of the two general classes.

We have shown that book-keeping is one of the prime factors in economical production on the farm and now let us consider its place in the disposal of the crops. Many of the farmers dispose of their crops before harvesting and having only a verbal agreement with the buyer or speculator he is entirely at his mercy. If prices decline the farmer perforce loses, if they rise the speculator gains. Although we do not claim that a system of book-keeping is the panacea for this and similar evils yet a written record of the agreement made with the buyer would have some influence in the farmer's favor in these matters. We cannot blame the speculator for such treatment of the farmer if he has not enough energy and business about him to record his transaction so as to give some basis upon which to work for his rights. The man who is as lax as this deserves to get "stung" and we cannot feel any very great amount of pity for him.

Book-keeping, after all, is just a good business principle and if our farmers wish to become recognized as business men they must adopt business principles. There may have been a time, when competition was not so keen and the struggle for maintenance so intense, when the farmer could afford to allow matters to slide along in this lax manner, but the conditions have changed. To-day, as never before, business ability is recognized as the great essential of success, and strange to say the producer, the man who should stand in the front rank, is the last man to adopt these sound business principles. What the agricultural industry, as every other industry requires, is men who are "on the job" who looks after all the details of their business who KEEP BOOKS.

H. E. W. '13.

WHY SHOULD A GIRL STUDY AGRICULTURE.

For a girl who prefers an outdoor life to an indoor life, there is no field that gives better opportunities than that of agriculture.

Many of branches of Agriculture are of more interest to women than to men and can be carried through quite as successfully by women.

No one goes into farming without being prepared to make a success of it, technical education for women in this field is essential. Most Agricultural colleges welcome women to their classes. Everyone has heard the "Back to the Farm" slogan applied to the steady increase in the numbers of men who are leaving the cities for the country, and in time, there is no doubt that the women who have left the farm to take up less healthful pursuits in cities and towns will also be going back to it.

The branches of agriculture that seem to appeal to women are : Horticulture, Dairying, Entymology and Poultry.

Many enterprising women in England have proved that they can grow as good flowers and fruit as men. In the Canadian west there are many instances where English women have taken up general farming and made it pay. The growing of roses and other hot-house flowers affords a livelihood to many American women. Market gardening is also a paying business with women in the states.

Dairying offers many attractions to women in its different phases.

Entymology is a study specially suited to women, this being proved by the number of successful women entymologists.

Most farmer's daughters and wives can swear to an intimate connection with poultry and there is no reason why poultry raising should not be carried on very extensively by women.

The one great reason why so many women leave the average farm is because they are very often given the most unattractive tasks to perform. By thorough training and intimate knowledge of all farming operations the work is made a thousand times more attractive to a girl, who might otherwise choose a business career or a profession.

H. W. '13

THE CLASS OF 1913.

In a few short weeks our college year will be closed and the class of 1913 will leave the college on the hill and the town of Truro, carrying with them very many pleasant memories, both of the college life and of the hospitality of the citizens of Truro. Our stay here has been brief and pleasant. We have come together from diverse sections of the maritime provinces, with diverse tastes, training and talents, but all with one common aim. We come from the cities and towns, and from the far outlying country districts. Some of us have had the educational advantages afforded by the High Schools and Universities, others have not been able to more than complete the public school course : yet here we have met all on an equal footing. The man from the town, born and bred in a cultured atmosphere, with a first class education, has learned to respect, aye and admire, the man who came from the farthest country district. On the other hand, the man from the country lacking perhaps the niceties of society and the advantages of education has had the rough edges of his character smoothed off and withal has lost that feeling of almost contempt for the city man who would wrest his living from mother earth. Apart from our class room work we have all learned much. Unwittingly perhaps, we have gotten new insights into human nature and into those qualities which go to make for true manhood. Had we never attended a lecture or opened a book we could not say that our time was wholly wasted and now after two years of friendship and intimacy we are about to part and go our respective ways. Partings are always saddening, and these are no exceptions. It is with feelings of true regret that we look ahead to the day when we will leave the college for the last time and say our "Good-bye's" to our comrades before dispersing to our various homes. And now the question arises, What are we going to do for our own districts, aye and for our country. It is obvious that agricultural improvement in these maritime provinces must emanate from the agricultural colleges through the graduating classes. If we are content to go home and till the soil using the same methods of our fathers then we must conclude that from our standpoint at least our college course was a failure and the college has not justified its

existence. It is up to us, men of 1913, to justify our course, and spread the gospel of good farming wherever we may go. It is up to us to work for a broader and wider understanding of the salient principles of agriculture throughout the provinces. We have it within our power to do this work. Our course has been intensely practical and we in the various districts can do what institute speakers can only talk about and advise doing. Surely example is better than precept and if we can actually show results to our neighbors how much more can we accomplish for any line of agriculture, whether it be beef raising, dairying, orcharding, field or cereal husbandry or whatever branch it may be, by actual demonstration under ordinary working conditions than can the speaker from the college who attends a meeting once or twice per year to labor for better methods. This then is our part in the struggle for more intensive methods and let it always be our boast that wherever any movements for reform are in progress the men of 1913 are to be found in the front rank. Several of us, no doubt, will continue the course for two more years. Those also will have many opportunities for benefitting the agricultural interests—perchance they will then return to the farm even better equipped to do the work outlined, others may perhaps return to our own colleges and spread the work through the medium of future classes.

During our stay here we have shown ourselves to be progressive. Within the last two years we have, with the aid of the other classes formed an United Students' Council for the carrying on of the business of the student body, and an Athletic Association. The debating society has been put on a better working basis, and the magazine has been increased both in size and number of subscribers till it is now recognized as a monthly publication by the post office authorities and subject to the regular postal rates for magazines. For this work we claim our due share of credit, and as we leave the college it is with the sincere wish that the various social interests of the students may continue to advance.

Within the two years of our college course the college has been growing by leaps and bounds. A large extension has been built on the main building, thus practically doubling the capacity of the building. A new horticultural hall has been erected

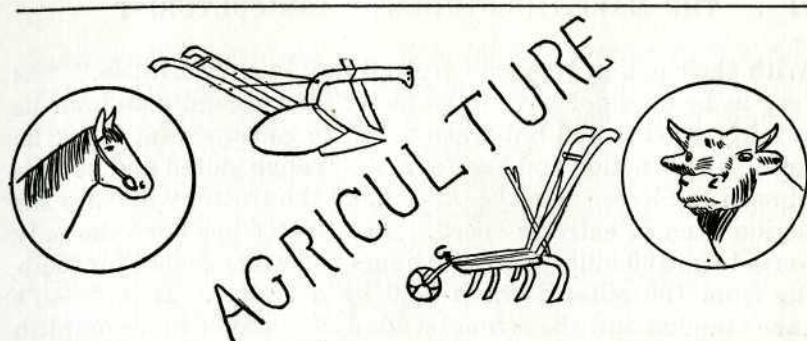
and a new horse barn has been built on the farm. The attendance of the students has practically doubled each year and the college is rapidly coming to the forefront among the various colleges of the maritime provinces. At present the students are agitating for a four years course which, although it may not arrive in time to benefit the class of '13 is bound to come in the near future. Two of the outstanding needs now are a new science building and a dormitory, both of which will be erected, if the present rate of growth continues, within the next few years.

And now we must bid adieu to the college and our classmates and take our place among the world's workers. We are starting out well qualified for our tasks and must now prove out the manhood that is in us.

“Let us then be up and doing
With a heart for any fate
Still achieving, still pursuing,
Learn to labor and to wait.”

H. E. W. '13.





HACKNEY vs. TROTTER.

A few arguments on the question have led me to write this article, and to begin with, my object is to uphold the trotter, which is the standard bred horse, in preference to the Hackney for usefulness. There is no one thing that the Hackney can do, that the standard cannot do a little better, whether in the show ring, on the race track, on the road or on the farm.

Hackney breeders claim for them that they are the predominate figure in the carriage class. Where are the Hackneys that ever defeated such standard-bred horses in the show ring as Coxe, Lord Brilliant, Lord Golden, Baby and Allie Nun? One of the foremost hackney breeders of to-day recently said, "If Lord Brilliant and the rest of them were here to-day and in top form, they could win over the most advanced type of English Hackney." Many of you, no doubt, admire the high action of the Hackney. But this extreme high action for which the Hackney is bred is largely due to artificial and mechanical methods in the way of shoeing and training. Indeed the Hackney of to-day is as much an artificial type as the average hobbled pacer. The hobbled pacer depends upon the support given him by the straps in order to regulate and control his speed, and the Hackney needs abnormally long toes and equally heavy shoes to make him do the one thing for which he is especially bred—act extremely high. You will, however, find many trotters that are lightly shod and having short toes with action far more airy and bouyant than any Hackney.

The Hackney never was, nor never will be any roadster.

With their action they can trot all day in a "wash-tub." As long as he does not have to go faster than six miles an hour he is fairly good gaited but when asked to go somewhat faster he loses all his action and besides is very rough gaited and pounds himself to pieces. On the other hand the trotter will carry his action even at extreme speed. The trotter has been the only horse to go 100 miles short of 9 hours and every record for roading from 100 miles down is held by a trotter. If it doesn't take stamina and the strongest kind of stamina to accomplish these feats I don't know what does.

As for a farm horse the standard-bred will work as long as he has four legs under him. He has any amount of gameness which is something very few Hackneys possess. I can take you to many a farm in these provinces where standards are doing the hardest kind of work and standing up to it too. How many Hackneys are doing this ?

The last time I was in Halifax I saw a trotter, Frank Powers, having a mark of 2.20, doing service on a heavy express wagon and the man in charge said that he was the best delivery horse they had. Flying Jib, an old timer, with a mark of 2.04, hauled a milk wagon before going on the track. R. T. C., 2.06 3-4, the biggest money winner of 1912 was a plow horse in his younger days and bore the marks of hard labor in heavy harness when he started on his racing career. Azote, 2.04, also did heavy work on the farm. Prince of Regleg, 2.16 1-2, a prominent money winner in the west during 1912 was first used as a coal pony and livery hack. And many other trotters might also be mentioned to illustrate the point that they have proven themselves utility horses as well as racers.

The trotter is by no means the high spirited horse some people think. He is the easiest horse to break in and moreover the most trustworthy. Moreover, the trotter will prove just as useful when a colt as will any breed of horses, even more so if used as a racer. Did not the Harvester, 2.01, and Colorado E., 2.04 3-4 prove themselves world's champions at 3 years of age ?

So far as general utility is concerned, the Hackney horse represents the greatest luxury in the equine kingdom. No one

familiar with the breed can claim for its members even a moderate degree of excellence when used for purposes other than show ring exhibition. They haven't sufficient speed to please anyone desiring a capable road horse ; they are lacking in strength and stamina, and, as a consequence, are not adaptable for use in farm work or on city streets, where many light horses are used advantageously. In brief, they are fitted only to please the fancy of the wealthy, who admire a smart hitch and do not care for pace or endurance.

Of course, there are exceptional Hackneys, horses that can step a good clip on the road, but, as a rule, their action prevents much in the way of speed making. That the Hackney is a soft horse is also undeniable.

All show horse trainers agree that the standard-bred horse can stand much more grief and wear and tear, and this is natural when you come to analyze the matter. The standard breed has been built up on heat racing, and for generations have been subjected to the severest tests of stamina and endurance. Not so with horses of the Hackney breed. For generations they have withstood no particular strain upon either their physical or mental forces, being generally used in their home country at only a moderate road gait, and that is scarcely sufficient development to assure perpetuation of such durable qualities as the trotter has inherited.

Of course, we must admit, that there are a lot of scrub standard-bred horses in the Maritime Provinces but that's not the horse's fault. It's the fault of the breeders who have been breeding with an utter disregard to type. Often is the case that a mare is bred to a stallion that has the same defects in conformation that she has. Such hit and miss methods can never produce individual excellence.

Speed has been the chief point in view in the development of the standard horse, but a vast change for the better is noticeable in our trotters and pacers when viewed strictly as individuals. Old timers attest that present-day trotters and pacers are far superior in physique to those of fifteen years ago. Bodies have become heavier ; backs and legs shorter ; ribs are more rounded ; there are fewer horses with flat flanks and thin

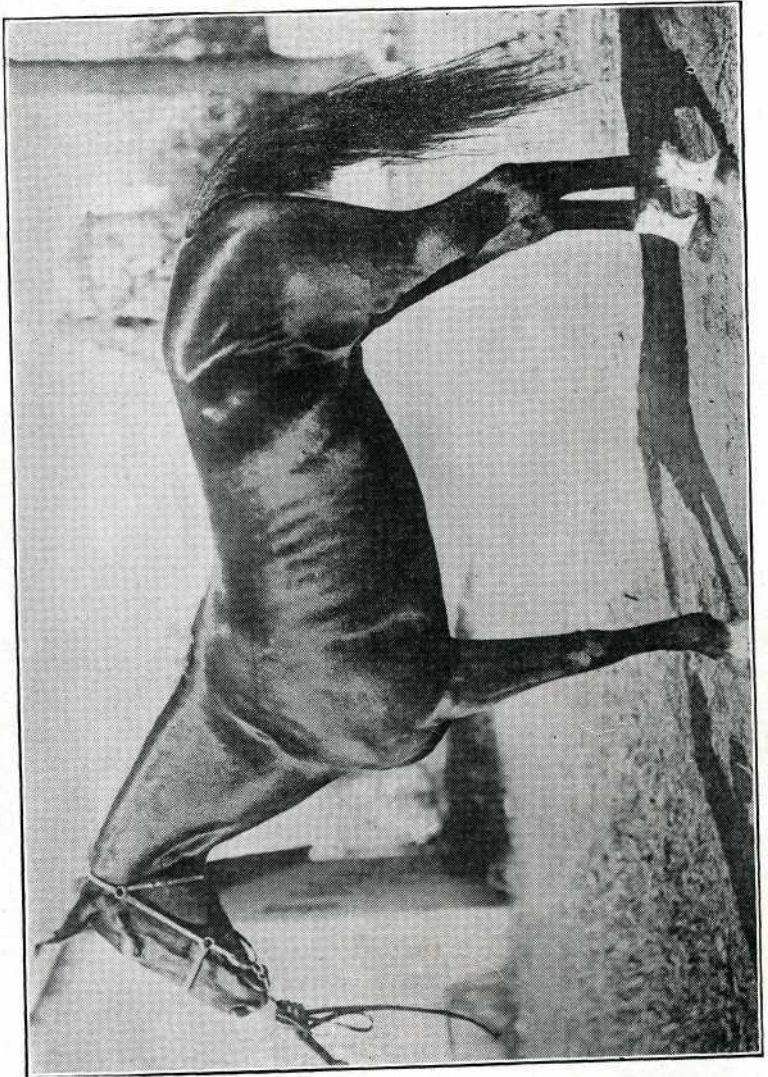
waists ; fewer with ragged protruding hips and sloping rumps ; shoulders are more highly developed ; necks are more nicely arched and heads are less inclined to such deformities as Roman noses, big ears, etc.

Students of heredity may theorize, and argue with each other, as to the pro and con of development, but this fact is apparent to all thoughtful observers, that the standard-bred is making rapid progress in the development of speed and at the same time is advancing in respect to conformation and all features that count for anatomical and organic improvement.

C. F. PETERSON, '13.

WITH THE FLOCK AT THE LAMBING SEASON.

I am only too well aware of the fact that, in the Maritime Provinces, there is a very great percentage of farmers to whom such a subject as the above is of little or no interest. This is most assuredly a deplorable state of affairs, for much of the land in these provinces is especially well adapted to the successful rearing of this animal—one of the most profitable a farmer can possibly possess. They are truly termed the “scavengers” of the farms, for they keep down weeds as no other stock is capable of doing ; they yield a triple profit in the form of a lamb, wool and their carcass ; and they may be fed with at least fifty per cent more profit than other kinds of stock. Moreover, it takes but small capital to start a flock, and the returns from the business are very speedy. Of course the sheep require skilful care and management, but in this respect they do not differ at all from any of our domestic animals. Many people fail to make a success of raising sheep, and are compelled by frequent losses to go out of the business altogether, simply because they imagine that about the only attention the flock should get is to be sheared in the spring. They feed just enough to keep the vital spark alive during the winter, usually letting the animals run outside in all sorts of weather, and then wonder why their lamb crop is so poor, and why both



UHLAN 1.58. CHAMPION TROTTER OF WORLD

ewes and lambs are in such pitiable condition. In the summer they turn their flock out to pasture, leaving it in the same field till the fall, when they sell their lambs, and receive next to nothing for them. By the time a few years have elapsed, the flock, or what remains of it, is in a sad state of degeneracy, and is disposed of by the disgusted shepherd (?). Had these men known sheep, understood their habits and their needs, and known how to feed they would be richer men to-day than they are now. But this article is not intended as an argument in favor of sheep-raising, so let us get back to the subject at issue. First, however, we note with encouragement that the Provinces by the sea are at last waking up to their limitless possibilities along this line, and hope that a shipment of some of Ontario's best stock, which was received last fall, may do much to better the condition of the Maritime sheep industry.

The shepherd who expects to have a large and healthy crop of lambs, will begin his preparation in the fall. If he is possessed of only a moderate number of ewes, it will not be unwise to let the ram run with the flock, as a vigorous ram can safely serve from 50 to 60 ewes. By "ruddling" the ram with some coloring substance one can easily determine when he has served a ewe or not, as the imprint of the color from the ram's breast is left upon the rump of the ewe. Of course, the first-class sheep ram will use only the most symmetrical, pure-bred sire, and either pure-bred or high grade ewes, of superior form and quality. They should have a frequent change of pasture-feed during the fall months, in order to be brought in for the winter in a hardy and thriving condition. I have in mind one very good plan which was followed during last fall (an excellent year for succulent pasturage). The flock was allowed the run of a larger field which had been seeded down in red clover, alsike, alfalfa and timothy (14 lbs. of the mixture per acre) some two years previous. Then, early in September, they were turned into the wheat stubble, which had been lightly seeded with clover in the spring, and was now in luxuriant condition. After they had eaten this clover growth, they were put in an old pasture, and allowed the use of a small field of rape, which had been sown in August. They came into the barns in August in fine shape for the winter-feeding.

CARE OF THE EWES.

The lamb is formed in the mother precisely as the feeder wishes it to be, so that he must never be negligent or lazy in his work with the pregnant ewes. For heavy feeding of roughage is sure to bring lambs that are too large and lusty to be delivered, while underfeeding is equally as certain to produce puny, sickly lambs that either perish altogether, or are far from profitable. An over-supply of roots, and particularly of roots which have been frozen, or of poor ensilage, is very apt to cause lambs to come forth that are flabby and naked, and frequently dead. Heavy grain-feeding is prone to cause the production of weakly lambs also. Irregularity in feeding is undoubtedly bad for the sheep, as they become nervous and excited when they are not properly attended to, and, as a natural consequence, are bound to lose flesh.

The silo is now an important factor in the feeding of sheep during the winter, as the silage from one acre of corn affords feed for as many as twenty head of sheep. Mouldy or rotten ensilage should never be fed, or abortion may result.

One of the foremost American breeders has used and recommends a ration composed as follows:—cut clover hay and cut oat straw, mixed with pulped turnips, oats and bran. Each ewe got all the roughage she would eat, with 3-5 pounds of turnips, and 1-2 pound of the grain ration. Another very good ration for the ewe flock is clover hay, turnips, oats, barley and bran. The ewes get all the clover hay they can clean up twice a day, while each member of the flock receives from 2 to 3 pounds of turnips, with from 1-2 to 1 pound of grain, 2 parts of oats to one part of barley and wheat bran. Some people prefer to add a little oil-cake to the ration just before the lambs come. An abundance of clear fresh water should be provided for the flock, as it is a very erroneous idea to say that sheep require little or no water.

A very important matter to be looked after at this season is to see that all doors and openings are as wide as possible, for if the ewes are compelled to pass through a narrow door, they will be sure to get jammed in the rush at feed-time, and the shepherd will then have dead or aborted lambs as a result.

Equally important is it that the ewes should receive an abundance of exercise, or else nothing can be expected but weak and puny lambs (with perhaps goitre). Many a fine ewe has been lost during yeaning, because of the trying time she experienced in lambing directly traceable to lack of exercise during pregnancy. Therefore, see to it that you do not shut your ewes up in a narrow, close pen during the winter.

If one has comfortable barns for his sheep, and is likewise well provided with turnips or mangels, he will do well to raise early or winter lambs, as these have many times proven the most profitable. Otherwise he should not plan to have any lambs arrive until the spring months, when the weather will be warmer for them, and when they can soon get out to the pasture fields.

YEANING.

Just before the ewe lambs she becomes very restless ; a noticeable drop on either side of the back-bone, back of the pin bones follows ; the belly lowers somewhat, and the ewe appears distracted. Then a clear discharge comes from the vulva, followed by the water "bags" or sacs. When these have appeared the ewe begins to strain, lays down and gets up again, paws the ground and roams around and round in a circle, and finally lies down, straining violently until she brings forth her young.

If the ewe is doing well, by all means let her alone, but if she has not produced her lamb within an hour or two, after the passage of the "bags," she should receive assistance. A lamb with a large head may be brought forth by rubbing a little linseed oil on the walls of the vagina, so as to facilitate the passage, and then, by gently pulling the skin of the vulva back over the head of the lamb, the head will come out at once.

The front feet should then be pulled out, after which the body will come out easily enough. In the case of an abnormal presentation the lamb or lambs, may be coming in any of the many ways possible for such presentation. They should be pushed back into the womb of the mother, and a person with a small hand and wrist should then disinfect his hand, moisten it with olive or linseed oil, and insert it into the vagina. After this he should work the lamb around in the womb until it is

in the proper position for presentation, *i. e.*, with the head and fore-feet coming first and straight out through the passage. If the ewe strains too violently to admit of pushing the lambs back into her womb, she should *as a last resort*, be grasped by the hind-quarters by two assistants, and her hind parts raised in the air, when the straining will cease, and the foetus will slide back into the womb.

The moment the lamb is born, see that its mouth is freed from the mucus contained, as many lambs have been lost through neglect of this matter. Then see that the ewe can get at the lambs to lick it dry, or otherwise she is liable to disown the little creature. One thing should be mentioned here, as it is *absolutely necessary* if one is to have success with the lambs, and that is that the shepherd must be on guard all the time during lambing, or, to use a slang phrase "be right unto his job." If twin lambs arrive, one is apt to wander off and become lost or chilled, when the ewe is quite liable to disown it, and in latter case it is very liable to perish. Sometimes it may be too weak to suck, and then the shepherd must assist it to obtain its first meal.

A very good way to do this is to throw the ewe, very gently of course in a sitting posture, holding her there while you hold the lamb to the teat. Once the youngster gets the taste of the first milk he will usually suck away like a little engine. Sometimes, however, he will hold the teat in his mouth, and absolutely refuse to suck at all. In this case the shepherd should procure a small bottle with a long, narrow neck, and milk a little of the ewe's milk into it. Then by holding the lamb between his knees, and placing his thumb in its mouth to hold it open and to give it something to suck, he may pour in about a spoonful of the colostrum, being very careful not to give too much. In about an hour or two he should repeat this, when the lamb will become much stronger, and able to suck itself. Sometimes, if the lambs continue weakly, it is necessary to either feed them in the above manner, or see that they suck themselves, about every two or three hours during the day.

DISOWNING LAMBS.

Occasionally it will be found that a ewe will refuse to own

her lamb, bunting it about, trampling on it, and otherwise behaving in a very unmotherly manner. Sometimes this is due to a lack of milk in the udder, for, as has been said, "the maternal love of a ewe resides, not in her heart at all, but in her udder." Then too, when a lamb dies, it is often found necessary to make its mother adopt a strange lamb, which is usually one of twins. This may be done in many ways ; either by tying the ewe fast by the head, and placing two stakes, one on each side of her to prevent her from jumping about ; by cutting off the tail of the lamb and rubbing the blood on the head and back of the lamb and the nose of the ewe ; or by skinning the dead lamb and placing the skin on the living one. This last method, though recommended by some, is clumsy and often unhealthy for the living lamb. The best and simplest method I have seen is to tie up the ewe to the feed rack, so that she may lie down at ease, and letting the lamb shift for itself, only holding the ewe for the first day while sucking. After a week or so she will usually be the fondest of mothers.

It should, perhaps, have been mentioned, that permanent lambing pens are not at all necessary for success. They are only to be used during a short season, and are inconvenient the rest of the year. A pen made of 12 boards, 3 1-2 feet long, 6 inches in width and 3-4 inch thick, nailed to four 2x2 posts of 3 1-2 feet in length, and placed over the ewe, affords a very convenient and comfortable shelter for her while she is yeaning. A very good method, and certainly a very cheap and simple one, is to plan to have a few empty box-stalls or pens at this time, and to put up a few boards in them to form several partitions. When the lambs are a week or so old, take down these partitions, turn the lambs and ewes into their old pens and let them run together.

Should a lamb arrive in very cold weather and become chilled, the shepherd should at once immerse the little animal up to the nose in water as warm as the hand will bear it. Then it should be taken out, dried, and given a little milk with a drop or so of gin or whiskey in it. This latter is a great stimulent for weakly or chilled lambs.

FEED FOR THE LAMBS.

By the time the lambs are about two weeks old, they will

begin to nibble at the hay and grain their mothers receive. (And here it should be mentioned that the ration of the ewes should be raised after lambing, so as to produce a large flow of milk. Feed rather more roots, and increase the grain about 100 per cent. At this time one should see to it that the lamb creep is provided, where the lambs may have access at all times to good clover hay, some oats, bran and oil-cake. Such a creep can be made in several ways, one being to nail boards across the front of a small pen or compartment at one end of set sheep-pen, in such a manner that the lambs can easily creep through, but the ewes are unable to follow them. Salt should be available at all times. See to it that the lambs continue to gain and put on flesh for the first year, when they will have gotten a good start in life, and, if they are intended for breeders, will be in fine healthy condition.

They should be weaned at from four to five months of age, and put, if possible on some succulent pasture, such as second-growth clover or a field of rape. The ewes should be milked partially dry every other day for a while, then every fifth day, and so on until they are dried off, with no injury to their udders.

If it is necessary to castrate lambs, it should be done at the age of three days, and is most easily accomplished as follows : Place the lamb on its left side on the ground, holding it between the knees. Then take a sharp knife and cut off the top of the scrotum, leaving the testicles free, squeeze them out of the scrotum and pull them out with the teeth. This method is much more humane than cutting off the whole scrotum and contents.

Docking should be performed at the age of six or seven days. Hold the lamb under the arm, grasping both hind legs firmly, then holding the lamb in a posterior position toward an assistant, who ties a piece of twine tightly round the tail, and cut off the tail with a sharp knife at one of the joints, just below the twine. Remove the string in an hour's time.

Now, these may seem like a formidable list of things to do for the proper care of lambs, but they are absolutely necessary if one intends to be a successful shepherd. The sheep is the farmer's best friend, so see to it that it gets a fair show and effi-

ient treatment. In addition to developing a profitable branch of business, the care and protection of sheep will tend towards making a kindlier, more patient, humane and better man out of the owner.

G. MAGEE, '11.

SHEAF GRAIN.

The aesthetic beauty of sheaf grain has always been recognized by man, since the time of the ancients who represented Ceres, the Roman Goddess of Agriculture, carrying a sheaf.

As a floral design it is even regarded to-day as a fitting emblem of the mature worth of those whose life-work has won an assurance of harvest.

The great North-West formerly pictured as a vast plain grazed over by herds of buffalo is, to-day, thought of as a great wheat field. "The granary of the world" which at harvest time is thickly dotted with grain in shock. This is the present day conception of the harvest fields of our West each province of which proudly displays, as an emblem of its exhaustless resources, a sheaf of wheat.

The exhibits of sheaf-grain at our industrial exhibitions are the pride and admiration of numbers of people who delight to view the products of our country.

There is considerable art displayed in the making-up of a creditable sheaf. The stalks are selected individually in the field, preferably while still green and carefully bleached. After thoroughly drying they are stripped of their leaves and a bundle (200) having the most typical heads selected for the centre and bound tightly, sometimes about a stick to given it rigidity. About this the stalks are spread in layers, each layer being drawn slightly lower giving the top of the sheaf a nicely rounded appearance with the maximum amount of grain exposed. When of sufficient size, the sheaf is tightly bound, an additional layer of finely bleached stalks is added to cover the twine binding and then bound with the regulation band, sometimes with a ribbon or plaited band of straw. O. HICKS.

SEED FOR NEXT SEASON.

The question of seed will be uppermost in the minds of farmers next spring, and there will be the usual rush for supplies at prices that are not always in keeping with the quality. When a short season is to be reckoned with, it is most essential that seed grain be plump and have the vitality that will insure early start of the plants and enable them to withstand any later difficulties such as drought and high winds. Each year portions of crops are injured by frost before maturity, with the result that the kernels are more or less unfit for germination.

Attention is directed by the seed commissioner to the indifference of farmers as to the quality of seed. Instead of demanding high class samples they are content to use ordinary commercial grain, which in the end costs more than the high-class grain. Hundreds of cars of No. 1 and No. 2 Canada Western oats are each year loaded out of the elevators at Fort Williams, and distributed for seed throughout Eastern Ontario, Quebec and the Maritime Provinces. The seed control act cannot be applied to protect farmers who deliberately buy and use for seed these commercial grades that were never intended to be sown. The larger dealers in this kind of "seed" grain are unable to procure in commerce the quantities they require of oats, barley and wheat that would produce a uniform type of grain.

There would seem to be a desire on the part of dealers to have the Grain Inspection Act amended to provide for a grade of oats that they could represent and sell as seed as distinguished from commercial grain. Such a grain would be defined as follows :—

"No. 1 Canada Western seed oats shall be round, recleaned, of the intermediate and long white type, free from wild oats and all noxious weeds seeds and other kinds of grain, and still weigh not less than thirty-six pounds to the bushel."

The main difficulty, as pointed out by the seed commissioner, in securing this advantage to the producer and user of this kind of seed grain, arises from the unwillingness of the elevator owners to set apart storage space for such a special grade.

Following the unusual shortage and extremely high price of timothy seed last year, there is a promise of an abundant supply and equal low prices for the coming season. The saving of timothy seed this year has been very general in all parts of North America. Quite large areas have been left for seed on farms of Eastern Canada. The quality of the seed is on the whole good, except that there has been discoloration by wet weather; this affects its commercial but not necessarily its real value.

Abundant rain produced a rank growth in the second crop of red clover. The bloom appeared abundantly but spread over a long period. Hence the yield of seed is quite uncertain and in most cases low considering the tonnage of hay. Seed has not ripened evenly and most of the samples show a large proportion of brown immature seed.



HORTICULTURE

THE CARE OF THE BEARING ORCHARD.

As fruit growing is the chief occupation through the Annapolis Valley and other parts of Nova Scotia, the orchard is that part of the farm that should get the most care.

As early in the Spring as possible the fruit grower should see that his orchard is thoroughly pruned. All dead limbs, and all limbs affected with limb rot, or any other diseases be carefully cut away, crossed limbs, where they are chafing, and suckers and dead tips should be removed ; stubs of limbs removed that are over an inch in diameter should be covered with a heavy oil paint to prevent drying out and decay, so hastening the healing of the wound.

The limbs and branches removed should be gathered up and burned, thus destroying any disease or insects that may be present on them.

As soon as the soil is in a fit condition to work the orchard should be plowed. The soil plowed each day should be harrowed down before leaving the field at night to prevent evaporation of moisture which is one of the prime requisities to the fruit grown at this time of the year.

The whole orchard should be given thorough tillage till about the first week in July ; harrowed once every ten days and after every rain to keep a good surface mulch to retain all the moisture possible ; it should then be seeded down with a cover crop.

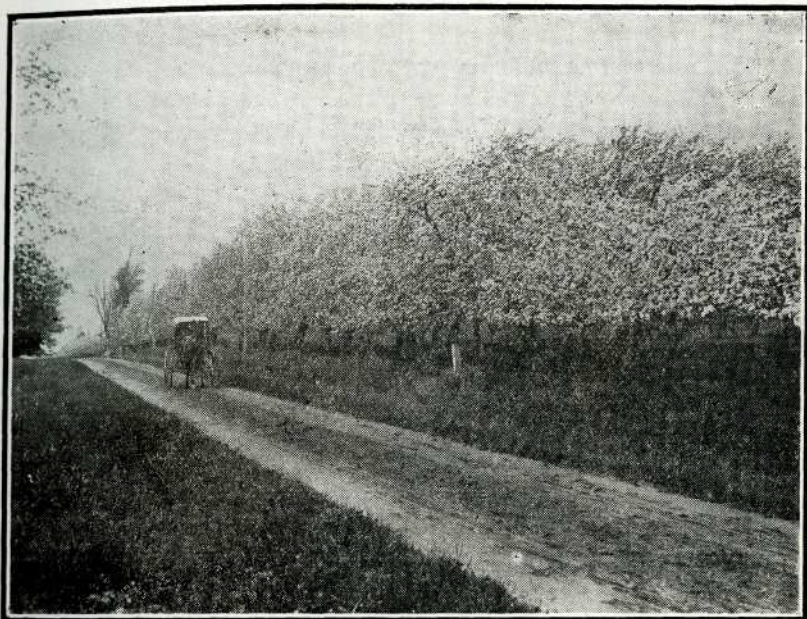
There are two kinds of cover crops that can be used :

1st.—Crops that do not gather nitrogen. These consist of buckwheat, rye, etc. 2nd.—Nitrogen gathering crops, or legumes, such as clover, alfalfa, vetch, etc. These gather free nitrogen from the air by the aid of bacteria living in nodules on the roots of these plants.

These form the best cover crops for the orchard or any other branch of farming where the soil is in a poor condition.

Either of these crops can be turned under in the fall or the following spring. By so doing a great quantity of humus is added to the soil, and every good farmer knows the value of this addition to his soil.

Every orchard needs fertilizer of some kind, especially if it is bearing heavily every year ; and every orchardist should



ORCHARD SCENE IN NOVA SCOTIA

know which special kind of fertilizer his own particular soil needs to keep up the supply.

There are three kinds of fertilizer that can be obtained :

1st.—Nitrogen, as supplied in Nitrate of Soda, Sulphate of Ammonia, etc.

2nd.—Phosphoric Acid, supplied in Superphosphate, Basic Slag, Bone Meal.

3rd.—Potash, supplied in Muriate of Potash or Sulphate of Potash.

Nitrogen is used for the growth of the tree and is also

found in the leaves. Phosphoric Acid is needed for the reproductive organs (seeds). Potash is needed for the formation of fruit.

Nitrogen should be applied the latter part of May, or the beginning of June as the trees are then making their largest growth and can make the best use of these elements. If applied at any other time of the year there is a danger of loss through leaching.

The phosphoric acid and potash can be applied the same time as these two elements become fixed in the soil and do not suffer through leaching. There is also a saving of time by applying all three ingredients at the same time.

Plum orchards should be thoroughly sprayed during Spring and early Summer to prevent fungus growth, also to kill injurious insect pests. Full directions for spraying were given in the last issue of this magazine.

C. B. GOODERHAM, '13.

STRAWBERRY CULTURE.

Strawberry culture is a branch of horticulture that is receiving more and more attention every year and why not? It has been said that the strawberry is the best fruit produced in Canada, but whether the best, or one of the best, nearly all will agree that strawberries and cream are a delicacy not easily surpassed. Every home that has a garden should have a small patch of strawberries, as they are the first fruit of the season and can be grown without much difficulty, although perhaps no crop will give greater returns for extra care and attention than the strawberry.

In order to raise strawberries successfully one must plan to give them the proper attention at the right time. He must have a soil rich in humus, well drained and naturally moist. Perhaps the best soil would be a loam, preferably a clay loam, that has been under short rotation for some time so that it will be comparatively free from weeds and rich in humus, nitrogen, phosphoric acid and potash.

The preparation of the soil for the strawberry crop should consist of plowing in the fall, which should preferably be across. Get the soil into a good tilth that will serve for two or three years.

The fertilizing may be done by plowing under about thirty-five tons per acre of barnyard manure, or a part of this amount may be put on in the fall, followed by an application of commercial fertilizer in the spring. A good mixture would be 900 lbs. of bone, 400 lbs. of acid phosphate and 300 lbs. of potash.

After the fertilizers have been applied and the land properly harrowed and leveled the sitting of the plants is done. This is an operation demanding care, as poorly set plants very seldom live. The opening for the plant is made with any convenient instrument such as a diking spade, small shovel or a steel pointed dibble. The plant is set in with the crown at about the level of the earth with the earth well pressed around the roots.

The best varieties to grow depends upon the soil, climate and the market demands. The Senator Dunlap, Sample and Glen Mary are considered good varieties. Good plants are essential as no one can grow first class fruit from poor plants. Good fruit is produced only from strong, healthy plants. Home grown plants are best because they are fresher, more apt to live, and you have them near at hand. The plants selected should not be the ones around the outer edge of the plot but the inner plants which are larger and stronger. It is advisable to plant a plot for the express purpose of obtaining good plants and those true to name and type.

The cultivation should be started immediately after the planting is completed in order to form a dust mulch to prevent evaporation. Hand hoeing should be practised every week or ten days until the runners of the plants prevent. The cultivator also should be run until the new plants grow out too much in the way. Afterwards the weeds should be kept in check by hand weeding, while doing this the top soil is stirred up to maintain the dust mulch.

After the ground is frozen in the fall the plants should be

mulched with some coarse material, perhaps none better than rushes if they are easily obtainable. If not, clean oat straw serves the purpose satisfactorily. The mulch is for the protection of the plants during the winter and may be removed in the spring or be left on as a mulch during the summer.

The picking of the berries should be done carefully so as not to bruise the flesh or to move the hull.

A lot of labor is involved in the growing of the strawberry crop, but when from one hundred to two hundred dollars clear profit is obtained from a single acre it would seem that the labor had been well spent.

R. A. WELDON, '13.

NOTES ON LETTUCE CULTURE.

Of all the vegetables grown in hot beds, cold frames and green houses lettuce easily takes first place in commercial importance. It is production by the first method that will be discussed by the writer in this article as he has had greater experience in that phase of the work than in any of the others.

Though lettuce may be grown fairly successfully under ordinary conditions of soil and climate, it is better to have rich, sandy loam, which, on account of being light, warm and porous, is well suited for the rapid development of the plant and drying easily on the surface reduces to a very great extent danger from rot and other fungous disease.

In order to ensure success in production by the hotbed method close attention must be paid to the following details :

- 1.—A good site well drained and sunny exposure.
- 2.—Have manure in right stage of fermentation and put in uniformly.
- 3.—Soil of such a character as mentioned above, free from lumps and put on at a uniform depth.
- 4.—Care in watering. Have the water at the right temperature and water the plants in the early morning.

Dairying and Poultry

DAIRY FARMING.

Nova Scotia has been spoken of as "The Province that has been passed by" and, speaking from an agricultural standpoint, this has been true to a certain extent for a great many years during the era of the opening up of the Western Provinces. Free grants of land, extensive advertising and glaring reports of the profits to be made out of wheat and other grain growing, inflated land value, etc., has turned the eyes of the immigrant in that direction with the result that by thousands they passed by the Eastern Provinces for those further west, but the times are changing. The opportunities of the East are becoming better known and the agricultural possibilities of Nova Scotia are being brought to the eyes of the world stronger year by year and in the largest portions of the Province the possibilities for Dairy Farming are undoubtedly the most outstanding. And to the young man possessed of a fair amount of zeal and energy who wishes to go into an agricultural life where he can apply a goodly amount of brain work and executive ability with his manual labor, a reasonable assurance of a fair recompense for his labors and the building up of a permanent business that will increase in value in proportion to the ability applied, there is as good opportunity in the Dairy field in Nova Scotia as in many other places.

Starting with say an average herd which, at the present time, are only producing around 3000 lbs. of milk per year of a value of around \$40.00, which does not show any margin of profit over the food consumed, it is almost surprising how soon, with good business methods, they can be brought up to a profit producing herd without any expense by way of buying, other than sire stock. First we must determine which are the best and poorest cows in the herd and this can only be done by means of keeping an accurate account with each cow, weighing and testing her milk regularly, knowing at the end of the year the amount of milk and butter fat and value of same produced

5.—Attention to ventilation. Keep the temperature as nearly as possible uniform.

The soil used in the hotbed may contain larvae of insects, spores of fungi and weed seeds all of which are injurious to the plant. A very effective remedy is to sterilize the soil by steaming it in a large tank.

The seed should be sown thickly as this will assure stocky and vigorous plants. When the true leaves appear the plants should be transplanted into permanent beds. The proper distance between plants is eight inches each way. This will allow ample room for development.

There are three distinct types of lettuce, Head Lettuce (Big Boston is a good variety), Loose Leaf (Grand Rapids), Cas (Trianon Cas).

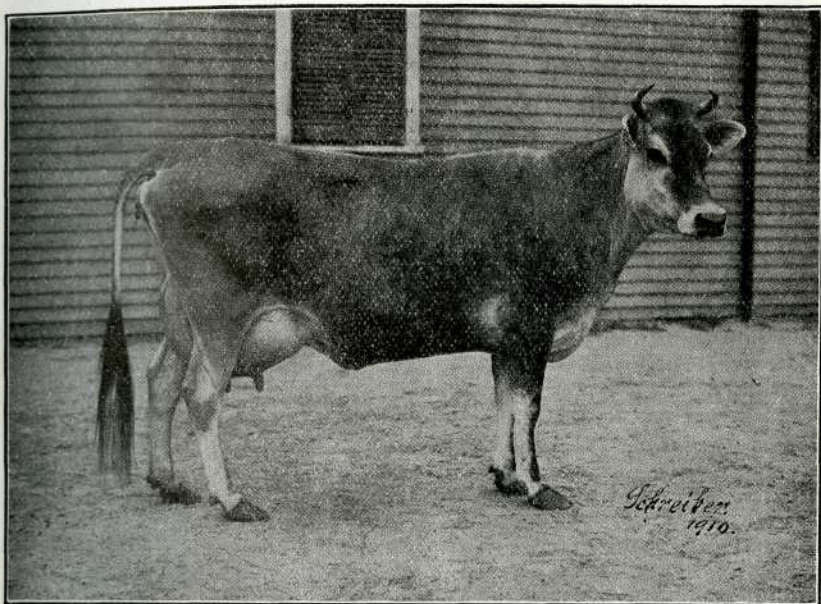
Lettuce is in greatest demand in the maritime markets from Easter until about July 1st. They are sold either by the dozen or by the crate. Early in the season they will bring about 60 cents per dozen and at this rate an acre will produce about \$18.00 worth.

Considering the ease of production compared with that of other vegetables and the rapidly increasing demand lettuce bids fair to be one of the most lucrative employments of the Maritime farmers.

W. D. ARTHURS, '14.

by each cow. Then start and weed out the poorest at the end of the first year. Breed the best to the best sire obtainable and continue along the same line from year to year, selecting at the beginning one breed to breed to and after making selection stick to one breed at all times. As circumstances permit, new blood of the same breed can be brought into the herd but always know a cow's record before buying her, and the record of the sire's dam and granddam.

The feeding is a study by itself and gives a great scope for a



JERSEY COW "LASS"

man to use ability, for any cow, no matter how good, can do her work properly unless fed judiciously, any more than a steam boiler can make steam without the proper amount of the right kind of fuel and water applied at the proper time.

The three essentials to make the productive end of dairying a success are ; Weed, Breed and Feed, and all three are equally important.

The by-products are a source of much revenue if properly

handled. The manure from the stable is particularly valuable and when properly handled increases the fertility of the soil at a rapid rate and is especially needed here where much commercial fertilizer has to be bought.

To be a successful Dairyman requires a man of strong determination. Apparent success does not come in a day or a year but to the man who goes at it with a determined mind and conducts his work in a systematic good business-like way, success is bound to follow.

W. A. MACKAY.

DUCK CULTURE.

Anyone interested in the rearing of ducks will find the following article, copied from *Canadian Farmer*, of considerable interest.

Ducklings are very easy to rear, and once they have reached the age of a month or five weeks they require very little care.

Most duck raisers who cater to the early markets are beginning operations now, as being early is the first essential in making duck raising pay. If the stock ducks are young, having been hatched last March or April and have been well managed, it is quite easy to be getting eggs for hatching purposes early in February. To insure fertile eggs the ducks should be liberally provided with green food in the shape of alfalfa, cabbage, or chopped mangels, and also with fresh water. There should also be an abundance of gravel and grit and their sleeping quarters should be comfortable and well littered with dry straw.

Seven or eight ducks mated with a couple of drakes give the best results. When they have started laying do not let them out very early as they are liable to drop their eggs anywhere. Ducks respond readily to good treatment, and will repay careful management in a very practical manner. If anyone has any well grown ducklings on hand, which are not good enough to retain for breeding purposes they should be got rid of im-

mediately, for otherwise they will quickly eat all the profit they are likely to make. Unlike those for killing, ducks intended for future breeding should be given their full freedom, and they are all the better if permitted to enter water. As a matter of fact the more exercise they have the stronger and healthier they are likely to develop, although their growth may not be so rapid. If ducks have access to a pond or stream where they can procure for themselves a large amount of natural food, they do not require more than two meals a day; one first thing in the morning and one early in the evening. Some duck raisers give meals both for breakfast and for the afternoon meal, but I have found whole grain to be a satisfactory and easier way of supplying their afternoon ration.

Duck eggs take twenty-eight days to hatch and require considerably more moisture than hens' eggs. If they are set under a hen care should be taken to sprinkle them once or twice daily with tepid water. A little timely aid is often useful in helping the youngsters from their shell also. Once they are dry and well on their feet they should be removed to a coop with a strictly dry floor. This is very essential.

For their first meal give bread and milk. Vary this with feeds of oatmeal, shorts and boiled rice every two or three hours. In boiling the rice put a little fat in with it to keep it from being sticky. Keep water and gravel within reach in a shallow pan. A regular duck drinking vessel is a good investment, as it prevents the ducklings getting themselves and their bedding wet.

When the warm spring days come let them roam over the garden; they will not do much harm in the early part of the year, and the slugs will be made conspicuous by their absence.

If they cannot have a garden or other cultivated run, a little chopped meat must be added to their ration as well as green food.

Rats are a sworn enemy of ducklings, and every care should be taken to keep down the pest. When a thunder storm is threatening take care to have the ducklings housed, as they are very liable to get on their backs and being unable to recover their balance soon die. When they are about six weeks old, they should be penned on fresh grass, or in a warm shed with

plenty of litter. Barley, meal, oat meal and fat or beef scrap should be fed to them two or three times a day. If in a shed feed this in troughs or pans. Keep them quiet and undisturbed between meals. By the eighth week some of them should be ready for market, and if weighing five or six pounds in April or May should realize good prices.

In raising ducklings ample protection from the sun is very important, as many deaths among ducklings are due to neglect in this respect. If there are no trees or hedges under which the birds can shelter, artificial shelter must be provided. A couple of hurdles fastened together with a layer of straw or similar material answers the purpose quite well.

When the ducks and drakes can be distinguished from one another they should be separated. If they are allowed to remain together the drakes fight among themselves besides worrying the ducks and retarding development. In order to distinguish between a duck and a drake look for two or three curled feathers immediately above the tail of the male bird.

EGG PRODUCTION.

Upon what does egg production depend?

In the first place the activity of the reproductive organs is the direct cause of egg production. Without this activity not an egg will be produced, though every other factor is adequate. Hens possessing this activity show it by a number of outward appearances; their healthy look, their continual scratching for food, coupled with a sign of cheerfulness.

Second.—There comes breed. If you have not already hens that are good layers or hens that might be improved by selection, you had better select a laying breed, or a noted laying strain in an egg producing breed, as a profitable investment, keeping up their high standard by careful selection, using the trap nests. Pullets hatched in the spring are generally found to be better layers.

Third—Housing. This needs careful attention. Plenty of fresh air and sunlight. Extreme dryness and ample room.

It would be well if you have not an old house that could be improved, to build an entirely new one. Plan it after one of the open-front styles. In one of these the fowls get sufficient air, ample space is left for the admittance of sunlight (the great germ destroyer). Dryness is very essential, while room is not so important. If you maintain the foregoing three rules you can keep poultry in a limited space. Never ceasing war should be continued against the infesting of one's house or poultry with insect pests. If once well settled they will be hard to get rid of.

Fourth—the feed. The hen can be classed as a manufacturer. She takes the hard grain, mashes, green foods, grits, etc, and makes them over into the finished product (the egg). Many kinds of feed may be used. A good one is a mash in the morning, composed of scalded corn-meal and middlings, equal parts, in which has been mixed enough bran to lighten it. At noon give boiled vegetables, they should also receive some meat, and grit should be kept before them all the time. In the afternoon so as to give them plenty of work scatter some cracked corn in the litter.

Fresh water for them to drink must be supplied.

Now if you can spare time to watch the hen's habit to find out what keeps them laying and what has a tendency to make them fail, you will soon understand how to make egg production a profitable business.

H. C. S. '13.

A FEW BRIEFS FOR THE POULTRYMAN.

The profits in poultry culture are measured by the care given the birds.

Grit is the fowl's teeth and must be provided if eggs are to be produced.

Hens need to be provided with a dust bath in summer even more than in winter.

It is useless to expect many eggs from hens of any variety after their second year.

A damp hen house is a disease breeder, and dampness and filth are a fatal combination.

The dropping boards should be cleaned regularly and the droppings removed from the house.

The market age of goslings is twelve weeks, which is a short time after they have feathered out.

If you intend to breed good birds begin with fowls which are naturally of strong constitution and vigor.

Chickens are creatures of habit. Whether they are lazy or active depends largely on the way they are raised.

Eggs which are to be used for hatching should be kept in a place where the temperature remains between 40 and 50 degrees.



College Life





THE DEBATING SOCIETY.

The Debating Society was organized on January 27, G.W. Cochrane was made president ; Vice-President, H. Buckley ; Secretary, M. H. Coughlan ; Treasurer, J. A. Brenmer ; Sergeant-at-Arms, C. E. Wright. Since organization several debates have been held which were so poorly attended that it was a disgrace to the college. However, the social evenings were slightly more popular, without doubt a compliment to the ladies, but rather accentuating the lack of interest in debating.

Mr. Cochrane is to be congratulated and thanked for his splendid energy in keeping alive with so little encouragement so necessary and beneficial a society.

The debate with the Normal College will not take place owing to the fact of the examinations being so near it was thought unfair to ask any one to give the time necessary for its preparation.





ATHLETICS

Another season of basket ball and hockey has gone, and I think that the college can feel that the men who represented her in the various contests played the game every time and when defeat came did not squeal.

Our career in hockey this winter has not been of the brightest, but all must remember that the college has had hard teams to go up against, and, whereas the college can play only men picked from those here enrolled, the outside teams have a larger area from which to choose their material and therefore have a better chance of success.

We would like to thank the boys who turned out to the practices and enabled the team to get into shape, and also the rooters who rooted so faithfully and lustily.

N. S. A. C. A. A. At an early meeting of the Athletic Association it was decided that monograms should be presented to players who had competed in at least two match games of the season.

These monograms were secured and were eagerly contested for by a large number of players and we are glad to be able to announce that the following have received their letters, and well earned their distinction.

HOCKEY

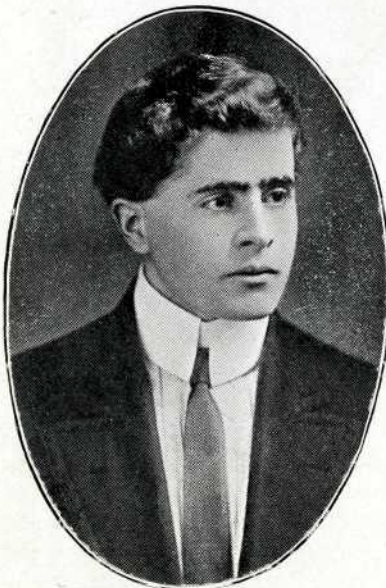
R. Donaldson (Capt.)
E. C. Morash.
W. N. Keenan.
C. Starr.
G. A. Hubbard.
J. L. Eldridge
C. E. Boulden.

BASKETBALL.

C. F. Peterson, (Capt.)
O. Schafheitlin.
W. N. Keenan.
C. Starr.
N. J. McLean.
A. S. Hunt.



H. E. WOODMAN
President United Students' Council



A. G. DUSTAN
President Athletic Society



G. W. COCHRAN
President Debating Society

Alumni and Exchange

E. S. Illsley, '06, runs a creamery in Somerset.

G. H. Unwin, '06, is on the English staff of the Ontario Agricultural College from which institution he graduated at the head of his class in '09.

R. F. Newcombe, '07, is farming at Port Williams.

C. F. Coates, '07, is at home in Nappan.

A. W. Jackson, '07, has returned from B. C., and is farming at Canning.

P. H. Moore, '07, is making an experimental farm in Agassiz, B. C.

Frank Brady, '07, is connected with brown tail moth work in New Brunswick.

F. A. Reid, '08, is dairy farming at Bear River.

P. F. Morse, '08, has a large fruit and dairy farm at Berwick.

C. J. Cock, '09, is running a co-operative store at New Annapolis.

C. J. Bruce, '09, has taken to himself a wife and a farm in P. I. Island.

W. W. Purdy, '09, has followed his example in Wentworth.

Lovett FitzRandolph, general favorite of the class of '09 is following the vocation of his father at Round Hill, Annapolis County.

Lorne B. Smith, '09, will soon finish a successful course at Cornell.

W. B. Milner, '09, is travelling for F. B. McCurdy, Halifax.

Leopold Baker, '10, lives a life of single blessedness at Middleton. We understand that fox-farming is attracting his attention.

J. H. Ross, '11, is taking third year in MacDonald.

E. S. Leonard, '11, is farming in Clarence.

W. J. MacFarlane, '11, is taking third year work at MacDonald College.

W. G. Oulton, '11, is farming in Lorneville.

R. Creed, '11, is preparing for further college work.

Austin Scales, '11, is also fox farming.



EXCHANGE.

Under exchange this month we are pleased to acknowledge the *Argosy*, *Theologue*, *MacDonald College Magazine*, *O. A. C. Review*, *King's College Record*, *Dalhousie Gazette*, *P. N. C. Gazette*, *Atheneum*, *U. N. B. Monthly*, and others.





Prof. B—in Physics—"When is work done?"

W-ig-t—"It's never done.

Prof. S., —After giving ration for dairy cow—"Would any one make any addition to this ration?"

Co-Ed.—"I would add some oat straw, for the cow's breakfast."

Prof. S.—"How may an orphan colt be successfully reared."

D-ck-e—"On his hind legs."

Billy K.—After stepping on one of Dr. McLean's pups—"Doc! I'll replace the animal!"

Doc. McLean—"You flatter yourself."

Junior—"What is your idea of a hero?"

Senior—"A male normalite."

S-n-d-rs—"I have eaten many a better stew than this."

Landlady—(angrily) "Not in this house!"

(Got it first guess.)

Rube to Cocci—"Hello! feller!"

Cocci—"My name is not feller it is Mr. S-u-d-e-rs.

The lecturer arose and said impressively : "Every time I see a young man coming out of a saloon, I want to go right up to that young man and say, 'Turn right around, young man; you are going the wrong way.'"

N. S. A. C. student on coming to Truro and looking for a boarding house.

Student :—"What are your terms, madam?"

Landlady :—"Five dollars and up."

Student :—"Well, you know I'm an N. S. A. C. man."

Landlady :—"Five dollars down, please?"

Prof. S.—"The Kentucky saddle horse has five gaits, a walk, trot, canter, rack, and running walk."

Hod-s-n—"Can they Turkey?"

He—"Did you know our hockey captain has been arrested for murder?"

She, seriously—"No, never, how did it happen?"

He—"Oh, he shot the puck."

"Good evening, my young friend," said the parson, "do you ever attend a place of worship?"

"Yes, indeed, sir," replied the jolly junior, "I'm on the way to see her now."

Flaime—"How did your act take last night?"

M-n-oe—"Great, when I sang the first verse they yelled 'Fine' and when I sang the next verse they yelled 'Imprisonment.'"

Cynic—"Dr ! Is a vessel a boat?"

Doc. S.—"Er—yes—you may call it that."

Cynic—"What kind of a boat is a blood vessel?"

Doc. S.—"It's a life boat ; however we will refer to that later on."

"When they take women away from the coeducational college what will follow," said the speaker.

(Class of 1913 as one man)—"We will."

FARM FOR SALE

THAT Commodious and desirable Country Place, known as **Maplehurst Farm**, situated in the vicinity of Glenholm, Colchester Co., is offered for Sale. This well known Farm, one of the best in the County, is ideally situated, being within 5 miles of the thriving Mining Town of Londonderry, while the busy Manufacturing centre of Truro, is only 10 miles distant. Situated on the main highway leading from East Mines Station, there is a twice-a-day Mail delivery at door, while Church, School, Railway Depot and an Up-to-Date Creamery are all within a radius of a mile.

▮ This Farm consists of 165 acres, one hundred acres of which is Upland, and mostly all under a high state of cultivation. The balance consists of a fifty acre Wood lot and fifteen acres of a good Dyked Marsh. House is of a Wooden Construction, Comfortable and Cozy, having Verandah, Bay Windows, etc., and heated throughout with Hot Air. On ground floor, there are seven rooms, on floor above, five. Also a Summer House and Flower Garden in connection. Two up-to-date Barns, one 80 x 40, the other 30 x 32, both with Cellar Basements. Also Carriage House, Implement Shed, Poultry House, Piggery, etc. Water in House and at Barns, and a never failing Spring of clear pure water only a few yards from House. An Orchard of 60 trees, all bearing, is an important asset of this Farm, also an immense deposit of Brick Clay is to be found on premises. About \$300.00 worth of Machinery will be sold with Farm.

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STELLARTON, - N. S.

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The Association offers to the young man temporarily in town a place for companionship and recreation.

To Students from out of town, memberships are extended for all privileges at half rates.

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TRURO, NOVA SCOTIA

Finest Sample Rooms in the Maritime Provinces.

Headquarters for commercial travellers and tourists.

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Metropolitan
Rink

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Guaranteed free from disease, including Canker, Green Mt., Irish Cobbler, Delaware, Early Rose and Beauty Hebron are among my supply. **\$1.25** per 90 lbs. here, with package free. When possible I will ship in barrels to avoid bruising.

I will this Spring deliver, prepaid, to any Express office in New Brunswick or Nova Scotia, a crate of Potato Sets (any of above varieties), all ready for planting, about 25 lbs. net for **\$1.00.** Cash with order.

H. Gordon Smith, Union, Ont., says the Seed he got from me, planted side by side with his own, yielded 100 bus. per acre more than his own seed. Think this over and let me supply you.

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UPPER SACKVILLE, : N. B.

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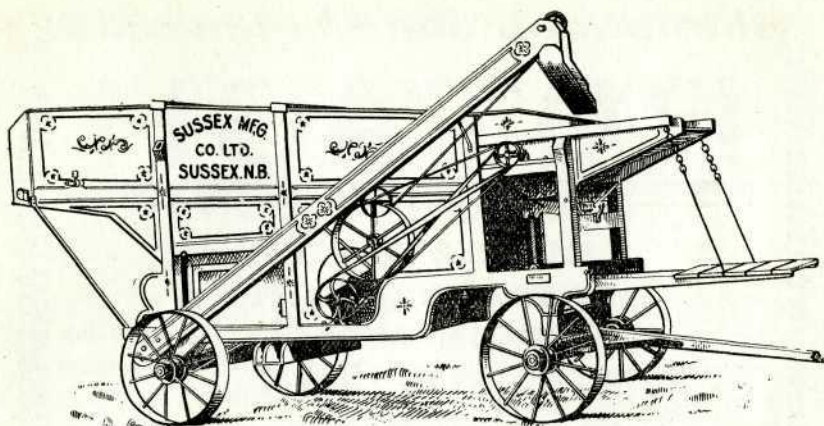
BASIC SLAG

DO not allow yourself to be deluded into buying foreign Slag of Low Quality when you can get the Sydney make, sold on a clear guarantee of available Phosphoric Acid.

If offered foreign Slag ask to know the registered number and refer to Government Bulletin to find out what guarantee, if any, is given of available Phosphoric Acid.

Then compare with the guarantee given with Sydney Slag. Farmers want to buy available Phosphoric Acid and should not accept a guarantee in any other form. Do not accept verbal statements from interested sellers of foreign Slag. Believe only what you see in the Government Bulletin, and if you want any further information, write to

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**IMPROVES QUALITY
INCREASES QUANTITY
PROMOTES MATURITY
PRODUCES PROFIT**

The large increase in the consumption of **POTASH** in Canada, for agricultural purposes during the last few years proves that farmers are recognizing more and more the benefits their crops derive from this essential plant food.

When planning for the coming season's work be sure and provide for your fertilizers having a high **POTASH** content. **POTASH** can be obtained in the highly concentrated forms of **MURIATE OF POTASH** and **SULPHATE OF POTASH** from all reliable fertilizer dealers and seedsmen.

Write us for advice on the Economic Purchase and Use of Artificial Fertilizers and for **FREE** copies of our educative bulletins, which include :—

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"The Potato Crop in Canada"

"Fertilizing Orchard and Garden"

"The Farmer's Companion"

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They have found that the use of concrete eliminates one of the worst avenues of waste—repairs; and it is by preventing all forms of waste that the college-bred farmer is doubling the products of his land.

Our information department will supply any desired information on the use of concrete, free.

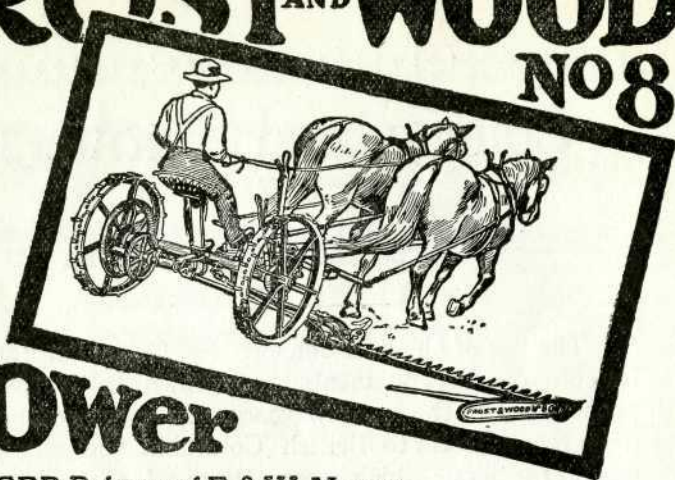
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CANADA CEMENT COMPANY, Limited
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FROST AND WOOD

NO 8



Mower

TIGER Rakes and F. & W. Mowers have behind them 70 years of experience and skill in making the very best farm machinery. The rake is all steel, with automatic trip, and a truss rod under the frame to hold the teeth exactly right. Breakages are practically impossible. It will last a life time.

The Frost & Wood Mower has roller bearings on axle, cross and crankshaft. Its gears and pinions are arranged on the famous "internal gear" principle, which prevents noise, binding, choking and broken knives.

Get absolute dependability in your haying machinery. This Mower and Rake have in them every feature that minimizes stops and accidents during haying. Examine them closely. Investigate carefully. They will pass the test of service, season after season.

"INTERNAL GEAR" WHAT IT DOES

THE F. & W. Mower takes power from the inside of a rack on the left main wheel. In this position, three rack teeth are always in mesh with two pinion teeth. This divides the wear—means smooth running. It is the easiest cutter made.

Even after years of use, these teeth are still in close mesh. The knife cuts the moment the mower moves. This prevents choking, broken knives, accidents and field repairs. You avoid loss of hay and wages by perfect design.

FREE For a post card—a book giving full details of our rakes and mowers, with list of sizes and complete description.

The FROST & WOOD CO., Limited

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SMITHS FALLS

St. John, N.B.

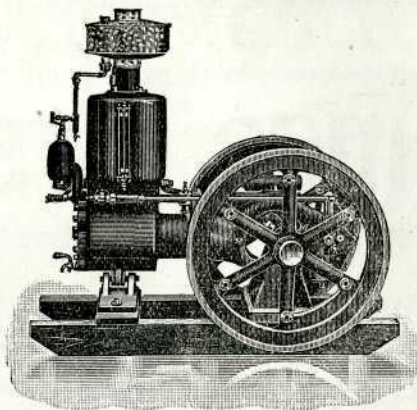
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The Delaval Separator Co.

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R. K. ELLIOT, Sec'y and Treas.

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