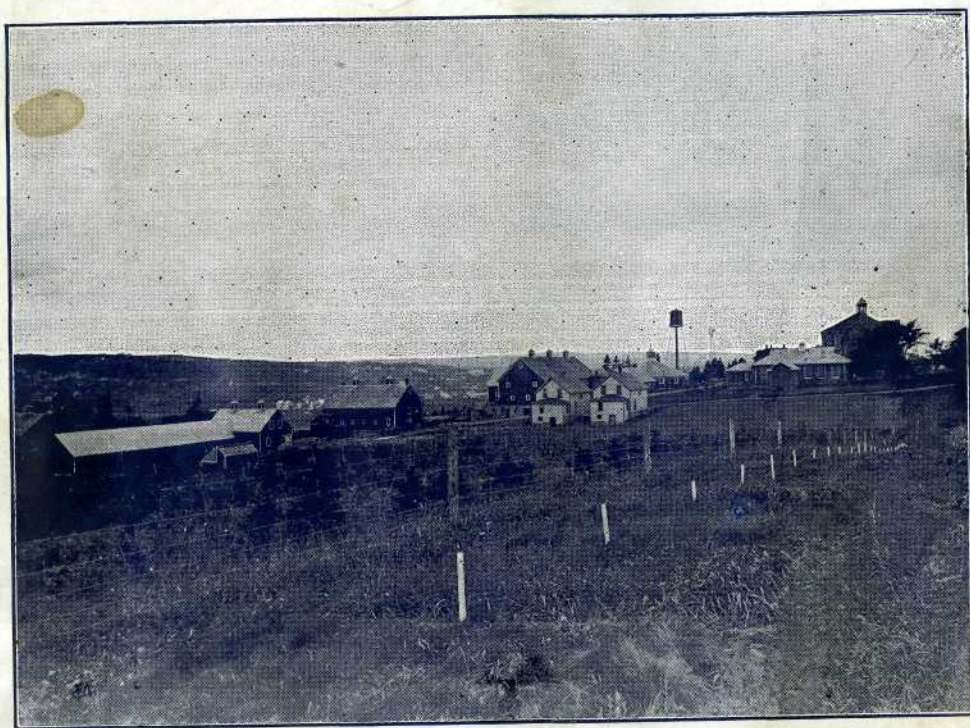
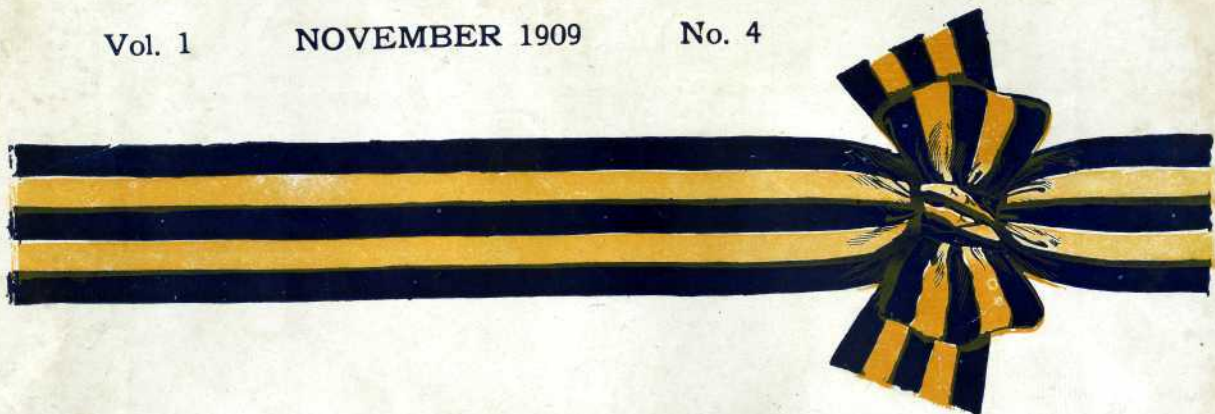


Vol. 1

NOVEMBER 1909

No. 4



# The Maritime Students' Agriculturist

Price 10 cents.



---

# What a Gallon of Gasoline Will Do for You

**A** GALLON of gasoline will run one of the efficient 2-horsepower I. H. C. Gasoline Engines for fully 5 hours.

That is, you will have full 2-horsepower to turn your machines all that time.

It will save you and your family all the hard work of turning the cream separator.

It will pump water and grind feed for all your stock.

It will saw your wood, shell your corn, turn your grindstone.

It will do all these things and many more for you the same day.

And for 5 hours' steady work it will cost you the price of one gallon of gasoline.

Is not that getting your hard work done at a pretty cheap rate?

You will have plenty of other jobs for your

## I. H. C. Gasoline Engine

There is something for it to do all the time. If it is not working it is not costing you anything. When the engine stops, all expense stops. But it is ready to start up again at the same work or any other work at any moment.

There are larger I. H. C. engines that consume more fuel and do more work—you have your choice of a number of styles and many sizes.

**Vertical** 2, 3 and 25-horsepower.

**Horizontal** (stationary and portable) 4, 6, 8, 10, 12, 15 and 20-horsepower.

**Gasoline tractors** 12, 15 and 20-horsepower.

**Famous air-cooled** 1 and 2-horsepower.

**Famous skidded engines** 2, 3, 4, 6 and 8-horsepower.

**Also a complete line of famous mounting engines from 4 to 20-horsepower, and Sawing, Spraying and Pumping Outfits and Jacks.**

If you will look into the matter rightly, and learn to appreciate how much work an I. H. C. engine will do for you and how economically it will do it, you will inevitably come to the conclusion that you must have one of some kind.

The International local agent will be glad to supply you with catalogues and all particulars, or write our nearest branch house for further information.

**CANADIAN BRANCH HOUSES**—Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg.

**INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.**

(Incorporated)

---



**AT  
MOXON'S  
PHARMACY**

You will find a large assortment of  
**Nail, Tooth, Shaving and Hair  
BRUSHES**

a large stock of First Class Drugs,  
a nice line of Razors, Stropps, Soap,  
etc., etc.

Our Compound Syrup of Hypophosphites  
is an excellent tonic for students and  
all brain workers.

**E. G. MOXON,**  
DRUGGIST

Phone 73-L                      ENGLIS STREET

**Be Comfortable**

Buy your Furnishings from  
us. A New Stock, Up-to-date  
Ideas, at prices that satisfy.

See our line of

**Suits, Overcoats, Underwear, Half Hose  
Pyjamas, Gloves, Neckwear,  
Fancy Vests, Sweater Coats, etc.**

**We refund money on all unsatisfactory  
purchases**

**THE CHEAP CASH STORE  
A. E. HUNT & CO.**



*Stanfield's*  
**SUPERIOR  
SWEATERS**

A STANFIELD Sweater Coat  
is more convenient than the old  
style variety—wears and looks  
well all the time.

All sizes and many color com-  
binations, All dealers.



**SKATES!**

**SKATES!**

We have the famous **STARR SKATES** in all sizes.  
**HOCKEY SKATES 50c** a pair and upwards.  
**HOCKEY STICKS** made of selected second growth yellow birch.

SPECIAL PRICES TO CLUBS

**TRURO HARDWARE CO., LTD.**

**CUMMINGS & RENNIE, Limited,**

IMPORTERS OF

Staple and Fancy Dry Goods, Carpets and House Furnishings

TAILORING AND LADIES' TAILORING A SPECIALTY

**TRURO**

- - - -

**NOVA SCOTIA**



**Your Mothers and Sisters**

and the other fellow's **Sister** will appreciate an

**Artistic Photo of Yourself**

at Christmas time.—A dozen Photo will save  
you a great deal of worry over :: :: ::

**XMAS GIFTS**

**The Sponagle Studio,**

Phone 307-W

I' PA

Special Rates to N. S. A. C. U

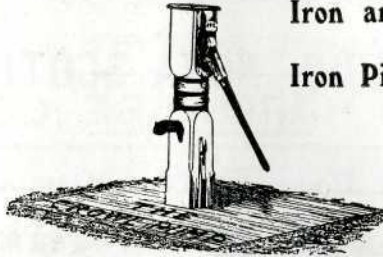
# THE CROWE PUMP

Deep Well Pumps

House Pumps

Tank Pumps

Power Pumps



Iron and Brass Cylinders

Iron Pipe and Fittings

Galvanized Steel Tanks

Wood Tanks

When ordering give exact depth of well from platform.

General Water Supply Material

Write and let us know your requirements

**G. B. CROWE & CO.,**

TRURO, Nova Scotia.

## How about that Photograph

Boys, that you were going to have taken? It would make an ideal Xmas Gift for that sweetheart of yours.

For Best Workmanship and  
Special Prices

Go to

**Redd Studio,**

**A. E. H. Street.**

## R. J. TURNER

Importer of and Dealer in

### HARDWARE

Paints, Oil, Glass.

### CROCKERY

Glassware

Lamp Goods

Kitchen Utensils

Rogers Bros. Silverware  
etc., etc.

Inglis St., Truro, N. S.



# Agricultural College, TRURO, NOVA SCOTIA.

Regular Course a Two Years Course  
Leading to Associated Diploma

Terms from November 1st to April 15th.

Short Courses for farmers and farmers' sons and Short Courses for ladies during first two weeks of January each year.

Tuition for all Courses Free. For Short Courses the railways grant single railway fare.

## THE SUBJECTS TAUGHT ARE:

Agriculture, including Field and Animal Husbandry; Horticulture; Dairying; Poultry Raising; Veterinary; Science; Botany; Chemistry; Bacteriology and other Sciences; English; Mathematics; Book-keeping; Political Economy; Mechanical Drawing; Carpentering; Blacksmithing, etc.

Students completing the two years course can enter the 3rd year of any of the Canadian Agricultural Colleges.

For full particulars apply to

M. CUMMING, B. A., B. S. A.,

Principal Agricultural College,

TRURO, Nova Scotia.

# The Provincial Normal School, TRURO, NOVA SCOTIA.

OFFERS FREE TUITION AND AN ALLOW-  
ANCE OF FIVE CENTS PER MILE FOR  
TRAVELING EXPENSES TO THOSE PRE-  
PARING

## TO TEACH

IN THE SCHOOLS OF NOVA SCOTIA

Courses leading to license as Kindergarten, and to license in Mechanic and  
Domestic Science.

For Calendar and detailed information write to

DAVID SOLOAN, Principal.

## THE YOUNG MEN'S CHRISTIAN ASSOCIATION OF TRURO

is always open to the Students who are  
in town. They are always welcome to  
its Reading Room and to the Bible Class-  
es and meetings.

A reduced rate is given to Students  
from outside the town to the Gymnasium  
and Game Rooms.

### LOCALS.

We thought Sam McGee had been  
sufficiently cremated last year—he ap-  
pears to be as lively as ever, however.

The pomological students feel that  
their dignity has been hurt by the want  
of confidence placed in them by Prof.  
Shaw, viz. the empty apple room.

(TUNE—Old Mother Hubbard.)

Some of us went to the apple room,  
To start pomological fun,  
When we went there  
The cupboard was bare  
And so we poor fellows had none.

“We missed that boy with boots so enormous,  
That made sweet music so long and so oft;  
He returned, though not with boots to greet us,  
But shod in moccasins so broad and soft.”



THE MARITIME STUDENTS' AGRICULTURIST.

**C. E. BENTLEY & CO.**

**The Dry Goods Departmental Store**

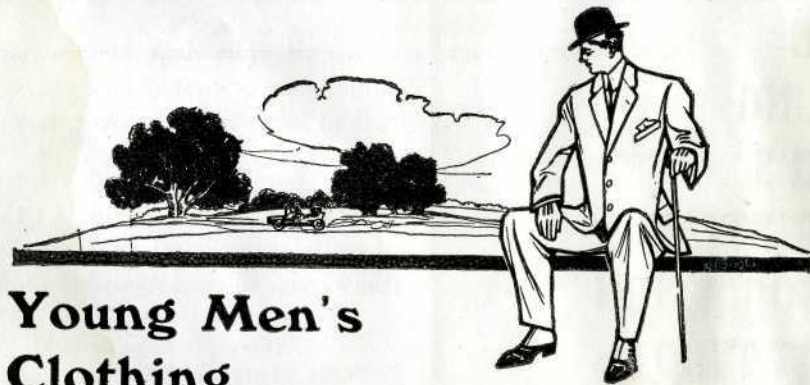
**TRURO, N. S.**

**Large Assortment to Select From**

**Strictly One Price to Everybody**

All Goods are bought direct from manufacturers and marked on a quick turn-over basis.

**SPECIAL MAIL ORDER DEPARTMENT**



**Young Men's  
Clothing**

Built specially for the chap who  
has good red blood in his veins

Distinctive, Personal, full of the little points that make up  
the newest of the new Fall Clothing.

**PHILLIPS & CO.,**

**Hatters and Clothiers**

Please mention The Maritime Students' Agriculturist when answering advertisements.



THE MARITIME STUDENTS' AGRICULTURIST.

# COLLEGE STUDENTS

will find all they require in the line of

## Text Books and Stationery

AT ROCK BOTTOM PRICES AT

# CROWE BROS.,

STATIONERS and DRUGGISTS

INGLIS STREET

TRURO, N. S.

OUR AIM—Superior Quality at Lowest Prices.

---

---

## CONTENTS

---

---

VOL. 1.

NOVEMBER, 1909

NO. 4

---

---

	Page.
Editorial .....	1
Swine Raising in Eastern Canada .....	2
Observations .....	5
Horticultural Notes .....	8
What Have You Learned in 1909 .....	10
Apple Packing .....	13
Bees .....	16
College Notes .....	18
Students in Attendance .....	19
Coal Versus Soil .....	20
Forestry and Taxation .....	20
Melted Wood .....	21
A Daily Thought .....	21
Some Farm Animals .....	22
Locals .....	22

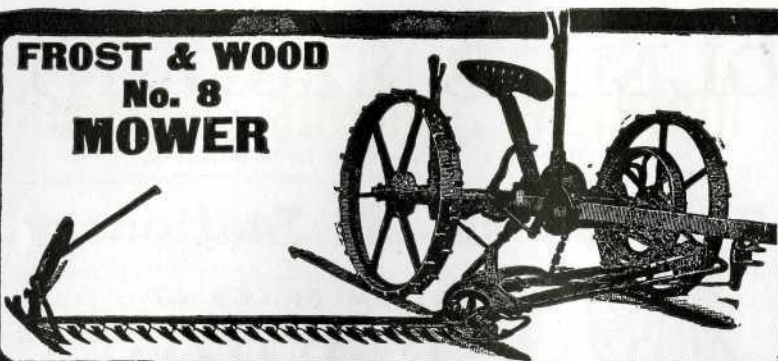
---

---

THE MARITIME STUDENTS' AGRICULTURIST is published by the students of the Nova Scotia Agricultural College, Truro, N. S.



**FROST & WOOD  
No. 8  
MOWER**



**HAY-MAKERS  
THEY WORK WELL  
TOGETHER**

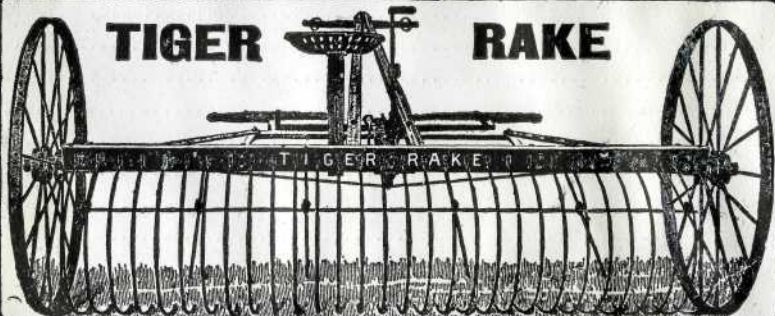
An ideal combination for getting in your crop of grass. Our No. 8 Mower with its strong, substantial build, its accurate, clean-cutting power and ease of operation, is a real money-saver and profit-earner for thousands of farmers at every point in the Dominion. It is strong, durable, needs few repairs. It works day in and day out, proving the stalwart honesty and mechanical excellence put into every gear and wheel, knife and shaft, cutter-bar and pitman.

But there's the other tool--can't get along without that--the Tiger Hay-Rake.

It's all steel, except tooth-rail and shafts, which makes it proof against hard work, rain and exposure. A Tiger Rake is exceptionally durable. It does such clean work, too. The spring teeth have just enough elasticity, and are curved so as to pick up grass easily and evenly. It's an easy rake to handle for horse and driver. It can be dumped by foot or hand. The fall of the teeth after dumping is eased by a strong spring that prevents much of that disagreeable jar so evident in cheap rakes. We can't tell you here the scores of good points about these hay-makers. Send for our catalog "A" and "Farmer's Ready Reckoner." Both books are free, and answer your questions. Ask our local agent to show you our farm implements. He'll gladly do it.

**The Frost & Wood Co., Ltd.**  
Smith's Falls, - - - Canada.

**TIGER RAKE**





# The Maritime Students' Agriculturist.

---

VOL. 1

NOVEMBER, 1909.

NO. 4.

---

BRAM. GORNALL, Editor.

M. B. DAVIS, Business Manager.

GEORGE MAGEE, Advertising Manager.

E. W. CONNOLLY, Auditor.

---

## EDITORIALS

ALL things begin in a small way and it is only by much perseverance and the overcoming of obstacles that appear pertaining to failure that success is made. Such a struggle is, we believe, before us but for our part nothing shall be left undone that will go to reinforce the success already gained. It is to our subscribers that we make an appeal for help. We do not aim at making the Magazine of interest to College Students only but for anybody who has the well-fare of the College at heart and who is able and generous enough to become a subscriber.

It is said that comparisons are odious but that is only true when applied to persons. In looking back over the years we cannot help comparing the different styles of soil treatment that have been in vogue. We can read of the time when the only tillage known was that of spading—how laborious and heartbreaking a task the people of that day only knew. By continued experiment, thought and perseverance we have to-day got past the question of tool tillage in our soil treatment and are giving

our attention to the question of soil inoculation. This question is claiming the attention of all up-to-date farmers and it would be well for those who lay claim to this title to follow the subject and become acquainted with it while it is yet in its infancy. We know that men are better able to learn if they study in their youth and a similar analogy holds true with regard to a subject that if it is followed and understood while it is being expounded and experimented with by those who have the subject at heart, that subject will be more thoroughly understood and its purport grasped in all its aspects.

INDIVIDUALS in general are by themselves of little consequence, but when combined they can generate sufficient power to overcome all obstacles. This truth if applied to the dairy industry of the Maritime Provinces would solve the future of this industry in our part of the Dominion. While there has been a tremendous amount of good done by Farmers' Associations there are still a large number of men whose ideals of agricultural life are very low. These



men of slipshod methods are they who are retarding the progress of these Provinces and it will not be until they are removed or are educated to better things, that progress will be made to the full extent. "Education spells progress" and it is only in this way that agriculture can be brought up to the standard which we believe it can and will some day reach.

WE are very glad to be able to mention the occasion of the marriage of our late Editor, E. M. Straight. The success which the Magazine attained last season was in no little way due to him. He generously gave a great deal of time, that otherwise would have been given to study, to magazine work, and it was by his enthusiasm and example that we were able to lay claim to that coveted

word "success." We wish him and his bride every happiness and success in their future life.

WE would like to say a word of welcome to the Junior Students. They are for the most part strangers to one another and to the Seniors, and it is therefore our—the Seniors'—duty to extend the hand of friendship and bid them welcome. We can take the lead but they must follow and it is only by united effort that the College term can be made a success educationally and socially. We have to recognize a fine body of students of whom we expect great things and as we were treated in the past so we will try and do the same to these new men.

### SWINE RAISING IN EASTERN CANADA

IT has oft' been repeated by our greatest authorities, such as the Hon. Sydney Fisher, Minister of Agriculture for the Dominion of Canada, Prof. M. Cumming, and others, that dairying must eventually become the great agricultural industry of our Maritime Provinces. This has now become self evident to all interested and the good work is rapidly pressing forward. Altho' this industry may predominate in the future, and very profitably so, yet the by-products, as in any industry, must be turned to the best advantage. From this grows swine raising, which is fully as profitable as the mother industry and these two going hand in hand with economic and intelligent farm practice insure success. This has been

the policy of Denmark, a country only two-thirds the size of Nova Scotia, which exports annually \$100,000,000 00 of dairy and pork produce, and this must be the policy of our Eastern Province.

But why has hog raising received comparatively so little attention in our provinces?

Firstly, it can only be conducted economically in conjunction with the dairy herd and can only grow with dairying.

Again, the hog is erroneously considered by the majority as a dirty animal. He is no dirtier than the farmer who keeps him. Given a clean dry bed, sufficient and proper food and a good run as needed, he may even then do good service in the manure pile or wallow in the mud and not be the filthy or

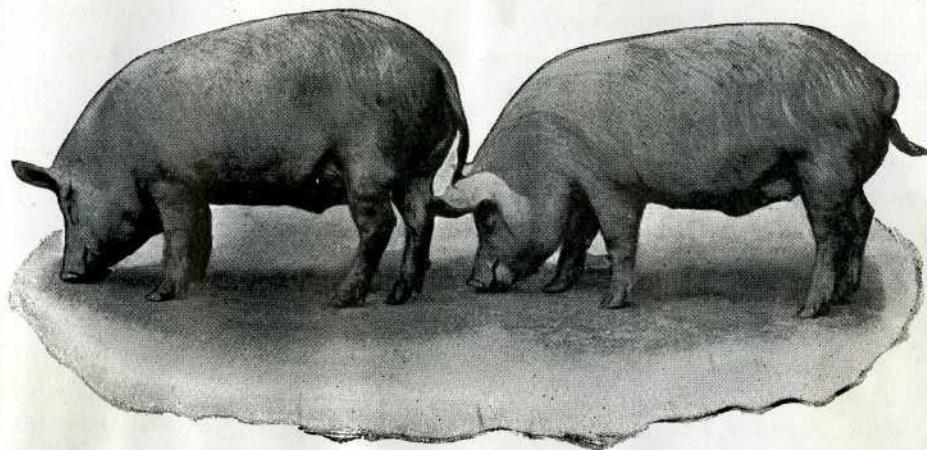


diseased animal depicted and so often seen. It occurs to so few that the pig may be benefited by regular cleanings as much as any class of farm stock, and so with his pen.

Another reason for tardy advancement is the numerous failures of men attempting this industry on too large a scale when neither having ability or required feeds, shelters, etc., to assure

he would raise more economical pork, of superior quality and about double the returns therefrom.

Finally, we see too great a variety of breeds and consequently of types in these provinces to insure uniformity and high quality of pork, bacon or hams, even on our local markets. This is the reason Denmark can command higher prices on the London market than



These Swine were selected by the Davis Co., Toronto, as ideal bacon types for home or export trade.

---

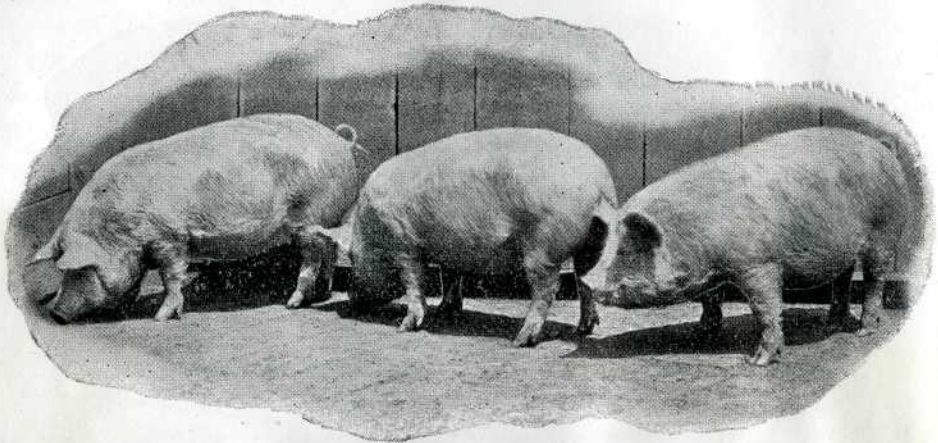
success. We also find a large majority of farmers of the opposite extreme, who are too conservative. Take for example. I know a farmer, who raises for market three pigs yearly. These pigs have a too liberal supply of milk and slops and scarcely any roots or meal. Would he but keep, say, two more pigs and use the same quantity of skim-milk, feed more roots and a reasonable quantity of meal,

any other country. Canada can produce as good bacon as Denmark, but many breeds and many types even of the same breed, is her weak point. But the question is so often asked, "what is the best type of pig or the best breed?" This all depends on the market. Looking back fifty years we find the fat hog weighing from 300 to 550 in great demand by packing houses and local



markets the Continent over. This gave rise to the many fat hog types and breeds, such as Chester White, Duroc Jersey, Poland China, etc. Now everything is changed. Farmers learned that 190 to 250 pounds live weight, was the economical weight for marketing, and the consumer learned that this weight gave superior quality of produce. The great demand for higher class bacon and

The main difference between these types might be summed up as follows: The fat hog, valued most highly for its hams, demands great thickness throughout, depth and thickness in shoulders, body and hams, and greater fatness than bacon hogs. The bacon hog, when split, is valued more particularly for its side, so-called the Wiltshire side. This means a demand for length, more muscle than



These Swine were rejected by the Matthews & Co., Hull, as too thick and fat for ideal bacon.

the possibilities of the bacon trade with England also influenced this change. Hence, the bacon and dual types and breeds have come into greater demand.

Of the bacon breeds, the Yorkshire and Tamworth, as well as some strains of Berkshires, are outstanding. This last breed, however, is more of the dual type, it, as a rule, being about intermediate between the Fat Hog and Bacon Hog.

fat, greater tapering, and trimness of shoulder, belly and hams, so that when split it may give that pleasing even intermixing of fat and lean, which is so highly prized on the best markets.

Many farmers claim that the thicker breeds are more economical feeders. This all depends upon the individual animal. Providing he is growthy and has constitution and capacity, the breed

matters little. I speak not from my experience alone, but from figures accumulated in careful trials at Ottawa, O. A. C., Guelph, and many Experimental Stations in the United States.

Would our farmers and breeders but keep utility to the front, satisfying the demands of farmer, butcher and consumer, learning that pure bred animals of the right type pay far better than mongrels or crosses and, finally, that feeding will make or mar their produce in size, color of pork, quality and mostly in profits, they would soon educate our local markets, ship the surplus profitably and place the pig in the front rank of animals suited to paying the rent and lifting the mortgage.

Just a word as to the markets and I am done. Nova Scotia, for example, produces only about 50 per cent of the

pork, bacon and ham consumed within our borders. The farmer, in other words, "is not onto his job." Then again if he has hogs to market, he sells them at, say from 6 to 8 cents per pound, just as pig and not as high class, or otherwise, bacon and pork. Here is a chance for him to educate the consuming populace toward demanding quality.

And what of the possibilities of an export trade? With a fertile country, ready shipping facilities the year round, a constant demand in Great Britain for high class bacon, the high prices varying with quality, surely this is tempting to our progressive agriculturists. Let us hope that before many years our farmers may seize these opportunities and aid the hog in proving his rights as a profitable friend.

E. S. ARCHIBALD.

## OBSERVATIONS

**O**BSERVATIONS on what? is a question that the reader may very well ask himself, upon seeing the heading of this article. So it might be well to add at the beginning just what the observations are on, viz:—on methods of conducting the fruit phase of farming in Nova Scotia, principally the Western portion.

Let us glance at the apple industry of our country, and see if everything is being conducted in as fit and proper a manner as it could be.

We find throughout the Annapolis Valley vast areas of orchards that are only half-cared for from one end of the

year to the other, while again we find areas of orchard that are well cultivated and cared for in the most modern manner possible. In the first instance the orchards so neglected are, in most cases, the larger ones, which are in such a dilapidated state, either because the farmer has too large an orchard, or too big a farm, and consequently cannot give either the amount of attention and care it should have.

This however, is not the only reason for such a state of affairs. Another important factor is, that even though much has been written and said on the question of cultivation and fertilization



of an orchard, still there are those who have not grasped the importance of the question enough to put it in practice.

I only wish to draw your attention to a few reasons why cultivation and drainage are important factors in the care of orchards. You all know that in the fruit section there has been a very dry summer, with the result that in many sections, the apples were much smaller than usual on account of it. Those who cultivated weekly, thus keeping a mulch on their orchards, did not suffer so badly. Why was this? Simply because the mulch broke the capillary attraction, (by which the soil moisture is brought to the surface and lost,) and thus prevented the undue loss of moisture by evaporation.

Then again, orchards which have been drained for some years, stood the drought much better on account of the lower water tables. It might be well to add in detail an explanation of this.

When a piece of orchard, or in fact any land, is underdrained, the water on the soil above and around the drain finds its way out, instead of standing for days until it seeps thru the surrounding soil, or is evaporated by the action of the sun, as would be the case in undrained lands. Thus you can see that the soil moisture would be considerably lower down in the case of drained land. Now as the tree must have moisture, which is gathered by the roots, they send out roots where the moisture is to be found. this being the case, let us look at the way to make use of it.

In the wet season of the year, viz:—the Spring—when young rootlets are being sent out by the trees, we can, by

draining, lower the water table (soil moisture,) considerably. Then, as the roots need moisture, they will start to grow down where the moisture may be found, finding enough on their journey to sustain them until they reach the drinking place. Now on the other hand in a wet soil, not drained, the roots do not have to go in search of water, and consequently do not attempt to grow downward. Now in the first case, when the dry season comes, we have roots to a much greater depth, than in the other case. The result is that the top soil dries out much more quickly, leaving the roots to suffer for water. On the other hand, the lower portion of the soil takes longer to dry out and may even not dry out at all, so that the roots to that depth always find water to assist them. Thus we can see that draining assists the trees to withstand a drought, rather than being detrimental to this end, as is thought by many who have not given this matter a careful consideration.

It now remains to say a few words as regards the picking, and packing of fruit as it is carried on in many parts of the Valley. Let us take a peep into an orchard and watch the picking.

We will see that some are careless, while others are careful. The careless picker will pay no attention to whether he bruises the fruit by rough handling, or pulls off all the fruit buds as he goes along.

In picking it is necessary to be very careful. The apple stem should be broken across the thumb, leaving the fruit bud, or next year's crop intact on the tree.



Then the apples should be carefully dumped into a barrel, by lowering the basket well down to the bottom, so as not to let the apples fall too far.

In many cases, we will see men packing in the orchard during the heat of the day. A mistake, which is the cause of a good deal of the rot found in early fruit after packing.

Apples after picking should be left in the orchard in barrels over night, just as they came off the trees. This is to allow them to cool off before hauling. When apples come off the tree on a warm day, they are naturally quite warm, as compared with the temperature they should be stored at. So, when they are packed in this condition, in a tight barrel they perspire and rotting is thus hastened.

Now while the apples are still cool, haul them to a cool warehouse and there pack them for shipment. Thus, by keeping our fruit cool and free from bruises, we can eliminate a great deal of this rotting in barrels after packing.

#### PACKING AND GRADING AS CARRIED ON BY SOME.

Have any of you ever been in a warehouse where you could observe the different kinds of packing and different grades of No. 1s, 2s and 3s as put up by different packers?

If not, you do not know the exact state of affairs. Much has been said and much done by our government to see that nothing but honestly packed fruit leave our country. Yet, after all is said and done, we find many evading the law by shipping fruit that is not up to the mark. In many cases carelessness is the cause, in others, wilful deceit. But

laying aside all causes, we can see lots of room for improvement along that line.

Barrels of apples marked No. 1, leave this country, which are hardly fit for No. 3s. It is not an uncommon thing for the inspector to find one of these and mark it "falsely packed," but still there are many that go out to market unnoticed by any one in authority.

The result of all this is disastrous to the welfare of our fruit industry, especially to the particular grower whose brand is on such fruit.

We will now take an exact instance which occurred in Boston a few weeks ago, to show the way buyers in the market watch the different brands.

A young Nova Scotian entered a large warehouse in Boston to see how they handled our N. S. fruit. While he was there, he walked a retail dealer from the city, who wanted to buy some apples. He carried with him an indexed book, and when the manager would point out lots of apples for sale, he would look up the name of the packer in his book, to see if he had ever had dealings with him before or not.

In some cases he would not know the name, in others he would say, no I don't want his fruit we handled some of his last year and he does not pack good. In other cases, he would say, yes, I will take that lot for he puts up good fruit.

Now Mr. Packer and Grower, you can see just where you stand. If your fruit is up to the mark in every respect it is going to be asked for and consequently will get the higher price, if not up to the mark you must be content with the low and unprofitable prices.



It is high time that our packers and growers found out this, and raised their standard of quality a little. I will grant that there are those who put up excellent fruit, but we find many who do not and for those and those alone is this meant.

Lastly, let us consider our shipping, facilities and see if they are what they should be, in order to guarantee a safe arrival in England.

The main difficulty lies in the way the boxes of fruit are handled. Packing apples in boxes is a growing business in N. S. and should be given all the chance possible.

We can readily see, that if in storing the cargo on board ship, a box is placed under a lot of barrels, that by the time

those boxes reach their destination they are going to be in a badly bruised condition.

Yet, this is what is done on those apple steamers. They store a box where ever they can find a hole for it.

Now what should be done, is to have a separate part of the steamer for boxed fruit alone, so that the boxes will not receive undue rough knocking.

Now if some of the points brought out in this article, simple as they may seem to be, would only receive the careful consideration of *some* of our fruit growers, I feel sure that the fruit industry would be placed on a better business basis and would amply repay for the trouble.

M. B. DAVIS.

## HORTICULTURAL NOTES AT MIDDLETON EXHIBITION

**E**ACH Autumn for the past six years a Horticultural Exhibition has been held in the Annapolis Valley. This year the newly incorporated town of Middleton was chosen as the place of meeting, where on October 6th the Exhibition was formally opened.

The fruit was displayed in the large van shed on the grounds of the Macdonald Consolidated School which proved to be an excellent building for the purpose.

No part of the exhibition attracted more attention than the class which called for the best plate of five apples of the following varieties, some 46 of the leading commercial varieties being named, 43 of which were represented. The King had the largest representation of

any variety, which consisted of 60 plates. The Golden Russet came second with 59 plates. About 780 plates were shown in the class.

While the fruit was not as large as in some previous years, it was a very uniform and carefully selected lot; there being very few of those overgrown poorly colored specimens so frequently met with at exhibitions.

In the class of the best and most valuable collection of apples, not exceeding 15 varieties, there were 12 entries. The collection which was given first prize contained the following varieties, Fallawater, Hubbardston, Ribston, Spy, Blenheim, Ontario, Golden Russet, Bishop Pippin, Gravenstein, R. I. Greening, King, Baldwin, Nonpareil, Wagner, Stark.



The best collection of 10 commercial or export varieties had 10 entries. Here the first prize was awarded to the one containing, Blenheim, Baldwin, Spy, R. I. Greening, Nonpareil, Golden Russet, Ribston, King, Fallawater, and Stark. The competition in both of these classes was very close.

While the show of plums was not as good as in some previous years, yet it was a very creditable exhibit. Some 130 plates were exhibited.

In the class calling for the best collection of 10 varieties there were 4 entries. The first prize collection contained Coe's Golden Drop, Grand Duke, Rein Claude, French Damson, Imperial Gage, Late Orange, Lombard, Red Egg, Flax Prune, and Damson.

In the single plate exhibit of pears there were about 150 dishes of excellent quality.

The best collection of 10 commercial varieties consisted of Bartlett, D'Anjou, Duchess, Great Britain Bussock, Louise Bonne, Howell, Bosc, Hardy, and Clairzeau.

In the best collection of 5 commercial varieties we found Duchess, D'Anjou, Bartlett, Bosc, and Sheldon.

The grape exhibit was not as good as last year, due largely to the fact that Mr. W. H. Duncanson, who was formerly the largest exhibitor of grapes, has moved to the U. S. during the year. A number of varieties however were represented, including Champion, Delaware, Brighton, Moor's Early, Campbell's Early, Niagara and New Rogers.

The remainder of the plate fruit

consisted of a small exhibit each of crabs and quinces, the latter being of excellent quality.

After going carefully over the plate fruit we would say on the whole it compared very favourably, both in quantity and quality, with previous years.

Next we came to the apples packed for export. Here 12 of the leading varieties were represented. The fruit was clean, well colored, and carefully graded and except for some half dozen boxes which were very slack, the packing was well done. There was noticed, however, to be a large falling off in the number of exhibits as compared with last year. There were only 45 boxes, where last year there were about 150, and 120 barrels which were about half the number shown the previous year. An annual visitor at this exhibition would naturally ask the question; Why is the most important feature of the show no better patronized? In looking for the answer we find in the prize list a number of prizes offered to the amount of \$5.00 and in a few cases \$6.00 for the best barrel of a certain variety, and \$3.00 for first prize in the case of the box. Fruit winning prizes to become the property of the donor of the said prize. When we consider the amount of labor required to collect enough perfect apples to fill a barrel, the depreciation of the remainder of the crop after these are taken out, the forfeiture of the prize fruit, and that the second prize is about equal to the market price of the ordinary No. 1, we would say the Valley fruit growers are very



loyal to their exhibition to make the number of entries that they did.

The remainder of the exhibition was displayed in another building close by, apparently used by the Middleton school for class rooms. Here we found nearly every kind of vegetables grown in Nova Scotia represented, the potatoes, squash, and pumpkins, being exceptionally good.

On the second floor was a large display of ornamental plants and cut flowers. Two specimens each of *asparagus spengeri* and *asparagus plumosus nanus*, were the best the writer has ever seen.

Another important part of the exhibition, to one interested in fruit, was demonstrations in box packing of apples, as practiced on the Pacific Coast, given by Mr. Earl of B. C., who is an expert in this line. We were glad to see so many of the fruit growers taking an interest in it, as we believe it will only be a question of a few years, when all of our choice fruit will be shipped in boxes.

It was now time for tea, and we took an evening train for Annapolis Royal, feeling that we had spent a most enjoyable and profitable day at Middleton.

## WHAT HAVE YOU LEARNED FROM THE SEASON OF 1909?

**N**O calling of life is so filled with variety as that of the farmer.

He lives close to nature, and has to adapt himself to her changeful moods. Early seasons, late seasons, abundance of rain, drought, cold, heat, sunshine, shadow, and all phases of these have to be considered in his plans. He who studies these and learns from them, makes the successful farmer, and he who does not fails; for though nature's fields always yield a harvest, yet they yield their bounteous fruits to him alone who, with intelligence and foresight, tills his soils and sows his crops. It is this phase of things that makes the farmer's life a varied life, frees it from the monotony of other pursuits and exacts a keenness of observation, quick adaptability, and practical application far be-

yond that required in any other line of life and classes the intelligent farmer as truly a student as he who spends his days in college halls.

The student farmer, and he is the good farmer, is therefore, a student not so much of books—in fact, least of these—but of every phase of nature. The soil and the organisms that live in it, the plant and its manner of growth, the seed and its method of sprouting, the fruit and how to preserve it, water and how to conserve it, the air, the sun, and the changeable moods of the heavens—these and many other things are constantly before him and call for his observation, judgment, and action. It is for this reason, that at the close of the season of 1909, we think it opportune to look back and record the lessons that have



been most strongly impressed—lessons which should guide the future methods of the Maritime Province farmer.

The Spring of 1909, like that of the two preceding years, was a late one and not a few farmers had to defer their seeding until the drought and heat of June had caused their soils to dry. Those, whose lands were naturally dry finished their seeding before those on the heavier and wetter lands had begun. And, in turn, those whose low and heavy lands were under-drained, gained not only days but weeks on those with similar land undrained. Never was the advantage of under-drains so forcibly taught. We, ourselves, know of under-drained fields that yielded in 1909 a ton more hay, 15 to 25 bushels more oats, and double the crop of roots in comparison with similar fields undrained, and when we have calculated results, we have found these under-drains yielding a percentage of profit never dreamed of, in the ordinary commerce of our country.

To thoroughly under-drain an acre of low or heavy land may cost as high as \$50.00, but many fields could be quite satisfactorily drained for less than half of that, so that we are easily within the mark in placing the average cost of satisfactory drainage at about \$30 an acre. Compare with this the extra annual value of the crops we have described—\$8.00 to \$10.00 more hay, \$7.00 to \$12.00 more oats, and \$20.00 to \$50.00 more roots, to say nothing of the improved quality of all these crops. Even the least extra profit amounts to 25% on the capi-

tal invested and, with some of the more expensive crops the returns will more than double that. Granted that we have under estimated the cost of drainage, there is still a percentage of profit far in excess of that which a farmer can get in savings banks or gilt edge stocks. Now 1909 was a year when drainage gave phenomenal results, but so also 1908 and 1907. Next year the advantages may be less, but nevertheless, he has been a poor student of farm problems in 1909 that has not learned that it will handsomely pay Maritime Province farmers to under-drain.

As if to show how varied she can be, nature followed the late, wet spring of May and early June with a drought that in some parts of the provinces, more particularly western Nova Scotia extended into September. Consequently, many of the necessarily late seeded crops made little or no growth, and not infrequently, mangels, turnips, etc., had to be reseeded. But the farmer who, from previous experience with drought, had learned that thorough plowing and still more thorough surface tillage conserves soil moisture, had his crops but slightly retarded by the drought. On June 26th, an excursion of farmers from the east visited the College Farm at Truro. They brought reports of illy started and parched crops and were surprised to find the crops on the College Farm looking almost as fresh as if there had been regular falls of rain. Now the College Farm soil is naturally dryer than the average soil of Nova Scotia and does not hold moisture as well, but



we have learned that, by thorough plowing and frequent tillage, we can conserve soil moisture for a dry season. Some figures will illustrate this.

The average rain fall of the Maritime Provinces is about 40 inches per year, which amounts to a little over 9,000,000 pounds of water falling on every acre. To grow 300 bushels of potatoes per acre requires about 2,000,000 pounds of water; to grow 3 tons of clover requires about 2,500,000 pounds and most crops require rather less than these amounts. With, therefore, only from 2,000,000 to 3,000,000 pounds required by our largest crop and 9,000,000 pounds of water available, one would think the problem of soil moisture a simple one. Not so; for, though ample water falls upon our soils to support the most luxuriant vegetation, yet it does not always fall regularly and there are often, as during last summer, weeks when there is no rain. The business farmer should have his land in such condition that when these periods of drought come, he will have stored in his soil sufficient moisture to supply the needs of his growing crop. On the College Farm, as well as on any other farms where proper cultivation was practiced, there was sufficient soil moisture in the land at the time mentioned because of the good plowing and frequent harrowings, and the regular cultivation which the soil received. The following facts will make this clear:

Prof. King of Wisconsin, made a determination of the amount of soil moisture present at the time of seeding in land that had been fall plowed, as compared with an adjoining piece of

land which was not plowed until the spring, and he discovered 2.31 per cent. more moisture in the fall than in the spring plowed land. Fall plowing helps in the conservation of soil moisture.

The same investigator determined that, in a square foot of land which was harrowed as early in the spring as it could be properly cultivated, there was a week later 13.87 pounds of water in the first surface foot, as compared with 10.58 pounds in an adjoining piece of land which was not cultivated until the time the determination was made. A corresponding difference was noted in the amounts of water down to four feet. This means that, through delaying cultivation for even one week the farmer can entail a loss of from 15 to 30 per cent. in the amount of water stored in the soil, the lesson from which is, begin cultivation, even if, as with turnips, you do not expect to sow for some time, as soon as you possibly can. It will conserve your supply of soil moisture. Further, continue this cultivation in all cultivable crops both before and after seeding at frequent intervals until the crop is too large to allow implements to pass through. If this is done, unless there should be a very protracted drought, no one need fear, under Maritime Province conditions, a lack of moisture to grow, at least hoed crops.

In the fruit growing counties of Kings and Annapolis the advantage of this surface cultivation was in evidence to an unusual degree during 1909. In the uncultivated orchards, especially those in the naturally drier parts,



apples dropped rapidly and those that were left did not grow to their normal size; whereas, in the cultivated orchards, owing to the store of moisture conserved, the percentage of drops and of poorly developed apples was very much less.

It does not happen every year that the advantages of surface tillage are so evident. Nevertheless, there is not a year but when it will be found that the man, who cultivates his soil as early as possible in the spring and tills his cultivable crops regularly through the season, seldom experiences very injurious effects from a drought.

There are other lessons which 1909 have impressed, but these are the ones

which have appealed to us most forcibly and which we have, therefore, recorded. And what of this? Will you merely read and give assent and stop at that? Will you resolve at the time to attend to these things, and then, as the days pass by, and the impression grows dimmer, let things go in the same old way? Or have you permanently recorded these things in your mind and have you resolved to put into practice a more thorough system of drainage and a more continuous and thorough cultivation of the soil? Observing, thinking and recording is the first step, but it is the man of action who accomplishes things.

M. CUMMING.

### APPLE PACKING.

**T**HERE is a great deal more to be learnt about the packing of Apples than most people imagine. The apples of Nova Scotia are for the most part packed in barrels, but of late years there has been some attention paid to the packing of apples in boxes and it is to be hoped that this may be given more attention so that in a few years it will be the general rule to pack the best of the fruit in boxes. It would hardly be considered advisable, as yet, for the average fruit grower to pack his fruit in boxes. Only in cases where the grower has extra quality of dessert fruit would it be profitable to use the box. For the poorer stock and the varieties not used in the dessert trade, such as Ben Davies, Stark, etc., box packing is out of the question solely on account of

the cost of package. Each box would cost about eighteen cents (18c.) and as it takes about three boxes to equal a barrel there would be a cost of fifty-four cents (54c.) against twenty-five cents (25c.) the cost of a barrel.

#### PACKING IN BARRELS

The minimum size of the standard barrel, containing 96 quarts is as follows:

Inside measurements

Between Heads 26½ inches

Head Diameter 17 "

Middle " 18½ "

A heavy plank should be provided for the barrels to stand on and upon which the racking can be done during the process of packing.

The barrel should be prepared for



packing as follows:—The quarter hoops should be driven down firmly and three nails driven in and clinched on the inside. The face end of the barrel should be nailed and the packer's name and address, variety of apple and grade, whether No. 1, 2 or 3, stamped thereon. The fruit for the face should then be placed neatly in the barrel. The grade of the apples should be precisely the same in the face as in the rest of the barrel and there should not be the slightest attempt to get high coloured or specially perfect fruit for the face. Each apple is laid with the stem end down, the stem having been previously cut off with a stemmer. If the apples are well coloured the second layer should be placed so that the colour of the apples will show through between the apples of the first layer, when the face end is opened. After the second layer is laid, the rest of the apples may be turned in from the baskets. The baskets should have swinging handles and be small enough to enable them to be let down into the barrel thereby obviating the necessity of having to pour the apples in from the top, which is a great mistake, "practiced by some of the common packers" as it is apt to bruise the fruit. As each basketfull of apples is placed in the barrel the barrel should be shaken slightly, not sufficient to throw the apples against each other or against the sides of the barrel violently, but just enough to settle them into place. When the barrel is full to within two or three layers of the top, a round piece of plank (padded) slightly smaller than the head of the barrel should be placed on the apples

so that when the barrel is shaken the fruit will be prevented from jumping out. In tailing, the apples may be placed with either the stem or the blow end uppermost. The aim in tailing the barrel is to have equal pressure upon every apple in the last row. It is advisable to use paper heads at both ends of the barrel. The exact pressure which must be given will depend somewhat upon the variety of the apple; if they are packed for storage or for a short trip, then the pressure need not be so very heavy, but if they are packed for export, it will be necessary to press them quite heavily, but care must be taken not to break the skin of any particular specimen.

Such apples as the Spy have to be pressed very moderately, as the apple splits and bruises readily under pressure; Russets, on the contrary, will stand much heavier pressure without breaking the skin, which is very convenient as they require a heavy pressure to prevent slackness from evaporation.

In finishing the barrels, eight nails if properly driven are sufficient for a two-piece head and ten nails are required for a three-piece head.

#### BOX PACKING.

The size of the Canadian apple box is 10 x 11 x 20 in., inside measurement. It is recommended that the box should be made from the following specification:—The end pieces not less than  $\frac{5}{8}$  inch nor more than  $\frac{3}{4}$  inch thick. The sides not less than  $\frac{3}{8}$  inch, the top and bottom inch or a little less would be better. These dimensions cannot be changed to any great extent. The best available variety of wood for the covers



is probably White Spruce, but many different kinds may be used for the ends and sides. The proper nails to be used are four-penny rosined nails. Cleats should be used on top and bottom.

Whether the apples should be wrapped in paper or not depends somewhat upon the variety and the grade of the fruit. Wrapping has several advantages.

1. It serves as a cushion in the case of delicate fruit.
2. It prevents rot and fungus diseases from spreading from specimen to specimen.
3. It maintains a more even temperature in the fruit.
4. It gives a somewhat more finished appearance when the fruit is exposed for sale.

Wrapping has also some disadvantages.

1. It adds to the cost of packing.
2. It prevents rapid cooling in cases where the fruit is not cool at the time of packing.

Double wrapping and the use of waxed paper is of use where extraordinary precautions are needed to preserve the fruit. The boxes should be lined with cheap paper. The paper to be 19 x 26. Two sheets for each box.

A permanent packing house is almost an absolute necessity for the best work in box packing, or even barrel packing.

In all packing houses there should be ample ventilation in order to cool the building off during the night time.

It is more convenient to have two tables for box packing:—1st table for grading; 2nd table for packing.

The simplest method of box packing is the barrel pack, which is to place the

bottom row and dump the rest in. This method is not to be recommended.

In a general way the size of the apples is indicated by the number of tiers in the box. If three layers will fill the box properly, it would be called a 3 tier apple. In the same way if 5 tiers fill the box, the size is said to be 5 tier. If the apples of one layer are placed in the spaces between the apples of the tier below there would be say, 4 layers of apples intermediate in size between those that would fill the box in three layers or in four layers if packed directly over each other or straight pack. Such intermediate size would be styled a 3½ tier size.

A very useful diagonal pack for the 3½ tier size is made by placing three apples in the first row, one in each corner and one in the middle. The second would then be made with two apples, third with three and so on, until the tier is completed. The second layer would be commenced with two apples, third layer with three and so on, as in the first layer. The packer should never attempt to fill a space with an apple smaller than the rest of the apples in the box. If there is a small space left it can be assumed that he has chosen the wrong pack. A beginner will find it necessary to try different packs until he obtains the correct one. He may try his pack in one end of the box, instead of using the whole box. The art of box packing can only be learned by practice. I might mention here that the packing table should be well padded and the apples dumped onto the table as carefully as possible, so as not to bruise them.



In putting the cover on the box nail one end of the cover first, then press the other end down and nail that. It is found advisable to place the apples so that the ends are lower than the middle, this gives a swell to the cover and bottom. A swell of about one inch or an inch and a half is advisable.

The box after being nailed should be marked with name and address of packer; kind of fruit, grade, number of tiers number of apples, whether well coloured or not and also a number or mark indicating the packer.

ANDREW W. THOMSON  
Berwick, N. S

## BEES

**I**N the compass of a few hundred words, it is almost impossible to say anything that would be of use to the ordinary individual who contemplates keeping Bees. All that we may hope to do, is to cause some one to consider the little money maker, which is nearly always neglected and often despised on the farm,

That the Bee has a place in the economy of nature cannot be denied; for all men who have looked into the matter at all, are agreed that the relationship existing between the plant and the insect is beautiful and marked.

The plant unfolds its flowers: the beauty of its petal leaves catches the eye of every one; but at the same time they are of little use to the plant directly. Its beauty and perfume can be only for the purpose of attracting insects; while the Bee is perfectly adapted for carrying the pollen from the stamen, and of depositing it on the sensitive pistil—and eventually an ovule becomes a seed. Most men are hindered from keeping Bees by the thought of the sting. It certainly is a powerful weapon, and much could be truthfully said of that which

it has done; but still Bees are easily controlled.

The horse and nearly all animals of the farm have some way of defending themselves; yet we do not argue from that, that they are not worthy of a place. We control them. Bees are more easily controlled than they, for a few puffs of harmless smoke will compel good manners even on the part of the hybrid.

We shall consider first the hive, then its inmates and then something of at least one method of handling them for comb honey, which will give fairly good results.

Every one knows something of the development of the hive. The little straw structures of a few hundred years ago marked a distinct stage. for it was a vast improvement on that which went before; and many a happy Bee has been glad to call it home. But this was far inferior to the box hive which came later and which is still seen all over the country. It had one drawback—everything was rigid. It soon became apparent that if Bees were to be run for profit they must be handled, and this could be



made possible only by a movable frame. To Langstroth belongs the credit of putting the idea into practice. True, there have been certain changes made in the hive since, but the 8 frame Langstroth is standard to-day. The Haddon, the 10 frame, the Danzenbacker and others have had a following, but the 8 frame Langstroth is more popular to day than it has ever been.

A great deal of misapprehension exists concerning the inmates of the hive, and the work which each performs. They all belong to one of three classes—a worker or undeveloped female; the drone or male; and queens or developed female or "mother" as the Germans call her

The worker is, as her name implies, the slave of the whole colony. She is a female, but lays no eggs under normal conditions. Her life is short often lasting not more than six weeks during the honey flow. Her wings, which are very thin and gauze like, owing to the constant work which they are obliged to perform, wear out; and one day, when hastening home under an exceedingly heavy load, she falls by the wayside and rises not.

The drone, or male, works not at all. He is a parasite of the worst kind, as the female knows, but as he possesses no sting his massacre is easy.

The queen, or mother, is the most important personage in the hive. She is the mother of every Bee in the colony. She possesses a sting but rarely uses it. She leaves the hive once during her wedding flight and may never do so again. If swarming should occur, she leads off her family, leaving the new

mistress the undisputed sovereign of her recently vacated dominion. These are the only times that she flies.

In the Maritime Provinces we would recommend that the hives be taken from the cellar about the 15th of April. Whether early or late, see to it that the day is fine, still and warm, so that the Bees may get a good clearance flight. They will be more than likely to fly at such a time anyway, but they cannot get back if the weather is unfavorable.

Immediately put in entrance blocks, thus bringing entrance to a very small opening. We do this to prevent robbing for much danger lies along this line.

Examine each colony in detail; see to it that no hive is queenless; that they have plenty of stores; feed if they have not; provide with salt water and pollen in the shape of corn meal, if any of these things cannot readily be obtained by the Bees. Have every hive bubbling over with Bees at the beginning of the honey flow. This will be about the middle of June, or at the time of the clover bloom. Now put in the supers filled with sections, in each of which a generous piece of comb foundation has been placed. If honey does not come in at first, as readily as you would like, don't be discouraged, for often in the east the heaviest flow of honey comes from such fall flowers as Buckwheat, Golden Rod, and Fireweed.

Do not take off any honey until the end of the season, always putting the empty super in next the brood, thus encouraging the Bees to work. When the time does come to remove it, and especially if you are a little timid, pry up the super and shove a honey



board containing a Bee escape, under them. The Bees gradually work down but cannot get back. Thus your supers are freed of Bees, and you may carry them to your honey house, or any other dry warm place. We shall say nothing about marketing, for you will probably eat the first.

Examine again for stores. Remember that an average colony wants about 40 lbs of honey to put them through the winter. Winter in a cellar, dark, well

ventilated and where the temperature is as even as possible. Put them in such cellar about the 10th of November. It would be better to remove bottom boards altogether, or, in any case, see to it that ventilation is not obstructed in any way. Keep out mice and do not allow any vibration. Other than this they will require very little attention until Spring.

E. M. STRAIGHT.

Guelph, Ont., Oct. 9, 1909.

### COLLEGE NOTES

**O**N Wednesday evening, Nov. 3rd a meeting of the Students was held in the Agricultural Class Room. Mr. Gornall was asked to take the chair for the evening and Mr. Gray to act as Secretary.

The chairman addressed the meeting and in a fitting and proper address welcomed the Juniors and explained in detail the object of the club.

Upon motion followed by discussion, it was decided to retain the same name as previous, viz:—"Rhetorical Rustics Club."

It was first found necessary to elect the officers for the first term of two months, which resulted as follows:

President—B. Gornall.

Vice-President—Geo Magee.

Secretary—M. B. Davis.

Executive Committee—Consisting of The President, The Vice-President and S. Dunlap.

Mr. McPhee was appointed to look for quotations and designs of sweaters, and report at the earliest convenience to the club.

The Executive committee was instructed to see about getting a piano for the season.

After some discussion it was decided to set the membership fees at 15c. for two months, or 45c for the term.

Mr. Gray was appointed to consult the Principal on having the electric lights seen to properly.

The sports committee was then appointed, consisting of Messrs McPhee, Christie and Ross.

A discussion re the banquet for students and ex-students at the Winter Fair, resulted in Mr. Gornall being instructed to write and ascertain the cost.

After an explanation to the Juniors in regard to the College Magazine, by Mr. Gornall, the meeting unanimously decided to back up that periodical to the end.

On recommendation of the Business Manager, Mr. Magee was appointed Advertising Manager. The appointment of assistant editors and other officers to be deferred until the near future.

The meeting then adjourned. Attendance 14.



THE morning was dull and warm but considering the lateness of the season the weather was remarkable. The force of circumstances had compelled me to stay over night in the small town of — and as was my wont I took a stroll directly after breakfast. I was returning from my country constitutional when I came across a number of young men going in the opposite direction and as I had always been a student of human nature I at once took notice of each young man that passed by. Determination I noticed was written large upon every feature, but with this was also mingled another expression. On some, it was an expression of awe and excitement as if they were bent upon some new and grand venture; others had that expression of joy and expectancy which one has when they are going to meet some friend of long ago and renew the old friendship; upon others there was an expression of calm indifference. What was the meaning of this? thought I, and it was not until some time afterwards that I understood its meaning—it was the opening day of an Agricultural College.

#### STUDENTS IN ATTENDANCE

##### SENIOR STUDENTS AT THE AGRICULTURAL COLLEGE. 1909-1910.

Leopold Baker, London, England.  
 A. B. Baird, Chipman, N. B.  
 John Chisholm, Glen Road, Antigonish Co., N. S.  
 George Christie, River Hebert, Cumberland Co., N. S.  
 M. B. Davis, Yarmouth, N. S.  
 J. Sedley Dunlap, Otter Brook, Colchester Co., N. S.  
 J. W. Fraser, Sylvester, Pictou Co., N. S.

L. G. Gray, Murray Harbour North, P. E. Island.

W. B. Gornall, London, England.

H. H. McPhie, Antigonish, N. S.

W. W. Purdy, Wentworth Station, Cumberland Co., N. S.

C. B. Sims, Argyle, Yarmouth Co., N. S.

F. C. Gilliatt, Granville Center, Annapolis Co., N. S.

F. G. Read, Bear River, N. S.

##### JUNIOR STUDENTS AT THE AGRICULTURAL COLLEGE—1909-1910

Henry Banks, Waterville, Kings Co., N. S.

John A. Black, Villagedale, Shelburne Co., N. S.

Francis Lane Bowron, Toney River, Pictou Co., N. S.

Clarence Crooker, South Brookfield, Queens Co., N. S.

Walter Colpitts, Point de Bute, N. B.

Earl D. Colpitts, Forest Glen, N. B.

Wilfred L. Faulkner, Stellarton, Pictou Co., N. S.

Ernest Harper, Jacksonville, N. B.

E. S. Leonard, Paradise, Annapolis Co., N. S.

R. E. Lumsden, Baddeck, C. B.

W. George Magee, Truro, Colchester Co. N. S.

Alex. G. MacKay, Dartmouth, Halifax Co., N. S.

Walter G. Oulton, Lornville, Cumberland Co., N. S.

Hugh Ross, River John, Pictou, Co., N. S.

Elbert D. Vance, Debert Station, Colchester Co., N. S.

Barclay Webster, Edinburgh, Scotland.

E. H. Growse, Felixstowe, England.

Octavis Monge, Cartiga, Costa Rica.

F. D. Shelton, London, England.

J. P. Shelton, London, England.

R. Doane, Truro, Colchester Co., N. S.



### COAL VERSUS SOIL.

IT has been said that the wastefulness of pioneers is in keeping with the prodigality of Nature; and that the pioneer farmer has the right to use up natural resources if he thereby improves himself and the prospects of his family. Take an illustration from the consumption of coal. During millions of years it was prepared and stored in the earth—we suppose for human use. And we have been using it with lavish liberality, boasting of the millions of tons we mine every year. Now we learn from good authorities that in 75 years the coal measures of the United States will probably be exhausted, except those at lower levels, more difficult of access and more costly to obtain.

No doubt coal was the means whereby man gained large and lasting ability to smelt and mould metals, making him ready for the next steps whereby he acquired a working control of electricity. With the difficult materials now plastic under his new skill, and more of Na-

tures' forces obedient to his new intelligence, he has harnessed the water-powers and generates heat, light and power transmissible from them. That he could never have done, so far as we can see, except for the use of coal without stint during all these experimental years. There is some excuse, if you please, for the extravagant use of one great natural resource, when that has led to the mastery for service over another resource still more valuable.

But when people exhaust the soil, what do they do? They make themselves more careless and less competent; they leave themselves less power and more poverty. On the other hand, when the farmers preserve and increase the fertility of the soil they become increasingly efficient and capable. These two go together. The fertility of our soil must be maintained, or restored, in order that there shall be continuously improving conditions for the rural population.—Principal Robertson, of Macdonald College.

### FORESTRY AND TAXATION.

(Washington Post)

RECKLESS and wasteful deforestation along the Mediterranean littoral has cost more money and is responsible for greater and more enduring suffering than all the wars which have swept around this inland sea. The peasants of Spain, Italy, Northern Africa, Greece, Asia Minor, Syria, and Palestine are paying to-day the penalty for wanton waste

of natural resources. It is the lesson of the ages, which Americans must take to heart.

Forestry is a public duty which is beginning to be recognized by the legislatures of the various States where there are thousands of square miles of hillside and upland, barren and waste land, fit only for tree growing. A number of States have planned



systematic afforestation, only to find that the tax laws stood in the way of success. It is but reasonable that the tax laws stood in the way of success. It is but reasonable that growing trees should be exempt from taxation until they mature and are ready

to be cut and marketed. The encouragement of reforestation by private owners is a patriotic duty and exemption from taxation during the growing period is not only just, but necessary.

### MELTED WOOD

IT is now possible to melt wood, by heating it in a vacuum, producing a hard, homogeneous substance that apparently has an industrial future before it. The history and present status of the process are given by Francis Marre in *La Nature of Paris*. To melt wood "appears at first sight to be an impossibility," he remarks, but it is, in fact, possible and practicable. Melted wood has been hitherto only a laboratory curiosity, but it may well be that industry shall presently discover practical applications of the greatest interest.

The melting process may also be performed, we are told, without drawing off the distillation products, resulting, in about two hours, in the formation of a solid amorphous mass of fused wood. Melted wood, the writer goes on to say, has an undoubted industrial future, as it has a fine grain, takes a high polish, and is hard and resistant. It takes printing ink readily and may be cleaned with potash, soda or turpentine. It may also be easily cast and moulded into all sorts of shapes, and by adding preservatives to it during the melting process it may be rendered practically indestructible.

### A DAILY THOUGHT

"Two men toiled side by side from  
sun to sun,

And both were poor.

Both sat with children when the day  
was done,

About the door.

One saw the beautiful crimson cloud  
And shining moon,

The other, with head in sadness bowed,  
Made night of noon.

One loved each tree and flower and  
singing bird,

On mount or plain;

No music in the soul of one was stirred  
By leaf or rain.

One saw the good in every fellow man,  
And hoped the best.

The other marvelled at his Master's  
plan,

And doubt confessed.

One, having God above and heaven  
below,

Was satisfied;

The other, discontented, lived in woe,  
And hopeless, died."



## SOME FARM ANIMALS I HAVE KNOWN.

A thick fleeced lamb came trotting by ;  
 "Pray whither now, my lamb?"  
 quoth I,  
 "To have," said he, with ne'er a stop,  
 "My wool clipped at the baa-baa shop."

I asked the dog: "Why all this din?"  
 Said he . I'm fashioned outside in,  
 And all my days and nights I've tried,  
 My best to get the bark outside."

A hen was cackling loud and long,  
 Said I to her: "How strange your song."  
 Said she : "T'is scarce a song ; in fact,  
 It's just a lay, to be eggs-act."

I asked the cat : "Pray tell me why  
 You love to sing?" she winked her eye  
 "My purr-puss, sir as you can see,  
 Is to a-mews myself" said she.

A horse was being lashed one day,  
 Said I : "Why don't you run away?"  
 "Neigh, neigh ! my stable mind," said  
 he,  
 "Still keeps its equine-imity."

I asked the cow, "why don't you kick  
 The man who whips you with a stick?"  
 "Alas ! I must be lashed," said she  
 "So I can give whipped cream, you  
 see."

## LOCALS

Who said Pomology ?

Beautiful Girl — Gardener, don't  
 make a flower bed there. It will spoil  
 our croquet grounds.

Gardener — Can't help it, miss.  
 Them's my orders. Your father says  
 he is going to have this garden devoted  
 to horticulture, not husbandry."

The reception held at the Colchester  
 Academy was a complete success.  
 The College boys started their strenu-  
 ous studies by partaking liberally of  
 the cake and ice cream which to some

of them was the principal event of the  
 evening. There were some that ar-  
 rived home rather late so I am led to  
 understand, but considering such top-  
 ics as Cookies and Periodicals which  
 would undoubtedly be continued and the  
 Sweet Nothings that might have been  
 whispered such a thing is not to be  
 wondered at. We are sorry that a  
 large number of people were awaken-  
 ed from dreamland, nightmares, etc.  
 by the mighty ferocious yells of those  
 academical encyclopedias who wand-  
 ered the streets so early in the morn-  
 ing.



## YOU

Like other good farmers, have most likely given a good deal of study to the plan of working your farm for the current year—considering whether you.

## CAN MAKE

more by selling the products through your stock, or by marketing your grain, hay and other crops direct—or whether you will use both methods. Like the rest of us you are after the

## DOLLARS

and frequently the easiest way to get them is by down-right hard thinking. Which ever plan is taken, you naturally intend to be in the front rank so far as convenience and results are concerned.

## BY USING

good hard sense first, the work comes easier afterward. You have likely looked over your present outfit and made a mental note of some things you need. A pointer or two might help. If you are feeding roots to stock, you probably pulp or slice them so as to get the best and cheapest ration. If not you are losing. Many farmers are using the No. 1

## MASSEY-HARRIS

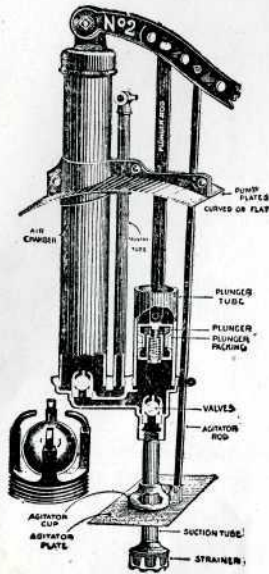
Pulper with great satisfaction. It has a concave cylinder—is fitted with roller bearings and can be run either by hand or power. If you want to cut up the hay or straw there is a fine line of

## MACHINES

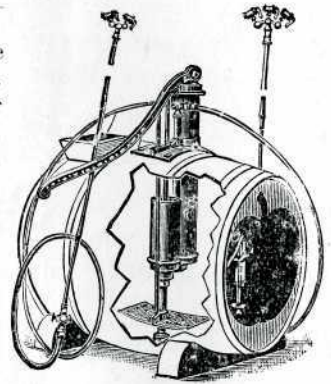
for that purpose. No. 8 Straw Cutter is a small neat machine for hand power. Cuts lengths from  $\frac{1}{2}$  to  $1\frac{1}{2}$  inches. The Cummings is larger and is for either hand or horse power. It cuts 5 lengths. Then there is the No. 2 M-H for power which cuts from 7-16 to 3 inches. Farmers say it pays to cut the feed as the animals eat it up clean—no waste. If you feed grain you want the stock to get the full benefit. To do so grind it. The Maple Leaf Grinder is pleasing hundreds of farmers. If interested you can get a new 1910 catalogue which gives more information about these machines and others by spending a cent for a post card. Address the card to

**MASSEY-HARRIS CO., LIMITED,**  
**MONCTON NEW BRUNSWICK**

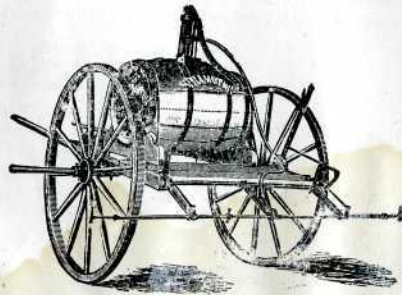




"All Spramotors are made with the same care in all parts. They are recognized where ever known as the standard High Grade Machines, whether used for painting, spraying, disinfection, or weed destruction. They are made in all sizes, for orchards, vineyards, potatoes, weeds whitewashing, painting, wild mustard, and other purposes, by hand power, horse power and gasoline power."

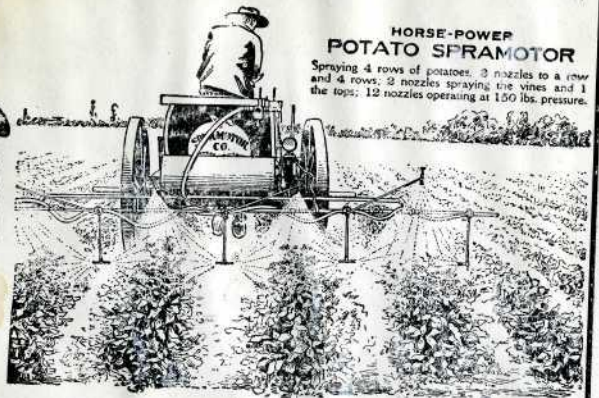


This Fig. 19 outfit was awarded the Government Spraying Contest.



**HORSE-POWER POTATO SPRAMOTOR**

Spraying 4 rows of potatoes, 3 nozzles to a row and 4 rows, 2 nozzles spraying the vines and 1 the tops; 12 nozzles operating at 150 lbs. pressure.



**SPRAMOTORS**

These illustrate some of the Spramotors used in the orchards of Canada, as this "ad." will not appear again in this paper we ask you to ask for particulars of interest.

**SPRAMOTOR Co., Ltd., 1258 King St., Toronto, Ont.**

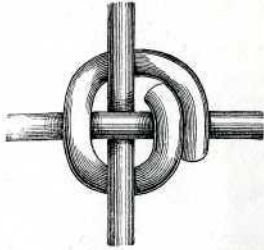
Please mention The Maritime Students' Agriculturist when answering advertisements.



THE MARITIME STUDENTS' AGRICULTURIST.

# Maritime Woven Wire Fencing

Coiled Spring Wire and Steel Frame Gates



Have a reputation as the BEST on the market. We propose to sustain that reputation. We do not use either cheap material or cheap labor in the manufacture of our goods.

Our Motto is

**QUALITY FIRST**

"THE MARITIME FENCE LOCK"  
The Lock that stands for  
Strength and Durability.

No 9 Wire	
" 9 "	8 in space
" 9 "	8 " "
" 9 "	8 " "
" 9 "	7 " "
" 9 "	6 " "
" 9 "	5 " "
" 9 "	4 " "
" 9 "	4 " "

**The New Brunswick Wire Fence Co., Limited**  
**MONCTON, N. B.**

The only Manufacturers of Woven Wire Fencing and Steel Frame Gates in Eastern Canada.

Give us your trade.

We guarantee satisfaction

Please mention The Maritime Students' Agriculturist when answering advertisements.



W. B. UR  
L'bond '01

Family of  
Wines and

SHOES  
MADE IN  
ENGLAND

Small text at the bottom of the page, possibly a footer or fine print.



# BUSINESS DIRECTORY

This is to remind you of the

## Insurance Policy

You were going to take out with  
the Insurance Man.

**BRENTON F. PORTER, Truro, N. S.**  
Telephone 147

## ROOP & CO.

Up-to-date Men's Furnishers & Clothiers

**Tailoring a specialty**

Opposite J. J. Snook's Truro, N. S.

## A. McLENNAN

MERCHANT TAILOR

A fine selection of Worsteds, Serges,  
Scotch and Canadian Tweeds always  
in stock.

## Union Steam Laundry & Dye Works

HANSON BROS. Proprietors

Genuine French Dye Cleansing a specialty  
All work guaranteed. A trial will con-  
vince. Phone 99, Truro, N. S.

Shoes

Repairs of all kinds

Boots

**Lawson Hiltz**

Inglis Street, Truro, N. S.

Boots

Immediate Attention Given

Boots

## TURNER & CO.

Dealers in Hardware, Paints, Oils, Mec-  
hanics Tools, Crockeryware, China and  
Lamp Goods, Enamelledware, etc.

Victoria Square, TRURO, N. S.

## R. T. Craig & Co.

Groceries and Provisions, importers of  
Teas, and dealers in Flour, Meal, Feed, etc

TRURO, NOVA SCOTIA

## CHOCOLATES

A large variety of high class chocolates  
to choose from. Also 1 lb. and ½ lb. box-  
es, Caramels, Creams etc. Fruit—  
Oranges, Grapes and other kinds of fruits  
always in stock at

**Central Kandy Store**  
Opposite Y. M. C. A.

How about having that suit cleaned  
and pressed to look like new by ?

## D. A. TATTRIE

Phone 355-J.

Inglis Street, — Truro, N. S.

## H. E. Hiltz, D. D. S.

Metal Plates, Crown and Bridges a specialty

Hours: 8-12, 1-5, Phone 179

Office: Kent's Block

34 Prince Street — Truro, N. S.

## Confectionery and Ice Cream

Chocolates, Creams, Buttercups,  
etc. Ice Cream of the finest qual-  
ity for receptions, parties, etc.

**M. J. PHY,** Truro, N. S.  
3 - L. P. O. Box 58

## E. E. McNUTT

Groceries, Etc.

Prince Street

Truro, N. S.





We make it a point to give satisfaction in all our dealings satisfaction in prices, satisfaction in promptness.

We supply any book published in the Agricultural Line, if we do not have them in stock, we obtain at short notice. Students will find our store well stocked with books,

and we invite all to visit us and look over our lines at all times.

**Special Note Books, Special Tablets, Special Prices. During December we offer a Real Fountain Pen for 99 cents with Clip-Cap, regular price \$1.50.**

**G. O. FULTON,**

**Inglis, Street, Truro.**

## F. Dexter & Co.

Steam and Hot Water  
Engineers and Plumbers

Dealers in

All kinds of Plumbing Goods such as  
Steam and Water Pipes, Galvanized  
and Plain Steam Valves, etc., etc.

**Estimates Furnished**

Agents for

**The Standard Drain Pipe Co.**

Telephone 143

**Truro, N. S.**

## Oak Hall

### The Shop for Men

A complete line of Men's Furnishings.  
Everything new and up-to-date

Sole Agents

### Fit Reform Clothing

See our Fall and Winter Suits  
and Overcoats.

Swell Patterns      Splendid Fitters

Let us show you that we mean what  
we say. We give money back if you are  
not satisfied with your purchase.

A Good Store to Trade With

**Frasers' Ltd., OAK HALL**