

**PAGES**

**MISSING**

# THE O. A. C. REVIEW

"THE PROFESSION WHICH I HAVE EMPLOYED REQUIRES A KNOWLEDGE OF EVERYTHING"

VOL. XXXI

OCTOBER, 1918

No. 2

## *The Educative Value of Auction Sales*

By G. E. DAY, B. S. A., Secy Dom. Shorthorn Breeders' Asso.

EDUCATION is not confined to schools and colleges. When a young man starts out from school or college he is merely entering another school in which he will receive training in those things which apply to the practical details of every day life, and his success or failure as a citizen or business man depends entirely upon his readiness to acquire and assimilate the truths and business principles furnished by his new surroundings.

To the man who would succeed in business a careful study of the science of marketing is of special importance, and the breeder of pure-bred stock must study the problem of marketing his goods if he is to make his work a financial success.

One cannot attend a combination auction sale of pure-bred stock without being amazed at the slowness with which the lessons of the sale ring are learned by the average contributor to the sale. When one animal brings three or four times, or perhaps ten times as much as another animal in the same sale, one would think that the seller of the low priced animal would



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ask himself some searching questions, and make an effort to learn the reason why his animal did not bring as much money as one contributed by his neighbour. It is no use to blame the auctioneer, the public, or the sale management. It is true that the contributor to the sale may suffer through negligence or oversight on the part of one or more of the parties mentioned, but wide differences in prices are due almost invariably to well defined causes, and the man who would be honest with himself and who would profit by his experience must honestly set about learning the reasons for discrimination on the part of the buying public.

What would we say of a merchant who attempted to compel his customers to buy goods which they did not want, and filled his show window with shop-worn, out of date articles, badly arranged behind dirty windows. Any school boy could make a forecast regarding the result of such business methods, and yet we find breeders of pure bred stock who follow methods similar to those of the careless merchant, and who are badly disappointed

when prices are not satisfactory. Instead of honestly searching for the reason they blame everybody but themselves for their lack of success.

Any person who will study the lessons of the auction sale ring will come to the conclusion that the old well known principles of successful marketing apply here with special force, and that there are at least three factors which govern prices.

Probably the first thing one will notice is that good breeding always commands respect, and that is a strong recommendation for any animal which possesses it. If a man who aspires to breed pure-bred stock does not know what constitutes good breeding, he is in a more or less hopeless condition until he obtains this knowledge, and it is high time for him to become a student of the class of stock he is breeding, and aim to offer the public the exact kind of breeding which it demands. It does not matter what our own ideas may be, but everything depends upon the ideas held by the purchasers. If the purchasers demand a certain kind of breeding and are willing to pay higher prices for animals bred in a certain way, then it is surely the part of wisdom for us to set about producing the kind of animals which will meet with their approval in this regard. For instance, we might like heavily salted butter, but if we have butter to sell and our customers demand unsalted butter and will pay an extra price to secure it, surely it would be folly for us to attempt to sell them salted brand.

This principal holds good in marketing all classes of goods or live stock, and when our customers ask for animals of a certain line of breeding, it is only good business to produce what they want.

The second factor in governing prices

is the individual merit of the animal. This is one of the hard lessons for the average man to learn. If he would make progress, he must learn to see the defects in his own animals, and to recognize merit in the animals bred by his neighbour. The man who thinks all his own animals are good will never make much progress, and while it is not necessary for him to tell the public the faults of his animals, at the same time he must know their faults and honestly set about correcting the same if he is going to make any progress as a breeder, and obtain satisfactory prices for the animals he is breeding. It is only men who have learned this lesson who rise to the top as stock breeders. We must learn to look at our animals with the eyes of the purchaser by the side of the ring, and if we do this we will have learned a lesson of very great value to us in our subsequent operations.

The third factor in the successful marketing of any product is to present it in the most attractive form possible. Carelessness in this respect has cost breeders many thousands of dollars. No matter how excellent the breeding or how good the individual, if the animal is presented in thin condition, with dry rough coat, and carrying the marks of neglect, it will not sell at its value. In many cases fat will sell at over one dollar per pound, when it helps to smooth up the form of an animal presented in a sale ring. This is especially true in meat producing animals such as beef cattle. The thin animal always shows to great disadvantage, and lack of fat is accomplished by lack of care, the combination is disastrous to the seller.

In the case of cattle, many a man thinks he will start a month or two before the sale and get his animals in-

to satisfactory condition, but the man who knows cattle knows that the time to start fitting is as soon as the calf is born, and that feed and care must not be spared from that time until the animal goes into the sale ring if he is to secure the best results from his efforts. This is another hard lesson for many people to learn, but it is a lesson

of great importance, and the sooner it is learned the sooner losses will be turned into profits.

A combination of good breeding, good individuality, and proper fitting and conditions is necessary to secure the highest profits from the breeding of pure-bred cattle.

G. E. DAY.

## "Little White Grubs" of 1918

BY BARTIMEUS

"There's a war on," is perhaps the most hackneyed reply to any inconveniences which we may be suffering, and which we may yet have to bear on account of the world's food shortage. But little do we realize how apt that phrase describes the continued effort of man to overcome his natural enemies, year by year. Of these, insects form a great and growing menace as each seeding time approaches. It requires twelve months solid campaigning, and needs skill, courage and intelligence unceasing; not a quick, flashy method of warfare, but a hard slag in overalls, year by year wearing down and eliminating nuisance after nuisance on the farm.

A great deal depends on the season, the weather conditions during the previous winter and early spring. But as "insect forecasts" still dare the courage of the boldest entomologist, farmers must depend on the well regulated and common sense procedures recommended for general uses by practical experts. Not all crops, however, are privileged in being protected in this way.

This year the little white grubs of

dipterous flies appeared with dramatic suddenness and laid waste many cabbage, onion and potato fields. No harm was apparent to the growing crops until the hosts of little maggots had filled the lines and were coolly feeding on the occupants. Then the cry went out for help, but once there entrenched no practical remedy yet known could save the situation. Experiments this summer have afforded much useful preliminary knowledge into the life history, habits and natural enemies of these maggots, and much is hoped for in the matter of being able to swat the fly or destroy the eggs as soon as laid.

The flies, similar in appearance to the house fly, arrive before the cabbages are ready to transplant in the field, and usually busy themselves around seed beds in the open and in cold frames where seedling cabbages are being raised. There infestation is likely to take place unless care is taken to prevent the access of the fly into the frames by means of cheesecloth sashes, or, in the open seed beds, to remove and transplant the seedlings as soon as the small white eggs are seen on the soil by the cabbage stalks. When

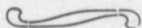
the cabbages are in the field the fight becomes fast and furious, as egg laying continues uninterruptedly throughout the summer and autumn. Fortunately once the cabbage plant has been given a good start in growth and toward maturity it is rarely the development of larval arrests its progress. Hence for the first month in the open field or garden, some effort, where practicable, should be made to combat the fly. For the owners of allotments, kitchen gardens, and small holdings, two methods are of practical use.

Immediately the plants are set out in the ground, tarred felt discs should be applied and kept free of dirt for as long as possible. Care should be taken to have the soil in good tilth so that the discs can be evenly placed on the ground.

Corrosive sublimate of the strength of one part to one thousand two hundred parts of water, applied once a week, to the plants by means of a watering can without a rose, has given good results. This treatment commences after the cabbages have been in the field for four days, and is continued for one month.

But no remedy or control is successful unless applied with intelligence even if the instructions have been rigorously observed.

More than any one thing else that will help to eliminate these little grubs from our food supply is the faculty of observation. Every student who wishes to win "this" war should train and school himself in mental observation in nature.



## *Moonrise on the Campus*

The portals of the clouds so softly part;  
 Into a dazzling radiance deftly spun,  
 A thousand waves all silver-tipped start,  
 And shining ripples all the arch o'errun.

Along the sky is stretched a light so cold,  
 With all the splendours of the stars upon  
 Its golden lengths. The sphere of gold  
 Sails out and up the depths. The dark is gone!

The pines their homage pay in silent calm,  
 As moves in majesty the night's fair queen;  
 Adown the skies, as from a rosy palm,  
 A veil of filmy mist floats all serene.

Airily downwards through the golden night,  
 It softly sinks upon the pine-tops green;—  
 Lest fairy wings should open wide for flight,  
 Our eyelids close and memory grasps the scene.

M. Lillian Morley,  
 Milverton, Ont.

## Reminiscences of the O. A. C.

BY PROF. J. HUGO REED, V. S.

**T**O the gentle reader of this article I owe an explanation, or rather "an apology." A few days ago when I received a letter from the Editor of this Journal requesting, or more correctly speaking, "ordering" me to write an article entitled "Reminiscences of the O.A.C.," I felt like Jimmy E.

Jimmy was rather a character during my boy-hood. The public school which I attended in the Village of Stewarttown, Halton Co., was situated on a corner of Jimmy's farm. Everybody, young and old, male and female, called him Jimmy. He was a kind-hearted Irishman — kind to the school children, but very much given to profanity. The boys and girls of that age did not differ materially in general characteristics, from those of the present age, hence they enjoyed seeing and hearing Jimmy indulge in his favorite pastime. They took advantage of all opportunities to get Jimmy started. He had a good command of language and was quite fluent.

Many of the country boys were in the habit of going to the post office for the mail during the noon hour, and in order to reach the office had to descend a long and reasonably steep hill. One day upon returning from the post office a gang of boys observed Jimmy driving up the hill with a wagon-load of pumpkins. They selected one from the gang to get into the seat with Jimmy and engage him in conversation.

This was done, and Jimmy, with his usual affability, treated him kindly and became interested. The remainder of the gang got busy with the tail-board of the wagon-box and soon succeeded in removing it. The pumpkins promptly began to move and decorate the road with lumps of a good protestant color.



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Each pumpkin made a more or less thumping sound when it struck the ground. At last Jimmy became suspicious that something unusual was occurring, and looking backwards, became aware of the real state of affairs. He stopped the team, got out of the wagon and looked in blank amazement at the orange objects gracefully descending the hill, but not a word did he utter. The boys being disappointed

at the results of their cunningly laid plan, exclaimed, "Jimmy, Jimmy, why don't you swear?" After an incredible lapse of time Jimmy said, "Well boys, I feel that I cannot do justice to the occasion."

A few days after receiving this order, I was personally interviewed by the Associate Editor, and the order was promptly repeated. I endeavored to express my sorrow in not feeling able "to do justice to the occasion," but my arguments had no force. "He stood pat," and I had nothing to "draw to." It being a fact that on certain occasions I had given orders to the same boys who were now ordering me, and I "stood pat," and nothing less than

strict compliance would be considered. I decided that it was my turn to surrender, and have a try. Now, if the afore mentioned "gentle reader" decides that I have made a total failure in writing a readable and interesting article I hope that he or she will make due allowance of my acknowledged inability and decide that I have done my best, hence am "more to be pitied than laughed at."

After the resignation of Dr. Grenside in December, 1892, I was appointed Professor of Veterinary Science at the College. My duties commenced on January 1st, 1893.. It may be worthy of mention that my political ideas were not in accordance with those of the party then in power, nevertheless I received the appointment; a fact that was afterwards frequently referred to in public meetings at the institution, to prove that in such matters the Government did not make such appointments on political grounds, but purely on the grounds of "merit."

At this time, more than a quarter of a century ago, the institution was a comparatively small concern. Dr. Mills (who occasionally still visits the old haunts and is as genial as ever) was President. The late Prof. Shaw was Professor of Animal Husbandry and farm superintendent, and the late Mr. Storey was farm manager. Compared with present conditions, the staff was very small. The heads of the departments, and in most cases the whole department, were the late Mr. Wm. Rennie, the late Prof. Panton, Prof. Hutt, Prof. Dean, Dr. Zavitz, (not then on the teaching staff, but devoting his whole time to experimental agricultural work), the late Prof. Shuttleworth, Prof. Jarvis and the writer. There may have been one or two more departments which I cannot call to

mind. The class rooms were few and small. The live stock class room was in the basement of the main college building. It required considerable coaxing and forcing to get an animal to enter, but still we managed fairly well. The chemical department and the botanical department had class rooms in their respective buildings.

My first work as a servant of the Ontario Government was the examination of two recently imported Gurnsey cows. I pronounced both of them tubercular and had them isolated in an unused pig-house on the dairy farm. This occurred on or about the 2nd January, 1893, and the next day I started out on a three weeks tour, lecturing at meetings of the Farmers Institutes. As associates I had the late Mr. A. B. Pettit and Mr. Raynor, now associated with the Dominion Government. I accepted as subjects a list prepared by Dr. Grenside. At that time most of the college staff spent the first three weeks of each year in this work. I was practically unprepared this time as I had had no opportunities, but I pulled through some way. This work continued for a few years. At that time the college session lasted from October 1st to about the 20th of the following June. When the season was changed to commence the middle of September and end the middle of the following April, there was not sufficient time to allow the staff to take part, and the work was carried on by outsiders, for which some of us were duly thankful. I must admit that in the performance of any duty in connection with the college I have never felt so much like a fool as when I was attempting to instil into the minds of an ordinary evening audience at a Farmers' Institute meeting, some of the mysteries of Veterinary Science. A large percentage of those

present usually were villagers or townspeople out for entertainment at a free show. The members of the deputation used to steal each other's stories according to who was first called, with an endeavor to create good feeling, and then speak of something serious, but the latter laudable attempt usually fell dead like a well lofted golf ball on a green.

The number of students was small, but the college was just beginning to come to its own after many years of hard fighting. The farmers and general public were beginning to realize that after all there might be some good points in "scientific farming" as it was called. The number of students yearly became greater, hence the classes too large for the classrooms, and in many departments too large for the professor in charge. As a result of this new buildings were erected and assistants were appointed in most of the departments.

Among the buildings erected was what was then called the "Experimental Building." This contained compartments for the experimental department. A Live Stock and Veterinary class-room, and apartments for a Bacteriological Department. Prof. Harrison, now President of the Macdonald College, St. Annes, Que., was appointed to take charge of this department. Later on the Judging Pavilion, Massey Hall, Physics Building, Field Husbandry Building, Machinery Building, enlargements to the Chemistry, Botanical, Dairy and other departments, and a new set of buildings for the poultry department, were erected.

Notwithstanding all this the classes became so large that there was not sufficient accommodation, and it was necessary to divide the first year into two sections; later on the second year was

also divided, and one year the first year was divided into three sections. This kept the teaching staff busy.

On some occasions we had a few students who were impressed with the idea that Dr. Mills and his staff did not know how to conduct an agricultural college, and they felt it their duty to practically revise the whole system. It was, I think, in the late nineties, that there were a few students who tried hard to effect this change. Dr. Mills called a meeting of the staff on different occasions to discuss the better way to deal with this bunch. Some of the staff were in favor of harsh methods (which would probably have been the best), but others took a more lenient view and were in favor of giving the boys another chance. When it came to a decision the Doctor usually sided with the latter, but at last things reached such a stage that the transgressors had no advocates left. Some of the members of that bunch are now holding important positions in the different governments, and it is noticed that they do not think that any students that are under them are quite qualified to teach them how to conduct their departments. Nor are they "tickled to death" when reminded of the time they attempted "to run the Ontario Agricultural College." About 1903 Dr. Mills resigned his position to accept one on the Dominion Railway Commission, and Dr. Creelman was appointed President of the College. Things went on in about the same old way, which goes to prove the force of the old adage that "there is no man who cannot be replaced."

As with all public institutions of the same nature, there has occasionally been trouble. When we consider the number of students in attendance we do not think that we have had more than our share. A very large percentage of our



students have been manly, upright, honest young men and good sports, but an occasional mischief maker or two can generally get followers enough to cause trouble. Our boys, as stated, are mostly "good sports," anxious to learn and at the same time, keen in athletics, as is proven by the standing they always take when in competition with students of other institutions. The staff, individually and as a whole, is anxious to encourage the boys in their various forms of sport, and the boys realize that there is a time for work and a time for play, and endeavor to make the most of both.

The college staff has become very large, and there is such a constant change in its personnel, especially that of the junior members, it is impossible for a person, not constantly associating with them to keep track. The change is not limited to the juniors, but many of the heads of the departments have changed. When the Macdonald College opened in St. Annes some years ago Prof. Harrison and Prof. Lohead left us. Recently Prof. Reynolds, who had been with us for about 23 years, left, to take charge of the Manitoba Agricultural College, and during this year Prof. G. E. Day, who had been with us 25 years, resigned, to become more intimately acquainted with his pets, "the Shorthorns." In fact Dr. Zavitz and Prof. Dean are the only members of the teaching staff who were here when I became a member. There is one member, not of the teaching staff, who has us all trimmed. I refer to Mr. Squirrel of the garden department, whose appointment was pre-historic.

Some say that members who have proved themselves valuable are so sought after by other institutions and societies, and the financial consideration is made so attractive that the

Government cannot afford to retain them. If this be so Dr. Zavitz, Prof. Dean and the writer must consider ourselves mediocre. We have grown old in the service and so far as can be seen are content to remain in it so long as our feeble efforts continue to permit of our toleration.

The present classes at the College are unique in the fact that there are some lady members taking the regular course. We see no reason why such should not be. Present conditions demonstrate that in mostly any calling a woman can do the work of a man. The presence of girls in a Veterinary class room, at first thought, may seem out of place, but there are many reasons why a woman should be a horse woman. We have little doubt that when it comes to examination, both theoretical and practical, the girls will hold up their end with the boys.

Since the commencement of the war the number of students attending the college has become materially reduced. Very many of the students have gone overseas, some of them will not return. Others have already returned more or less incapacitated and we trust that it will not be long until the remainder will return, still in Class "A." The boys have all given a good account of themselves, and have done honor to themselves, to the college, and to their country.

On account of its effect on the college and for other reasons, a few weeks ago Dr. Creelman decided that he would go over and put a stop to the war and according to reports that we got from that point recently we about decided that he had been successful.

I cannot allow this epistle to escape without making brief reference to the Macdonald Institute and Macdonald Hall. A few years ago by the genero-

sity of Sir William Macdonald, the Government was able to erect and equip these magnificent buildings for the purpose of teaching our Canadian girls the various branches of Domestic Science. A capable staff, under the direction of Miss Watson, was appointed. At this institution Domestic Science in all its branches is being taught.

When the time arrived for the opening of the Hall the girls came. We may simply mention that this fact does not appear to be particularly displeasing to the college boys. Formerly the boys went down town to "get acquainted," and the natural results were that not a few of the students eventually married our town girls. After the Mac girls came the boys were not so often seen down town, neither were there so many of our girls taken away. Some say that this was hard on the town, but we have not noticed any particular disappointment or grief on the part of the girls and have no evidence that the boys are not satisfied.

For some years the staff at the Hall annually invited the members of the College staff to a banquet, at which was displayed the skill, in the culinary art,

of the graduating class in serving a meal at the cost of a few cents per plate. It is needless to say that the staff fully appreciated this favor and always had something pleasant to look forward to, and later to remember. I may tell you, in confidence, Mr. Editor, that the staff was so impressed by the fact that such meals could be served at a very moderate cost, that the members decided that it would be wise to have a "special course" put on for the wives of the staff, in order that their hubbies might be able to get something eatable at their own tables. This scheme did not appeal to Miss Watson. I suppose on account of there being so many special courses, she could not ask her staff to do the extra work it would necessitate. At all events the scheme fell through, and we notice that since then the general order of the annual banquet has changed, and the wives of the staff are invited and the hubbies left at home.

Now, Sir, you ordered an article of about 3,000 words. After you have counted the words of this epistle, if I am short, and you advise me of the fact I will make a brave effort to remember something that I have not mentioned in order to fulfil the contract.



# Sheep Breeds, and Management

BY JAS. A. TELFER,

Ontario Representative Sheep and Goat Division, Ottawa.

**S**HEEP are dual purpose animals producing that which the entire world is in great need of at the present time—Wool and Mutton—and are thus becoming daily of greater importance in the animal kingdom. The breeds of sheep are chiefly of British origin, with the exception of a few of the African, and Asiatic breeds, and the foundation stock of the Western Canada ranges which

about the brisket, neck and thighs, while Class C shows a smooth skin with the exception of a few folds around the neck. This last Class consists of the Delaine and Rambouillet Merino, which are more of the mutton type than those in Classes A and B.

In the breeds of British origin we find the Down breeds to be considered the choice of mutton breeds of sheep.

Place of Origin	Name of Breed	Wool Classification
Spain . . . . .	A. Spanish Merino B. American Merino C. Rambouillet Merino	Fine Wools
Great Britain . . . . .	Southdown Shropshiredown Suffoltdown Hampshiredown Oxfordown Dorsethorn Cheviot	Medium to Low Medium
Asiatic . . . . .	Romey Marsh Lincoln Cotswold Leicester	Low to Coarse
African . . . . .	Karakul Persian Tunis	Coarse

is Merino blood decendants of the flocks of Spain. Therefore our breeds of sheep in Canada may be classified as follows:

The Spanish Merino was the original Merino, and has been the foundation of the three classes of Merino found in America known as Classes A, B and C. Class A is composed of those possessing the greatest number of wrinkles or folds in the skin. Class B Merino shows only a few wrinkles or folds in the skin, and these are found chiefly

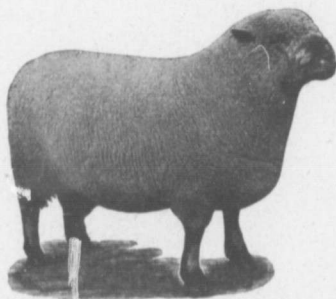
The Cheviot being a hill breed is possibly the smallest in size, but is a breed admirably suited for the hilly or rolling country of our land. The Cheviot is a hardy sheep standing well the rigorous climate of Canada. Next in rank, according to size and quality, comes the aristocratic Southdown, small in size but very deceiving in weight, producing an excellent type of market lamb for the late markets. The Southdown carries a dense fleece weighing

from six to eight pounds. The Shropshire is a breed considerably larger than the Southdown, rams weighing 225 lbs., and ewes from 150 to 160 lbs. The fleece is evenly distributed over the body and weighs from 8 to 12 lbs. Shropshire sheep thrive well in nearly all sections of Canada. The Suffolk, one of the hardiest breeds of mutton sheep, is a rather stylish sheep with coal black trimmings around the head and legs, which are bare of wool, presenting a striking contrast to the bright wool of the body. The fleece of the Suffolk, although fine in fibre is not long, and does not shear as heavy as some of the other breeds of Down sheep. They produce, however, an excellent carcass of mutton, the breed having carried off many sweepstakes at the Smithfield show in England. The Hampshire, one of the oldest and largest breeds of mutton sheep, is becoming more popular in Canada, and is found in large numbers in the United States. Rams weigh 250 lbs. and ewes 185 to 195 lbs. The breed is noted for its early maturing lambs. They are heavy boned animals, and carry an excellent quality of meat and wool. The Oxford-down was established about 1830 and is the heaviest of the Down breeds, rams weighing 250 to 350 lbs. and ewes 180 to 275 lbs. The quality of the wool is lower than that of the Down breeds mentioned above. The Dorset Horns has received much prominence in recent years owing to the fact that they will breed at any season of the year. They are very prolific, and the ewes make splendid mothers. Dorset Horn rams will weigh 250 lbs. while ewes will weigh 160 lbs. The fleeces are usually light and in many cases found bare on the belly. Of the coarsewool types we find the Romney Marsh a splendid type of sheep carrying a heavy fleece. They

seem very hardy and adapt themselves readily to any climate. The Lincoln is the largest of the domesticated breeds of sheep. Lincoln rams weigh 250 lbs. They grow a very long wool varying in length from 8 to 15 inches, with fleeces weighing from 14 to 18 lbs. There are many Lincoln sheep in Canada. The Cotswold sheep resemble the Lincoln in many ways and weigh from 200 to 250 lbs. for rams, carrying a very long coarse fleece, the breed is quite numerous in Canada and United States. The Leicester is probably the hardiest of the long wool breeds, thriving well in cold, bleak climates. Rams weigh an average of 225 lbs. and ewes from 175 to 200 lbs. They have square outline and possess a splendidly covered back of flesh. Their fleeces weigh from 9 to 11 lbs. and is of the Low Combing quality. The Karakul breed of sheep is the breed whose lambs at birth or shortly afterward produce the fur known on the market as Persian Lamb fur. They are a native of Bokhara, Turkestan, Asia, and have recently been imported into America for the purpose of producing here the costly Persian Lamb fur. The wool possesses a long ashen grey fibre which is used chiefly for the manufacture of carpets. Rams weigh from 175 to 220 lbs., ewes 130 to 150 lbs. Persian sheep are natives of Asia Minor, and are known to produce lambs that bear some small value from a fur standpoint. The wool is very coarse and is used for the same purpose as that of the Karakul.

It is worthy of note that all the breeds of sheep described in this article will thrive in most districts of Canada, but that all will not thrive in all parts of Canada, and none will thrive in any part of Canada unless given the proper care and attention. Do not accept the

advice of any person who says that sheep do not require any care or attention. In order to make a flock yield the returns that it ought to do great care and attention must be given. Choose first the breed most suitable to your district and then apply some work and good judgment in the care of your flock; and success must follow. During the haying time save the clover hay for the sheep; they will relish it and probably give you greater returns for it than any other of the farm stock. Save the pea and bean straw, and watch how the sheep will enjoy it during the winter months. Grow plenty of roots; and with a small ration of grain the flock should come through the winter in fine form, providing of course that you have not overlooked the fall dipping of your flock, which should be done early in the fall with a poisonous solution. When the lambs appear provide them with a creep where they may enjoy their food by themselves. Keep them free of vermin by dipping; dock their tails when from 7 to 10 days old, and then watch them grow. Shear early and provide yourself with a fleece-tying box, dimensions of which may be had by dropping a post card to the Sheep Division of the Live Stock Branch, Ottawa. Use paper twine in tying the fleece. Make application to have your clip sold through the co-operative body, and realize the highest market price for your grade of wool. Dip your sheep about three weeks after being sheared, and in the fall of the year ask yourself if there is an investment that you have made which is paying you more than that flock of sheep.



## The Migration of Birds

BY R. E. BARBER, '21.

**B**IRD migration has always been, and is yet, a thing of much mystery. The movements of some species are very marked, while with others the passage to and from their northern home is somewhat veiled in obscurity. However, with records sent in from observers in all parts of the country, scientists have been able to determine the migrating routes of many birds.

But why do birds migrate? Why,

away up to the arctic circle, and back, for the sake of spending six or eight weeks in Boreal North America? Such questions are just a few of the many complications which arise when the subject of bird migration is discussed. There is possibly, to the bird student, no field of study which affords better food for reflection than the migratory habits of even our common birds.

Illuminating these problems and



HOUSE WREN AT NESTING BOX.

for instance, does our common Yellow-Warbler, being an insect eater, leave us about the middle of August, when it is very warm and myriads of insects swarm the shrubbery? Why do some birds travel by night and how do they keep their course in the darkness? Why does that wonderful bird, the Golden Plover, travel the astounding distance of some fifteen thousand miles, from Patagonia, in South America,

granting the fact that birds do migrate, we have, owing to this condition of events, a great opportunity to get acquainted with a larger number of them than if this migratory instinct was not in evidence.

Almost before one can realize it, the season of song and nesting has slipped away. Many of the bright feathered songsters which were so conspicuous in May and June, and brightened us

with their songs about the garden, have changed their coats to plainer attire. The young of many species also are exceptionally hard to identify on account of their plain and mottled plumage. This makes the lot of the bird student a difficult one and he must look sharply to make sure of his specimen. A pair of ordinary field or opera glasses are indispensable when out on a bird jaunt.

Starting in the latter part of July, while even yet late broods of some species are still in the nest, there is a noticeable gathering together of many birds. This is particularly evident if one lives in the vicinity of lake shores or marshes. Here we find numbers of the shore birds, such as the Sandpipers, Yellow-legs and Plover family. They will be found feeding along the mud flats and wading about in the shallow water. The land birds, too, are congregating. Along the road-sides and across the fields we observe scattered flocks of brown colored representatives of the sparrow family. They are mostly Chipping, Song, Field and Vesper Sparrows, the Vesper sparrows being easily distinguished by the two white outer tail feathers. The sparrow family as a unit are no doubt the most confusing to the bird student. They are usually inconspicuously marked, and their plumage at this time so juvenile and worn, it is very hard to identify them.

This flocking of the birds is preliminary to their southward movement, many of the shore birds have departed by the middle of August. At about this time, too, the little Yellow Warblers quietly slip away.

In a walk across country at this season we shall likely encounter flocks of Warblers. They are a sociable family of insect eaters during migratory journeys, and it is not an uncommon

sight to see companies of them, representing several species, busily feeding among the tree tops or playfully chasing one another about through the branches. A representative flock at this period would include the Black Throated Blue, Redstarts, Blackburian Pine and Canadian Warblers. All of these, with the possible exception of the Pine, are very conspicuously marked and much more easily identified than the Sparrows. The familiar Boblink, so brightly colored when he came in May, has now changed his coat for one of plainer attire. We can generally come across a flock of them in the meadows or hear their plaintive little call notes as they fly overhead. Even more noticeable are the Swallows. Flocks of them can be seen flying over the water or meadows, others will be sitting in long rows on the telegraph wires along the road side. Crow Blackbirds are ranging about the country, not infrequently destroying the gardener's late garden peas. Their more respected cousins, the Redwings, literally swarm the marshes in some sections at this season. By the end of August the last of some members of the Flycatcher family have generally passed by, such as the Kingbird and Great-Crested Flycatcher. The Baltimore oriole, too, has gone, leaving his pendant nest in the elms as a souvenir of his summer visit.

While August sees the departure of a few birds, the southern movement is far more in evidence during September and October. In this month we have a continual coming and going of the great majority of the birds. Every few days brings fresh arrivals from the north, where many of them spend the summer. These travellers sometimes stay with us for a couple of weeks before passing on. This is noticeable of

some of the Thrushes and Sparrows. The Hermit Thrush makes its appearance generally by the middle of the month, and we can find them feeding on the ground among the shrubbery. The bright rufus tail is a distinguishing feature of these birds. They are generally in small flocks of two or three. In company with them we may see the beautiful Fox Sparrow, one of the larger members of the sparrow family. Also numbers of White Throated Sparrows and Juncos. The Juncos, like the

While most of the birds prefer to migrate in company with their own kind, it is not infrequent to see an odd specimen of a different species along with an entirely different kind. Such a sight was witnessed at the time of the writing of this article, September 28th. A solitary Palm Warbler was observed in company with a flock of six Bluebirds along the roadside. This Warbler has the habit of bobbing its tail up and down while moving about the ground or bushes.



YOUNG GREAT-CRESTED FLYCATCHERS

Vesper Sparrows, have the outer tail feathers white, but the general plumage is a slate color. A large brown colored bird might be encountered scratching amongst the leaves or flitting ahead of you through the bushes. This is the Brown Thrasher, one of our most beautiful songsters. The little House Wrens spend most of the time amongst the brush heaps, the whole family sometimes being present, skulking through the brush like little brown mice.

He spent most of the time in chasing the Bluebirds about as they flew from post to post. We may see also in company with a flock of Warblers an odd one of the Nuthatches, either the White or Red Breasted.

In early autumn many of the small fruits and berries are ripe, such as grapes, elder-berries and mountain ash. We can often find many birds congregated about these to feed. Sometimes, if one is quiet and stands for awhile at these places, a dozen or so different



kinds can be seen. They do not all come to feed, but drop in for a few social minutes, then move on again. At such places the bird student will often add a new entry to his list of migrants.

September generally sees the passing of most of the insectivorous birds. The smallest of them, the little Ruby Throated Humming bird no longer makes his daily rounds of the flower garden. The Warbling and Red-eyed vireos, too, have deserted the shade trees for more favorable haunts. Just about the end of the month, the Golden and Ruby-crowned Kinglets can invariably be seen flitting about the trees in large flocks. An occasional Yellow-bellied Sapsucker, a beautiful bird, may also be encountered at this time, and Catbirds and Towhees may still be seen about the garden or hedge-rows.

October, with its cool nights, and frosty mornings, still finds many of the hardier birds with us. Strolling around the garden or across the fields and along the fence rows, the enthusiast will encounter many. The Juncos and White Throated Sparrows flit about almost everywhere. An odd one or two imposing White Crowned Sparrows would be a lucky find at this season. Then the hardiest of all the Warbler family, the Striking Myrtle Warbler with yellow markings, may be seen. Meadow-larks fly up in scattered flocks and Kildeers may still be observed about the wet pastures or ponds.

Robins, Bluebirds, Chipping Sparrows and Hermit Thrushes are among others to be noted. The Phoebe, which in summer is found about the country bridges and culverts, may be seen. They will be met with almost anywhere at this season. Large flocks of crows may be noted, particularly towards evening, when they keep flying in long straggling flocks to certain roosting places.

November brings the winding up of the migration season. Occasional flocks and individuals of Robins, Kinglets and Juncos are encountered. Some of them may stay till near the end of the month. The Brown Creeper and Red Breasted Nuthatch might be noted also.

By December the birds have settled down to a winter basis. We now have the common resident birds with us, comprising the Downy Woodpecker, the Hairy Woodpecker, White Breasted Nuthatch, Bluejays and the familiar Chickadee. This month the winter visitants, such as Snowflakes, Red-palls, Tree Sparrows, Pine Siskins and Grosbeaks will have arrived from the north to spend the winter. With the coming of mild weather the latter list of birds will move north again. Simultaneously with their departure the first of the spring arrivals from the south may be noted. The yearly visitors from the land of perpetual summer are again on the move, which will open up a new chapter for the bird student's note book.



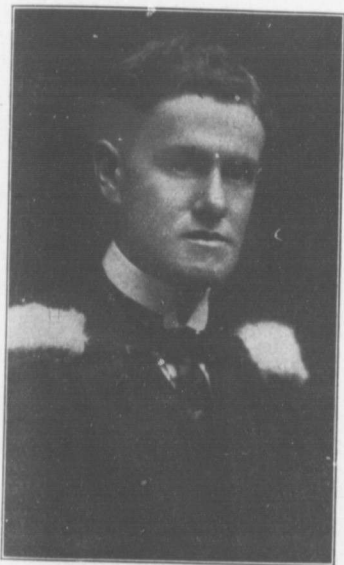
## Meteorological Observations and Their Use

By R. C. MOFFATT, M. A., Lecturer in Heat and Meteorology.

### The couplet

"The evening bright and morning gay,  
Is a true sign of a fair day."

is familiar to us all and is about as old as the Greeks, being handed down from generation to generation. This is an example of primitive meteorological observation and weather prediction, and how often the farmer looks toward the West at sunset especially during the



R. C. MOFFATT, M. A.

harvesting season, and applies this same prediction and very frequently profits by it. It, however, gives only an idea of the probability of rain in the next few hours, but not of the destructive frosts of late spring and early fall which the practical horticulturist so

much fears. For the purpose of the prediction of weather conditions, scientists have endeavoured, by studying the atmospheric conditions and the changes in them, to learn the cause and effect of the changes in those conditions and thus establish rules whereby economic predictions can be made. This study, which is extremely important in agriculture and commerce and especially in the prevention of the loss of life on lakes and seas by the prediction of coming storms, is known in science as meteorology.

The conditions of the atmosphere at any particular time and place is termed the "weather" of that place, while the term "climate" is generalized weather of a district or country for the year. The weather of a place is definitely described by giving definite values to the six meteorological elements, namely, temperature, pressure, wind, humidity, clouds and precipitation. Observations for these values are taken twice daily, preferably at 8 a.m. and 8 p.m., at stations located throughout Canada and the U.S.A. which are maintained by the Governments of each country. They are similarly taken where possible over all the land surface of the earth. They are also taken on ships fitted out by different Governments at various places on the seas, but these ships move from place to place thus not allowing a general and constant record to be kept there.

The first four meteorological elements are most instrumental in weather predictions. Most people have recognized that the presence or absence of clouds is quite a deciding factor in the production of frost. A short de-

scription of the elements and the records taken is necessary to show the use of meteorological elements; a detailed description of the apparatus being omitted.

The temperature readings are taken in the Fahrenheit scale and are three in number—maximum, minimum and present temperature. The average of the maximum and minimum will give the mean temperature for the day. The pressure is measured by balancing the weight of the atmosphere with a column of mercury. At sea-level and freezing temperature and at latitude 45°N the atmosphere will sustain a column of mercury 29.92 inches or has a pressure of 14.7 lbs. per square inch. Wind observations are direction and velocity, and are obtained by a constant recording apparatus or anemometer. From these are obtained the velocity in miles per hour and the prevailing wind for the day. The relative humidity, by definition, is the percentage of saturation of the atmosphere with water-vapour. For any particular place and time this depends principally on the temperature at the time of observation. At noon the temperature is high and the amount required for saturation is high but the actual amount present has not correspondingly increased and hence the relative humidity is low. At night the relative humidity often reaches 100% or the air is saturated and precipitation results in formation of dew or hoar frost. Cloud observations are of the following classification: Clear, if no clouds are present or up to 3/10 of sky being covered with clouds; fair, 3/10 to 7/10 cloudiness; cloudy, 7/10 to 10/10 cloudiness; overcast, lowering clouds and threatening rain or raining. Precipitation records are inches of rainfall or snowfall, or both.

These records are telegraphed each morning to central meteorological stations such as Toronto and Ottawa. The pressure and prevailing wind records taken at the different stations are plotted on a map of North America and lines drawn through places of equal barometric pressures. These lines are known as isobars or isobaric lines, and are frequently closed curves which show the location of areas of high and low pressures at the time of observations. These "highs" and "lows" are not stationary but move in a more or less regular way from West to East; that is, a certain pressure condition will travel from the Pacific to the Atlantic in about forty-eight hours. The relative position of a "high" and "low" will determine the direction of the prevailing wind in the district, as the air will flow from an area of high to an area of low pressure. Thus considering Guelph, if a "high" exists to the south in the Central States and a "low" to the north, the prevailing wind will be from the south. Any particular pressure condition which exists in British Columbia to-day will be translated to Ontario twenty-four hours hence; consequently, the prevailing wind of the subsequent twenty-four hours can be determined. If the wind blows from an area of water, such as the Atlantic Ocean south of Nova Scotia, where it becomes moisture-laden and passes over Ontario, which is somewhat cooler, precipitation in the form of rain or snow results; that is, with a south-east wind we have rainfall or snowfall. You may ask, "why not have rain when the wind is north and comes from the Hudson Bay?" Precipitation cannot result unless the area over which the moisture laden air passes is colder than the area over which the air gained its moisture or unless by the presence of mountains

the air is pushed upward and thus cooled below the temperature of saturation for the moisture present. Neither of these conditions are fulfilled when the wind is north. In this way precipitation can be predicted by any amateur from the weather maps which may be obtained free from the Meteorological Office, Toronto.

The prediction of frost can only be made by the long experience and training of an expert by mathematical calculations which he understands. For this, four of the meteorological elements, namely, temperature, pressure, wind and humidity, are required. A short discussion of the effect each plays in the production of frost will be of considerable interest. The humidity of the atmosphere is the most important. The higher the humidity, that is the more water vapour present in the atmosphere, the less liability of frost as the dew-point is higher or the temperature at which dew begins to form is higher and when dew is formed heat is freed, thus arresting the lowering of temperature. This can readily be shown by comparing the times of the first destructive fall frosts in the neighbourhood of lakes and rivers and at places remote from expanses of water. The temperature has a double effect; the higher the temperature quite naturally the less liable to production of frost. Again, the higher the temperature the higher the humidity and hence its effect. The relative distribution of the "highs" and "lows" will decide the direction of the prevailing winds which has an evitable effect on the temperature and hence frost.

The magnetic observations taken only at certain central stations throughout the whole world are most interesting. The earth acts as a magnet and exerts a magnetic force with a horizontal component of .166 gauss or dynes per unit magnetic pole, measured at Toronto. A freely pivoted magnetic needle points in a north and south direction but not along the true geographical meridian; that is, the magnetic meridian has an angle of declination to the geographical meridian. This angle varies from place to place and with time, the variation being either regular or irregular. At any particular place and at certain times a marked disturbance of the needle in the form of a slow quivering is noticed which may last only a few hours or for several days. As such times "magnetic storms" are said to exist and are usually accompanied by marked Aurora Borealis or Northern Lights and these by thunderstorms. Meteorologists, who have made a careful study of this, have noticed by the aid of telescopes that these are also accompanied by certain disturbances on the sun's surface. These disturbances are dark spots, commonly called "Sun Spots," travelling with enormous velocities across the sun's surface. These "Sun Spots" as considered by scientists to be the primary cause of the magnetic storms, the aurora and the thunderstorms which are exhibited on the earth. The modern scientist looks to his followers to go further and in the future find the cause, of these sun's spots. Thus the march of science.

## Milking Machines

BY S. G. COLLIER, '21.

EVER since man learned how to build himself a dwelling for protection from wild beasts and bad weather, and how to sew skins together for bodily warmth, he has been inventing new ways and means to make life more comfortable.

"Necessity is the mother of invention" we are told, and as it was necessity that made primeval man better his condition so in these modern and enlightened days it is necessity which urges us on to invent and devise machines which will not only settle our labour problems, but which will also give to us that higher state of things which early man sought—comfort and convenience in the home and the office, in the field and the factory.

Among some of the most modern inventions and one which has been and is going to be of immense value to those concerned with dairy work is the milking machine. It is here, and here to stay. There are many and strong arguments in its favour, of which the most important is—CLEANLINESS.

Milk is the most valuable food we know of and in these days of pure food laws, too much emphasis cannot be laid on the importance of producing milk which shall be at once, clean and pure and with the least bacterial content it is possible to get.

Milk that is unclean or impure through dust or foreign matter which may come from the cows udder or the bedding is not only useless, it is dangerous. The fact that with the milking machine the milk is taken from the cow through the cups and tubes and into the covered pail, without so much as a particle of dust or dirt being al-

lowed in it, and that all dangers of odors being absorbed is eliminated is a strong argument in favour of clean milking by a machine over the old and slower method of open pail hand milking, where pieces of straw and foreign particles are constantly falling into the milk.

The milking machine will take the grind out of the work in dairying. To the looker-on hand milking appears to be an easy job, but it decidedly is not, to sit for one or two hours twice a day in a cramped and unnatural position with the muscles tired and aching is anything but easy. The mechanical milker does away with all this. It is but the work of a moment to start the machine, attach the teat-cups, and when finished to remove and change to another cow and so on down the line.

One man with a double unit milker can milk twenty cows in an hour, and do the stripping besides. It would take a fairly good steady man to milk ten cows in an hour if the milking were done by hand; so here is a saving of an hour twice a day. Counting 300 days as a year, or an average lactation period, 2 hours a day for 300 days, is 600 hours. 600 hours divided into days of ten hours each, means 60 days, which at the present moment, when time counts for so much, is too heavy a loss to be regarded lightly.

These are some of the arguments in favor of the milking machine. There are others, had we the space to enumerate them. We have just given the three most important, ones, namely, cleanliness in the product produced, economy of labor and saving of time.

Is the milker easy to operate and

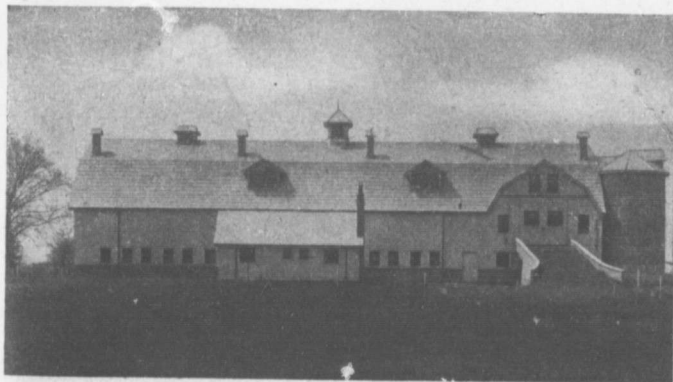
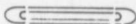
keep clean? Many men think that the more complicated a machine is the more efficient work it will do. Surely Henry Ford has satisfactorily demonstrated the foolishness of this idea. There are a number of machines on the market to-day, some of which are as near perfect as it is possible to get them, whilst others are not so good. The simpler ones cost less and do the work just as well as the more complicated ones, and do not require an expert mechanic to run them.

The milking machine it must be remembered is but a machine after all, and like all machines requires a reasonable amount of care to be kept in good running order. Keep the parts clean, well oiled and all screws tight. Your cream separator, binder and plows demand this attention, and the milking machine demands it also, and when

given no trouble will be found in operating it successfully.

See that all rubber tubing is kept clean. After the milking is done rinse all tubes and teat cups thoroughly in luke-warm, and afterwards in clean cold water. Then immerse all the apparatus in a solution of lime water, about two table spoonfuls of chloride of lime to 5 or 6 gallons of water. This must be changed at intervals, depending on the strength of the solution.

To sum up—Dairying is without doubt the leading industry of Canada, and it is important that the manufacture of dairy products must be kept at its maximum. How can it be done when the shortage of labor is so acute. There seems to be but one solution to the labor problem—more and better machinery. Especially does this apply to the dairy farm.



# QUIRY

## HORTICULTURE

### QUESTION:

We are experimenting on a fairly large crop of onions this year, and would be glad to receive information regarding them, especially as to what should be done in case of thicknecks. Trusting to hear from you at an early date?

### ANSWER:

I have yours in reference to thick-necked onions, and beg to advise that nothing can be done to correct this trouble in a growing crop.

The trouble starts early and can be avoided to a certain extent:

First—By sowing shallow on a firm seed bed.

Second—By keeping the soil away from the bulb during its growth. No part of the bulb should be in the ground.

Third—By the application of Superphosphate at the rate of 400 lbs. per acre, same to be well worked in before seed is sown.

Fourth—Avoid heavy applications of stable manure.

I would suggest that next season you try out these methods on part of the patch, leaving part untried for comparison.

J. W. C.

### QUESTION:

I am planning to put in an orchard in two or three years time. I have noticed in some apples, for instance, Northern Spies, that the apples are better than are a neighboring tree

every year. I know that nurserymen use the buds from the varieties they want. Do you know if it has been definitely ascertained yet if it makes a difference from which Northern Spy tree the buds are taken? Would it pay to get a nurseryman to get the buds from some definite tree that you know and which could be done if you plan two or three years in advance for planting. I would like if you could refer me to any work which treats on that particular phase of orchard work.

### ANSWER:

I have yours with reference to the propagation of Spy trees from trees known to be highly desirable. I think there is no doubt but that it would pay to take buds from choice trees, although the matter has not been experimentally proven in apples. You might get a nurseryman to grow a stock of trees for you from buds furnished by you. Another method of accomplishing the same result would be to plant ordinary Northern Spy trees and top-graft or top-bud, using scions or buds from choice trees. There are several other varieties which would probably also make satisfactory stocks for use in this way. I think McIntosh would be one of the best; Blenheim also should be satisfactory, and should expect that Rhode Island Greening would give satisfactory results as a stock for Spy.

The importance of selecting buds from choice trees has been worked out particularly with oranges and lemons

by R. D. Shamel of the Bureau of Plant Industry, Washington, D. C. Mr. Shamel has also some work under way with apples and peaches, but so far as I am aware this work has not yet progressed sufficiently to justify reliable conclusions. Mr. W. T. Macoun, Dominion Horticulturist, Central Experimental Farm, Ottawa, has under way the only experiment I know of in apples designed to prove this point. Mr. Macoun kept accurate records of individual trees for many years, and has a number of Wealthies top-grafted on Tolman Sweet coming into bearing now. Some of the Wealthy scions were taken from heavy bearing trees, while others were taken from light bearing trees, and a third set was taken from one particular tree which produced fruit annually and of very fine quality. These top-grafts have been fruited for two or three years, which, of course, is not long enough to justify a definite statement on the matter.

Mr. Harold Jones, R. R. 1, Prescott, Ont., some years ago top-grafted a large orchard with scions from one particular tree of Snow, which he had under observation with many others for a long period, and which produced fruit of splendid color and quality. Mr. Jones' top-grafted trees are bearing somewhat, but in this case again a conclusion has not been reached. I should be very glad indeed for particulars concerning the differences you find to exist in trees of the Northern Spy, or of any other variety. J. W. C.

QUESTION:

Will you please give me a little information on the treatment of filling holes in fruit trees with cement. Is it necessary to use some disinfectant.

ANSWER:

Replying to yours re use of disinfectant in tree cavities prior to filling same in with cement, would say the cavity should be thoroughly cleaned of all decayed wood, and would certainly be the better for treatment with carbolineum or coal tar. It is very important to get rid of moisture in the cavity, and to prevent dampness in around the filling after the operation has been completed. In order to get rid of any water which may find its way in it is advisable to slope the bottom of the cavity, if possible, to a given point and bore an opening from the outside for drainage.

J. W. C.

QUESTION:

We have a correspondent who wants to know whether it would be alright to set out raspberry and blackberries in the Fall. As I do not know much about Horticulture, I would be obliged if you would supply me with the information.

ANSWER:

Replying to yours would say it is quite all right to set out raspberry and blackberry in the fall. Early fall is better than spring planting, but late fall would be entirely unsatisfactory. I should say that the best time would be from the 15th September to the 1st October.

J. W. C.

QUESTION:

How can I protect my trees from mice?

ANSWER:

In protecting trees from mice it will always be helpful, first, to remove rubbish of all kinds both from the orchard itself and its surroundings, because rubbish affords excellent hiding places for mice. Snake fences with their long



grass and weeds are favorite breeding places. After this there are several methods that may be used.

1. Before the frost comes remove the grass for about twenty inches on all sides of each tree, heap a little earth up against the trunk, and pack it down firmly.

2. If the frost comes before the earth can be removed, throw coal ashes around the tree for a radius of about twenty inches and firm them against the trunks in the same way as a mound of earth.

3. After heavy snow storms if the snow is packed by tramping around the trees it will prevent the mice from reaching them, but this must be done after each heavy snow storm if there has been a thaw in between.

4. Building paper may be wrapped around the trees to a height of about twenty inches and fastened firmly with a string. It is important to throw a little earth up against the bottom of this paper lest the mice might enter beneath. The paper should of course be put on before the snow comes. Tarpaper is sometimes used but in a number of cases has caused injury to the trees.

5. Another form of protector that is very serviceable but rather costly is galvanized wire netting with meshes small enough so that mice cannot enter through them. This must be firmly fastened around the tree and sufficiently deeply placed in the soil so that mice cannot get beneath. These protectors may be left in and will be serviceable for several years.

6. Poison is sometimes used but is scarcely necessary under our conditions. There is always a certain amount of danger in connection with its use.

## FLORICULTURE

### QUESTION:

I have some clumps of tulips and narcissus Daffodils, in a flower border, that have become crowded. Can I dig them up and plant them again this fall?

### ANSWER:

The bulbs should have been dug up earlier to make root growth, about the end of July or early in August, and then planted at once, or have been dried a little and stored in a cool cellar until October, which is the regular planting time. If dug now they must not be divided up much and should be planted again before the roots dry out. Even then they may not do very well next season. Bulbs should be dug up and divided when dormant in the summer.

W. H.

### QUESTION:

When is the best time to plant Paeony roots?

### ANSWER:

About the end of September is the best time, but they can often be planted successfully as late as the end of October, especially if the roots are protected during the winter with a few inches in depth of strawy manure.

Paeony roots may also be divided and transplanted, when necessary, in the fall, if treated as before stated.

W. H.

## VETERINARY

### QUESTION:

Horse six years old is unthrifty, has a cough and slight discharge from nostrils. He has swelling between the jaws and seems unable to swallow. The swelling seems to give him pain. What treatment should I give him?

ANSWER:

Attend to comfort, give soft nutritious food, steam the nostrils, poultice the throat, and apply ammoniacal liniment. Give one to three drams of hyposulphite of soda three times a day. If the appetite is gone give milk and eggs. If the swelling has become soft in the centre it should be opened to allow the escape of pus and the wound flushed out once or twice daily with white, or carbolic lotion, until healed. Follow up with tonics and good food.

Ammoniacal Liniment — Liquor ammonia Fortier, 2 fluid oz., Oil of Turpentine, 3 fluid oz., Raw Linseed Oil, 3 fluid oz. J. H. R.

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### FIELD HUSBANDRY

QUESTION:

Would you advise sowing alfalfa seed this Fall?

ANSWER:

Alfalfa usually kills out badly when sown in the autumn. The best success is obtained where alfalfa seed is sown in the early spring on winter wheat on a fresh fall of snow or with a crop of barley or spring wheat, using about one bushel per acre of either of these two grains as a nurse crop. Summer seeding of alfalfa about July 15th has given good results. At this time no nurse crop is sown and land should be in the very best state of tilth. About twenty pounds should be sown per acre.

QUESTION:

Which is the most profitable to grow, Field Cabbage or Rape?

ANSWER:

Field Cabbage will produce more green feed per acre and is better suited to growing on dry soils than Rape. Field Cabbage may also be kept for a time after harvesting which is not true of Rape. Rape possibly stands pasturing better than Field Cabbage. Sutton's Earliest Drumhead is one of the best varieties of Field Cabbage.

QUESTION:

What would you look for in good shipping Swede Turnips?

ANSWER:

The roots should be sound, of uniform size, not too large and free from prongy roots and dirt. "Good Luck" and "Canadian Gem" are two good shipping Swedes.

QUESTION:

Are mangels injured by frost?

ANSWER:

Yes, they should be harvested in early fall before danger of heavy frost. They are more injured by freezing than turnips.

## Revised Proofs.



*He takes his proof sheet with a sigh,  
Deleting here, and adding there,  
Till not the keenest reader's eye  
But must confess the whole is fair.*

*And shall the pages of our lives—  
Letter by letter daily set—  
Be subject when the end arrives,  
To no revising process yet?*

*Sometimes our eyes are blurred with tears,  
Sometimes our hands with passion shake,  
Sometimes a tempting Devil leers  
At all the errors that we make.*

*Forbid O God! that work so vain  
Shall stand in an eternal scroll—  
With faults of sin and joy, and pain—  
As long as future ages roll.*

—Bernard McEvoy.

# THE OAC REVIEW

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## EDITORIAL

### THE REVIEW COMPETITION

The annual Review Competition is now open to the students of Macdonald Hall and O. A. C. This year entries will be made in only two classes:

- 1st. Original Short Story.
- 2nd. Original Poem.

The prizes will be:—1st, \$10.00; 2nd, \$6.00; 3rd, \$4.00; 4th, \$2.00, in books, for each class.

All students entering in the competition must observe the following rules governing the contest:

1. Each competitor must be a member of the Students' Co-operative Association.
2. Each article entered must be the individual work of the person entering same.
3. Each article entered becomes exclusively the property of the Review.
4. The competition closes November 9th. Entries will be received at the

Review Office up to and including that date.

5. Each article must be entered under a nom-de-plume, and must have a note attached, giving the competitor's name, the title of the article, and the nom-de-plume.

6. No competitor may win more than one prize in either class.

Entries will be judged under their nom-de-plume only, by judges appointed by the Review Staff.

The results of the competition, and first prize stories and poems, will be published in the Christmas Review.

### THE BEGINNING OF ANOTHER COLLEGE YEAR

College re-opened for the year on September 20th, when about seventy Freshmen enrolled, and were consigned to palatial apartments in Upper Panton and Lower Hunt. The following day

quite a number of old students breezed in, mustering about thirty Sophomores, and rather fewer Juniors and Seniors. Since then students returned every day till October 1st.

The first few days were, as usual, spent in settling down, and in welcoming returning prodigals. It is reported that "the starry stillness of the night" was frequently broken in the upper halls by the crashing of bed springs, the splashing of water, and other mysterious sounds—but we leave the reader to draw his own conclusions.

At the request of the President the usual initiation ceremonies were modified this year. The Flag Fight, however, took place on Monday afternoon, September 23rd. The Freshmen rallied round the flag, about seventy strong, forming a formidable guard. Notwithstanding the heavy odds, the Sophomores, by a combination of dash and strategy, captured the coveted flag after a short struggle.

Small, red caps were "all the go" among the Freshmen this year, for their choice lay between a little cap with lots of hair around it, and a large cap with no hair beneath it. By observation we found that several chose the latter combination.

R. F. J.

#### THE FUTURE OF THE WINTER FAIR

For some time there has been considerable discussion in live stock circles and among students and ex-students of the Ontario Agricultural College regarding the future of Canada's greatest winter live-stock show, now known as the Ontario Provincial Winter Fair, which has found a home in the Royal City of Guelph for so many

years. The outstanding event of the year for Guelph, for many live stock breeders, and for a large proportion of the students and ex-students of the College has been the Winter Fair. Guelph benefits greatly by being the home of such an annual exhibition as any city would, and is justified in feeling proud of the fact. College students who are interested in live stock find the Fair a great help in their Animal Husbandry work and ex-students return in large numbers each year to "brush up" their knowledge of breeds and classes and to receive a new incentive to go ahead with their task after conversing with friends and acquaintances of former years. Naturally, readers of the Review are interested in the discussions pro and con regarding the Winter Fair. Students and ex-students would not care to see it removed from Guelph. But what of the Breeder? He it is who is vitally interested. His views must be considered.

Time was when the buildings provided in Guelph were large enough to meet the demands upon them. But a good show gradually grew bigger and better and extra accommodation was added. This extra space was filled up in a single year and now the crowding is again acute. Then, too, we must remember that Guelph is a comparatively small city, not large enough to handle big crowds in comfort and the people who attend such exhibitions demand reasonably satisfactory eating and sleeping accommodation. Some there are who believe that even with new buildings entirely adequate to house the display to the best advantage, Guelph could not continue to hold the show which is bound to grow year after year. This is a fact which some breeders will bring out and emphasize

as only second to the importance of having a suitable building in which to hold the fair. First the exhibits must be so housed and shown that the greatest number of people may see them to advantage and learn to better appreciate high-class live stock and its importance in this country. The conditions must be such that large crowds are attracted to the show. They are only made possible by good and suitable accommodation. Will Guelph measure up? We fear not, unless some immediate action is taken. We all know that the buildings are inadequate. It would appear that an entirely new set of buildings on a new site will be necessary if the Fair is to develop to National or International proportions. When it reaches such where could the visitors stay in Guelph? Hotel accommodation is inadequate. Private homes would have to be thrown open and very often people do not care to open up to strangers, and strangers hesitate to stay in private homes.

With all these things in mind stock breeders have formed a committee to go into the whole matter of a National or International Winter Live Stock Show. Toronto is bidding for it. Hamilton is out to get it. Both are larger cities than Guelph. Both seem ready to put up the needed exhibition buildings. No decision regarding the matter has yet been arrived at. The present agreement with Guelph has only a year or two more to run. A bigger show is about to emerge. For the sake of the College student we must favor Guelph as the place for the Fair, but if a National Show is started in another city would it not be possible to continue to hold the Ontario Provincial Winter Fair in Guelph? It would seem so. True, the packing houses are situated in Toronto and

close proximity to stock yards is important in the case of fat stock shows. We must also remember that Hamilton is a big and ambitious city and ready to put up buildings and accommodation required. While we boost for Guelph we must realize the advantages of other places and Guelph should be awake to these and busy herself accordingly. A large judging arena of modern type is a necessity and from it should lead adequate stall, pen and stabling room accessible without forcing stock out in the cold winter climate. Every student should do his best to keep a good winter show going in Guelph, and, if bigger shows develop then excursions might be run to them so that we get the most out of them. There is a sentiment in connection with the Guelph Fair and this brings in large numbers each year. This must not die out.

#### THE COLLEGE SALE OF BREEDING STOCK

The annual sale of pure-bred stock will be held at the O.A.C. on Thursday, October 31st. The selection being offered is a good one and a fine opportunity is open to stockmen to secure the best.

Among the beef cattle are four young Shorthorn bulls, all by Proud Diamond, and out of Augusta, Lavender and Roan Lady cows. The Shorthorn females, on sale, include a six-year-old imported cow with a heifer calf, by Kinellar Yet, at foot; a fine Augusta cow with bull calf at foot; a three-year-old Augusta heifer; and a yearling Augusta heifer. In Aberdeen-Angus two choice bulls of breeding age will be sold.

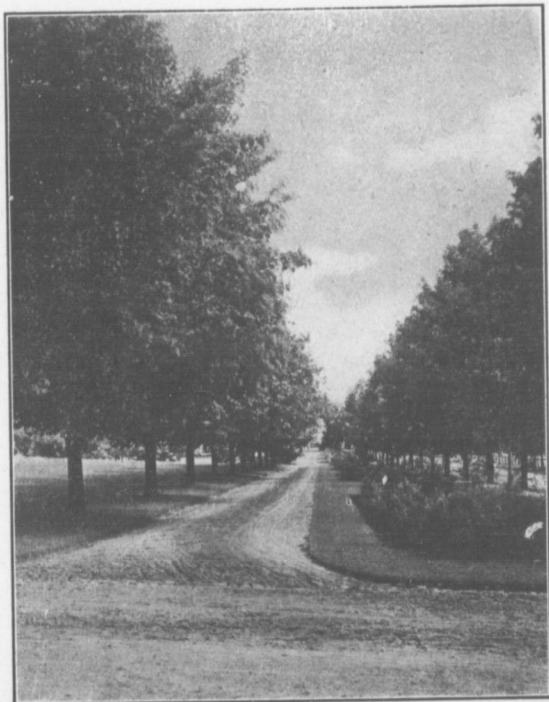
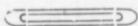
There are catalogued ten Dairy bull calves of choice individuality and high record breeding. The five Holstein

bull calves are sired by Hillcrest Rauerd O.A.C., whose dam, in addition to a three-year-old R.O.P. record of 20,248 lbs. milk and 810 lbs. butter, has a seven-day record of 34.10 lbs. butter. His sire's dam has an official yearly record of 29,000 lbs. milk, and 1,113 lbs. butter, and a seven-day record of 30.47 lbs. The three Ayrshire bulls are sired by a son of the great Hobsland Masterpiece (imp.)

There are thirty-seven sheep, comprising a number of males and females from the Shropshire, Oxford, South-down and Leicester flocks.

Pigs will be there in quantity. Sixty-eight head of the best in Yorkshires and Berkshires will be sold.

This sale will be as popular and attractive as ever and live stockmen will have a most excellent opportunity to buy animals that will prove winners.





W. L. Currier has kindly consented to the publication of the following very interesting letter from J. J. Brickley, '20. We notice that "Brick" retains his great powers of observation, particularly where the fair sex is concerned:

Bovington Camp, Dorset Co., Eng.  
Sunday, August 19th, 1918.

Dear Bill,—

Was very much pleased to receive your letter of July 16th a couple of days ago, and needless to say the perusal of its contents was very interesting to me.

As you can see by my heading we are now settled in our new quarters at this training depot. As far as that rumor about our being sent to the infantry reserves goes, it had the wind up for us for some time during our stay at Frensham. Also we had it that we were to go in the trenches on the heavy machine guns, and many of the fellows had transfers going through orderly room to get into other units. Then the applications came back with the information that no transfers to or from the Tank Battalion would be considered. However, now we are high and dry on one of the most interesting courses in any branch of the service, so according to army lingo, "Everything's Jake."

We left Frensham about 1 a.m. one morning, and after travelling through Surrey, across Hampshire, and into Dorset, arrived here at 9.30 a.m., and marched about three miles from Wool into camp, in a very heavy downpour of real English (wet) rain. This is certainly a very fine camp, but due no doubt to the work in which we are engaged, the location is very isolated. Probably for this reason also the accommodations are exceptionally good. We are housed in long, low bungalow like affairs, called "Huts," with about three tank crews to each building. Also we sleep on real mattresses and pillows and three blankets. Believe me, Bill, we appreciate these things after sleeping with only one blanket between ourselves and the tent floor. Of course, we also have electric lights, hot and cold showers, and very convenient and well fitted wash rooms. However, the crowning features of the place are the reading and writing rooms, canteens, cinema, barber shop, etc. In the canteens we can get a very nice meal for a shilling, with such eats as fried fish, eggs, mashed potatoes, sometimes bacon, salmon, blanc-mange pudding, cake, and occasionally chocolate bars. We can always get a good hot cup of cocoa, coffee or tea for a penny, which is very reasonable. To make



these canteens doubly attractive they are operated by the W. A. A. C.'s (Women's Army Auxiliary Corps), of which there is quite a large detachment in this camp. I certainly admire those English girls, not individually of course, but collectively, for the manner in which they take hold. One sees them in uniform everywhere, driving motor cars, motorcycles, and doing all sorts of non-combatant war work. I am rather afraid that it would shock the modesty of some people in Canada could they see some of the togs worn by these ladies. It is not unusual on the streets of any large city to meet a woman walking about dressed exactly similar to an army despatch rider, leather leggings, breeches, snappy tunic and belt with cap and goggles. In Glasgow particularly, the girl motormen (?) and conductors are very efficient. They certainly are attractive in their plaid skirts, smart green jackets with white soft collars and black ties, also a green hat set at a rakish angle, and of course those Scotch girls themselves are not at all unattractive.

We are now attached to the Imperial Tank Corps for rations, training, discipline and everything except pay. I have had my eyes opened here in regard to Imperial Officers. Believe me, William, they are not the high and mighty creatures we are sometimes led to believe in Canada. Possibly this war has changed army formalities, at any rate they do not insist on them nearly as much as some Canadian officers. All this stuff one hears in Canada about saluting officers on the opposite side of the street and springing to attention when one walks through the lobby of a hotel is simply nonsense. For a practical example, if one attempted to salute every officer he met on the Strand in

London, his arm would go like a pump handle, so the usual custom is only to salute red bands and other senior officers. If one gives these a snappy salaam, it means a good "rep" for his unit. (Don't think that because of this sort of thing any of us have less respect for our officers. Far from it, we really think more of them because they, in almost every case, represent men who have actually seen service, and also it makes one realize that although one may be an officer and another a private, we are all fighting for the one cause.

So Geoff is in the Engineers. I wish both you and he were here with me in this unit, for you would find many things to interest you, particularly if you are of a mechanical turn of mind. I should say the Engineers would not be a bad branch of the service, but one is bound to run against some tough chaps in the ranks of any unit, our own not excepted.

For our courses here we are divided into two general classes as drivers and gunners. For reasons best known to themselves, those in authority have put me with the former and I hope to qualify. If I do not I will have to be a gunner. If I cannot qualify as a gunner I will probably wash dishes in the cook house. Perish the thought! You understood that although we specialize in one line we all take some work on both lines, so in case of casualties occurring on board tank, any member can replace another in a pinch. I have spent a day on camouflage, and completed my first stage of the anti-gas training. I had some experience the other day when I went through the gas chamber. First, I walked into a room filled with Lachrimatory or tear gas, with instructions to put on the mask as soon as we felt

its effects. Believe me, those masks went on, on the double\*that time. Later, we went through chlorine and when we tested for gas, I took such a large whiff, that I had a bad headache the rest of the day. The same day I passed the adjusting tests in the given time.

I have no doubt, Bill, that you would like some information about tanks. Of course, I have seen hundreds of them, all sizes, from whippets to the latest and best type. However, you know there is a chance of those letters being censored, so it will be necessary for you to wait until post-bellum days for the most interesting parts of it. My experience as yet is very limited, because I have only handled the secondary gears on an old type tank when it was in motion. Next week I start my actual driving training, and I certainly hope to make good. There is considerable difference from driving a Cole 8 and an affair weighing from 30 to 50 tons. Both are very good sport, but I can never get enough speed in a tank to satisfy me, even if the engines are wonderful affairs. I am just going to tell you a couple of little wrinkles of tank driving which I do not think will be objected to. You know in driving your car if you are going down hill you release the clutch and apply the brakes. In a tank if one were to do this, the result would be a dead stop, because with twenty to fifty tons travelling at four miles an hour there is very little momentum. However, if a tank is being taken over a perpendicular drop of say ten feet, it is driven over the edge until the point of balance is reached, then the clutch is released and brakes applied, it will drop down on its nose, nice and gently. It certainly requires some judgment to strike the proper point of balance because if it is taken too far forward, the

tank will drop its nose with a prodigious bump, and too far back the tank will stop dead. About the same control applies to going over an obstacle, only if one shuts down too quickly, the thing will drop back. Time and again I have seen a huge tank balance on this so nicely that it would work up and down like a sea-saw. These are only two small points, and they will give you some idea of the things to be learned.

Since arriving we have been the recipients of some new togs, which comprise the regulation tunic, with a white tank about two and one-half inches, by one and one-half inches on the right arm, midway between the shoulder and elbow. Also we have shorts and putties rolled below the knees, which leaves us with bare knees, which seem very peculiar. These are only worn around camp, and when we go out we wear breeches, providing we buy them ourselves. There is a rumor that we are to get an issue of breeches, but maybe it is like 101 others we hear about camp, at any rate it does not make any material difference, because 90 per cent. of the fellows have them of their own. Also we have a couple of pair of combination overall and overshirt affairs, which are used for driving and general work around a tank, as well as a soft issue cap. You can imagine that our fellows put on some swank when they go out, but they certainly have nothing on the Yanks.

We have in the neighborhood no respectable sized towns, but Bournemouth on the coast, about twenty miles away is, I believe, a very fine place to spend a week end leave, and I intend to try it out shortly. It is what they call a watering place over here, which is equivalent to our summer resort.

I wish you could see the Yanks over

here, Bill. They are certainly a fine crowd of boys, and their average physique is away above the Imperials and ahead of the Canadians, only being equaled by the Australians. Of course their hat helps to set them off well, but at any rate they certainly have some swank when they get out on the streets. They have a new slogan over here, which goes like this: "Hell, Heaven or Hoboken before Christmas," which I hardly think they will realize so soon, the third place I mean, although there is no doubt that some of them will reach either of the first two.

Of course our seven day leave is now well past, but not altogether forgotten. One of the most marked results is the fact that before leave there was very little English mail came to our unit, while now every day brings its quota. Very simple, is it not?

Well, William, I must close now for obvious reasons, the foremost of which is that the envelope will hardly hold more. It is almost unnecessary to say that I will look forward to your letters and will try to reciprocate with anything that I think will interest you. No doubt you will be about ready for college by the time this reaches you, in which case pass along my regards to any of the old guard.

Yours sincerely,  
"BRICK."

Fte. J. J. Brickley, No. 2365753,  
No. 2 Section A Co.,  
1st Tank Battalion, C.M.T.C., C.E.F.,  
Bovington Camp, Wareham, Dorset  
Co., England.

G. R. Wilson, '18, writes from Petawawa Camp.

Dear Munro,—

Now that my term as sub-editor has ended I guess I may write you without

expecting a scolding for neglect of duty by return mail.

Army life does not admit of much attention to things agricultural. However, Bert Maxwell and I have so far managed to keep on top and are enjoying the life to the utmost. I am in rather a hurry this evening, so will not stop to go into any details of army life. Suffice to say that Quail and Mike Stillwell are both on farm furlough.

Below you will find a few names of fellows who have been overlooked by the Review so far as I can recollect. You will please see that they receive due attention.

Gunner W. G. Scott, '18, is with the 73rd Battery (Kingston) at Petawawa.

Gunner A. W. Snyder, '18, is with the 70th Battery (Toronto) at Petawawa.

Cadet A. T. Brown, '18, is in the R. A. F. in Toronto.

Gunner Jerry Chamberlain, '21, is in the 75th Battery (Kingston), at Petawawa.

Lieut. T. H. Shields, '19, is in the R. A. F. Address: Care Messrs. Cox and Sons, 108 St. Martin Lane, London, England.

Driver Clarence Cannington, '18, is in the 64th Battery at Petawawa.

Wishing you every success, I am,  
GR. G. R. WILSON 3132794,  
64th Battery, C. Brigade,  
Petawawa Camp.

Lieut. Leslie Lord, '16, R. F. A., writes from England.

Army Signal School,  
Dunstable, Beds.,  
22nd Aug., 1918.

Perhaps the Alumni Editor would like to know that G. Garlick '16 is at present in a convalescent home in Kent, after being invalided from France at

the beginning of the year; also that A. E. Ranger '16 is in the R. A. F. in Egypt.

I'd like to be remembered to any of '16 who are still at Guelph and also to the Staff.

Yours sincerely,  
L. LORD '16.

P. S.—I also came across H. Pearson, who started with '16, when I was in hospital in London in March last. He was a Lieut. in the R. A. F. and was flying near the East Coast.

#### We Deeply Regret to Report the Following Killed in Action

H. B. Steckley, R. A. F. Steckley went overseas in May, 1917, with a draft of officers from Canada, and in England was attached to a British Regiment and went to France. He transferred to the R. A. F., and after two months training was back in France, and served with his unit until his death on July 22nd, while bombing enemy territory.

Jack Macklin '15, King's Own (Liverpool) Regiment. Killed in action March 15th in Saloniki.

Egan Agar, '17, R. F. A., formerly reported missing, now reported killed in action. (German official).

Harold Cunningham '19 has been officially reported "died of wounds" received presumably during the heavy fight of August 9th-11th, when the Montdidier salient was wiped out. Cunningham enlisted with the 131st Battalion, and later transferred to the 47th Battalion. He won his commission after being wounded at Vimy Ridge. He was just as popular in the army as when he was here.

The following letter from H. R. Wyatt was received recently by Mr.

Hunt, and very kindly passed on by him for publication:

2nd C.C.D., Bramshott Camp,  
August 23rd, 1918.

Dear Mr. Hunt,—

Just a few lines to let you know how I am getting on. I am at present in the Second Canadian Command Depot. From here I will be sent to my Reserve, and I will then be ready for France once more. That will be about New Years, providing I don't have to go back in hospital once more, which is quite probable.

Since I last wrote I have met quite a number of the old boys. Russel Knox of '17 was at Epsom with me. I also saw W. O. Cook of '19 and Grunder of '19. Then I was passing through Witley last Saturday and I saw Thompson of '19. I have seen several of the other lads as well, but at the time of writing I can't think of their names.

I am at the present time filling in my application for my commission. I expect to have it by New Years.

How are conditions in Canada now? We poor lads over here surely have some fine news sent us. We never know what to believe and what not to.

Well, if I am lucky enough to get back O.K. I am coming straight back to good old O.A.C. A fellow never knows what a place like that means till he is far away. But now I know what it means.

I am sorry I have not a chance to write more to-night, but we are very, very busy.

So good-bye for this time.

Yours very sincerely,

H. R. WYATT.

My address at present is: Pte. H. R. Wyatt, No. 214069, 124 Lower Court Road, Epsom, Surrey.

Geoffrey Perrin '15 is now a Staff Captain.

Lloyd Hammond '17 has been reported "Missing."

G. Sibbit '15 is now overseas.

Gaultby '17 has been reported wounded.

"Froggy" Scott '15 who was gassed in the first battle of Ypres, and out of it for two years, returned to France in the spring of this year, and has again been wounded.

Geo. Patten '17, who went to France with the R. F. A., is a prisoner of war in Karlsruhe.

"Blondy" Wilson '15, 55th Battery, was reported seriously wounded in August.

Jack Foote '16, who went over with the 33rd Battery, and later transferred to another unit, has been reported wounded.

Geo. Wilson, 43rd Battery, formerly District Representative at Simcoe, has been reported wounded.

Hyde Auld, who went over with the C. M. R., was wounded on September 3rd. He is suffering from a shattered knee and a broken leg, but is reported to be doing well, though his recovery will necessarily be slow.

Ken Stairs, who went over with the 13th Battery, R. F. A., as a gunner, and later got his commission in August, 1917, was reported wounded in August.

"Sunny Jim" Neville has been invalided to England, and is in the office of Dr. Torey, the head of the Khaki University.

### Fred Odell '19 Writes from Bovington Camp

This is a life very different indeed from the one we used to lead at dear old O.A.C., but "there's a war on my boy," as they say over here.

I got through my first sea voyage in fine style, though we had not been away from Halifax more than a few hours before a lot of the boys gave up the ghost, and pretty nearly everything else, but I did not feel a bit sick—that is seasick.

The boys were crowded for room on the boat as usual. I know I have always been used to sleeping with my feet in bed with me, but you could not do it in the bunks we had.

The Battalion had to take boat drill every day. There was one "bird" who was supposed to go on a boat, but one time he was sea sick and did not show up. When they told him that was no excuse and what would he do if he was seasick and the boat was really sinking, he said he thought it was really sinking ever since we left Halifax.

Have just been on guard seeing that old Fritz does not try any funny business with our "busses" in the tank park. Was a noble Corporal of the Guard all night. We had about a hundred tanks this time. There are tanks galore around this place—human and otherwise—but although there are hundreds of Germans (prisoners) around they never seem to try to bust up the show, but just keep on from day to day doing as little as possible.

Our Battalion is well on in the

courses here, and the work is mighty interesting, but we surely work hard at it. I am taking a driver's course—great stuff careering over all kinds of holes, hills and bumps in these things.

Yours truly,

FRED ODELL.

No. 2365861 Cpl. F. C. Odell,

No. 2 Sec., A Coy.,

1st Tank Batt'n, C.M.T.C., C.E.F.,  
Army P. O., London, England.

“Sy” Hessel and “Syd.” Lord are both overseas on conducting duty.

H. J. Salter '20, R.A.F., has been reported wounded.

J. C. Neale '16 is overseas. His address is:

3134488 Pte. J. C. Neale,  
Draft 169,

Can. Railroad Troops,  
Army P. O., London, England.

Ed. Atkins '19 paid us a visit recently. He is in the Machine Gun Section of the Siberian Force, and is at present in Camp at Niagara-on-the-Lake.

We hear that Harley Selwyn '17 is having good success as an apiarist, and has bought a new place at Wakefield.

Light '19 and Gardiner '16 are engaged in shipbuilding work in Detroit.

A. J. Galbraith, formerly lecturer in Geology here, and now of the M. A. C., paid us a flying visit recently.

W. T. Ziegler '19, U.S.N., was here for a few days in October.

Quirie '20 R.A.F., was also with us for a few days.

Lieut. Ralph Donaldson '15 has been awarded the Military Cross.

V. H. McElroy has been reported missing.

Whittingham '15 is in hospital.

O.A.C. is represented in the 1st Tank Battalion by the following:

Fred Odell '19

Bergey '12

Brickley '20

Griffin '16

Malyon '19

Prof. Caesar has kindly passed on for publication the following very interesting letter from George Spencer.  
—B. S. A.

France, June 28th, 1918.

Dear Mr. and Mrs. Caesar,—

I have been wanting to answer your letters ever since I received them, but circumstances have prevented. We are now actually and really out on rest. We had barely 10 days of our appointed month's rest when the show started in March, since then we have been “in” continuously, not being out of the line more than 5 days out of 18 at any one time. Even then at any hour of day or night shells from a long range high velocity gun would come in as a petty annoyance, especially if the remains of the village were of any size. These shells are the magnificent whizz-bangs, which are exactly like their name, or pip-squeaks—things that defy the laws of acoustics as generally followed, and cause sound to travel faster than it usually does. One hears a bang! oooooocowow—crash—all in one second or in a fraction of a second if the shells are near you—and the gun firing with a velocity of anything up to 2300 ft. per second is from 5 to 8 miles away. I think

the shell carries the sound with it, something like a vortex coming at you or the widening concentric rings in a pond into which a stone has been thrown. All naval guns are like this and on land of course nothing larger than a 6 inch gun is usually used because they are so heavy. Anything larger than a 6 inch. requires a truck on rails. You see one of these babes weighs over twenty-three tons—practically a ton for every foot of its length, and throws a shell averaging 100 lbs. about 12 miles. Whereas a howitzer of about the same calibre weighs about one-sixth of that, throws the same shell nearly half that distance, uses 1-4 the charge and makes one-twentieth the noise. In fact some of these high velocity guns refuse to acknowledge or conform to the laws of acoustics, and one hears the gun boom about two or even three seconds before the shell arrives; and the shell travels all of twice the velocity of "normal" sound. Another form of petty annoyance is to have one or more of these guns within a quarter of a mile of your ruins or huts, because the noise at night will rouse all but the soundest sleepers — especially the first two or three nights out of the lines when your nerves are a bit raw and highly strung. Or perhaps a hun plane comes over and lays eggs nearby, if the jar to the earth doesn't waken you the crash certainly will. Lately he has taken to dropping them near the front line, either he is after the morale of our troops or else he is afraid to venture further inland. In the support line last trip (our defences are organized differently from what they were before the hun drive) a hun plane came over and laid six eggs at about 1 a.m. At 5 o'clock when it was

light enough, I went over to see the place of his oviposition. Five bombs had the long range fuse caps—things about a foot long, so that the bomb itself explodes actually before it strikes the ground—and one delayed action fuse which went so far down that it didn't form a crater—it upturned chunks of sod 2 ft. long one over the other for a diameter of 20 yards, and in the centre was a large mound of finely pulverised earth. I suppose this latter type he uses to reach cellars of houses, while the former is for street use. However, this time they fell far from anywhere in the waste fields. The instantaneous bombs made holes perhaps a foot deep—some less than that, but the blast has cleared smooth a circular patch 30 yards in diameter, and the outer ring 10 yards farther still on each side. They were small bombs too. Curiously enough while the lateral blast is so terrific the vertical one is comparatively small; because the vanes or tails on the end of the bombs were in the small hole of the explosion and must have just dropped afterwards. Of course they were torn and twisted, but one would imagine that they would be blown far away. However, for every bomb he lays, our machines lay six.

From here we can see the ruined towers of what must have been a truly imposing monastery, standing on a little hill. In the war of 1820 the huns destroyed it, and have still further battered it in the present war. It is a wonderful landmark still. For a wager, a pilot recently flew his machine between the twin ruined towers which were too close to allow his passage normally, so he had to take it banking on a curve—an extremely dangerous and daring feat. It was a double seater

patrol machine too. Another wonderful and perhaps less foolish feat was done round here a month ago, when one of the little very fast scout machines flew at right angles across a road between the trees lining it, though there was barely room to pass. I saw the latter but not the former feat. Not far from here is the little scout aerodrome, and every afternoon the birds go up for practice, and to play around. Yesterday evening a small flight of 5 machines came home about 9 p.m. from patrolling the front line, and as soon as they came near home, instead of going quietly to bed in the hangars, they broke off from their formation and played for half an hour, side-slipping, back-looping, twirling, diving at infantry on the ground, and doing "stunts" which would thrill an audience if it was an exhibition. And then one by one they came down. It was just like schoolboys drilling, and breaking off to play. I have seen machines not only spiralling downward but horizontally, and even turning horizontally in their own axis "flopping" just like holding a pencil in the middle and twirling it. This last makes you hold your breath—especially when you—as a land lubber—have been for a flight—a plain sailing flight with few turns, and know what it feels like. Truly, airmen are supermen. Lately I have seen machines driven down in flames—it is an awe-inspiring and a terrible thing to see. They were all hunts. The hunt tried every flip and flop he could think of to get out of the nose-pointing enemy who followed his every movement with a like one or took special short cuts to get in the hail of machine gun bullets. You see the scouts carry one or two machine guns fixed on their machines, which must be headed right at an enemy before the guns can fire. And these air machine

guns are "tuned" up to terrible speed—even in some cases to 800 rounds (rate) per minute. By a very ingenious contrivance the bursts of fire are synchronised with the revolutions of the propellor, so a m. g. fires right through the blades without hitting them.

The crops around here are the best since 1914. It is a good thing that every available foot is under cultivation, and that the grain, especially the wheat, is a sight to gladden the hearts of any and all—because bread is at present scarce, and flour is rare. Meat is plentiful and vegetables.

The French have a wonderful country and there is apparently not much about farming that they don't know. On my walk yesterday I saw a wheat field of perhaps 15 acres in which most of the stalks were 6 ft. high and in the high part of the slope near the road it wasn't an inch below 4 ft. with fine large heads now swelling to the harvest. The clover crop is extremely heavy; two crops of alfalfa are taken off per year. No one, to my surprise, keeps bees. I think the knowledge of the soil is in the blood of these people; they are wonderful farmers. It is never failing delight to me to look at the fields; the very wheat is doing its bit for France. There never was such golden barley. The foliage of the oat plants is perhaps too heavy in proportion to the heads.

I have accepted an offer which has been hanging fire for nearly 2 months; namely the position of Brigade gas officer under the newly organized Gas Science. Gas is assuming such proportions in modern battles that it is of

(Continued on page xv)





# MACDONALD

This year it is our privilege to extend a welcome to our new students at Mac Hall. This welcome is most cordial, and we want you to show us that you feel at home by asking us freely for any assistance we can give you, and also by sharing with us the responsibilities of our college life. Needless to say the last few years have proved to us that if we, all take hold and help, whether it be in the interest of Victory Bonds, Red Cross, Food Conservation, or anything else worth while, the burden falls heavily on no one.

Our House President and her Council, our Y. W. C. A., our Chapter of the I. O. D. E., and also our other organizations, all need our hearty cooperation and interest in order to give their best to us. We are so confident of your ability and interest, that we feel sure you will help us make this year one of the best in the history of Mac Hall.

## THE OPENING YEAR

Another college year has commenced, and Macdonald is very much alive. To most of those who have returned, the vacation has been no idle holiday. In camp and kitchen, on farm and field, both staff and students have been working, helping to supply the labour which is so greatly needed in these days of strife and stress.

In the Hall, the students of year '18 are much missed by those who are now seniors; these have also to regret the absence, for family reasons, of Miss

Violet Reid and Miss Muriel Watts, both of whom were very popular in their class. The latter was a valued member of the choir, and in the Macdonald quartet frequently contributed to the pleasure of audiences on both sides of the campus. As social convener of the Literary Society, she worked hard, and last term was elected president of the same, for which position she seemed specially well qualified.

Seventy-three new Macdonald students have taken up their residence in the Hall where they will doubtless soon feel quite at home.

## THE PIONEERS

Macdonald Hall has welcomed four O.A.C. students, Miss Davidson, Miss Hemming, Miss Chase and Mrs. Dawson, with who, Miss Catherine Graham, daughter of Professor W. R. Graham, intend to take the four years course in agriculture.

Miss Davidson has lived nearly all her life on her father's large dairy farm near Peterborough, where there were 20 cows, and for three years, during his illness, she practically carried on his work. Her aim is to teach, rather than to practise agriculture.

Miss Hemming, who is city born and bred, on the other hand, intends to become a farmer, and looks forward to possessing land of her own. During the summer of 1917 she worked on a farm, and this past summer she spent in the cereal department of the Experimental Farm at Ottawa.

Mrs. Dawson is well known in Canada and the States as a poultry expert, having obtained her knowledge and skill through long experience. She was born in India, resided 13 years in Canada, and went to England some three years ago to take up National Service work. She was engaged in transport work, and also put in some time on a Surrey farm. Returning to Canada, she and four other women performed wonders during this last summer on the Larkin farm, Queenston. Having succeeded so well with poultry, especially White Wyandottes, and having won numerous prizes and medals, Mrs. Dawson wishes to study other branches of agriculture, and to specialize in animal husbandry and veterinary science.

Miss Chase, who has lived on a farm in Nova Scotia, has passed two years at the Nova Scotia Agricultural College, and so enters the O. A. C. as a third year student. Her ambition is to own and manage a farm.

Miss Graham, who was born and brought up "right here," has devoted two summers to the Horticultural department of the O.A.C., and she desires to specialize in plant breeding and research.

In years to come, the names of these pioneers will be remembered with honour and gratitude by all women agriculturists, and surely everybody at Macdonald will wish them good luck and success in their courageous enterprise.

#### Y. W. C. A.

Social life at Mac. Hall was given a good start on Saturday evening with the Y. W. C. A. reception to the new students. The seniors in general cooperated most cordially with the "Y" executive in making the newcomers feel

that they were welcome, and in helping them to get acquainted all around.

Jolly games, interspersed with musical numbers, filled a most pleasant hour. Our popular soloists, the Misses Dora Lewis, Gundred Rebbick and Grace Totten contributed to the pleasure of the evening, while Mrs. Brown favored with a song to which Miss Hattie English played a violin obligato.

In a short address, the President of the "Y" assured the Juniors of the pleasure it gave to welcome them to the Macdonald Hall sisterhood. She outlined briefly the aims of the Association and bespoke their interest and help in the work of the society for the coming year.

The programme was brought to a close by the company gathering around the piano and singing old time songs.

The "Y" meeting on Sunday evening was well attended, and the interest shown was most encouraging. The exercises began with a short song service, followed in the usual way by prayer and scripture reading. A splendid paper on the "Observance of the Sabbath" was given by Mrs. M. B. Smith.

The laundry has been greatly improved, the tubs having been moved out from the wall and placed in a double row across the room. The floor is now properly drained. A new circular copper boiler with steam jacket has superseded the old boilers with exposed perforated steam pipes. This should be safer, as accidents occasionally happen through the violent boiling in the uncovered tubs. It is hoped that all students will combine to keep the laundry and ironing room in good order.

**GOLDENROD AND ASTER**

(A Song for Music)

To inward sight returning,  
 With sad remembrance yearning,  
 One hour of pure perfection,  
 Through tears come back to me.  
 With words of love persuading,  
 My willing heart invading,  
 When Alan won my promise  
 His wedded wife to be.  
 The setting sun was gilding,  
 The home-place he was building,  
 All mirrored in the river,  
 As still as clear as glass;  
 A sweet contentment bound us,  
 For all was fair around us,  
 And golden-rod and aster  
 Were bright among the grass.

He heard the Empire calling,  
 He went where shells are falling,  
 And now for him are ended  
 The glory and the pain!  
 My heart is stunned with sorrow,  
 Yet, were he safe to-morrow,  
 Had I the choice—God help me!  
 I'd yield him up again.  
 There is no braver ending,  
 I cannot grudge the sending,  
 Yet lonely I must wait  
 For the lagging years to pass.  
 I'm weary of my weeping,  
 I would that I were sleeping,  
 Where golden-rod and aster  
 Are bright among the grass.

**MACDONALD HALL FIELD DAY**

Mac field day was held on Saturday, September 28th. The weather man contributed largely to the successful carrying out of the sports programme. All events were keenly contested, and, judging from the number of junior entries we may safely predict that Mac sports for the coming year will come up to their usual high standard. All

refreshments were voted out for patriotic reasons. Following is a list of the events and winners:

75 Yard Dash—1st, Miss Elliott; 2nd, Miss McDonald.

Egg Spoon Race—1st, Miss Elliott; 2nd, Miss Suttaby.

Hop, Step and Jump—1st, Miss McDonald; 2nd, Miss Trethewey.

Three Legged Race—1st, Miss Suttaby and Miss Maybe; 2nd, Miss Maclean and Miss Warner.

Basket Ball Throwing—1st, Miss Elliott; 2nd, Miss Hemming.

Blind-fold Race—1st, Miss Elliott; 2nd, Miss McDonald.

150 Yard Dash—1st, Miss Elliott; 2nd, Miss McDonald.

Broad Jump—1st, Miss McDonald; 2nd, Miss Gardner.

Suit Case Race—1st, Miss Elliott; 2nd, Miss Riddel.

Tray Race—1st, Miss McDonald; 2nd, Miss English.

High Jump—1st, Miss Trethewey; 2nd, Miss McDonald.

Thread and Needle Race—1st, Miss McDonald; 2nd, Miss Nichol.

Shoe Race—1st, Miss Chase; 2nd, Miss Hemming.

Obstacle Race—1st, Miss McDonald; 2nd, Miss English.

Senior vs. Junior Relay Race—1st, Juniors.

Class Relay—1st, Jr. Associate; 2nd, Junior Normal.

Tug of War—1st, Juniors.

Grand Champion—Miss McDonald.

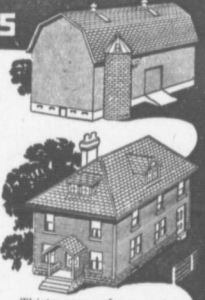
For the information of some new students it may be stated that to strike up an acquaintance with gentlemen on the campus on Sunday afternoon, is not according to Macdonald etiquette. It is usual to wait for an introduction.

# "METALLIC" covered buildings defy the elements



**T**HIS is a strong but a true statement. Put "Empire" Corrugated Iron or "Metallic" "Eastlake" Galvanized Shingles on the roof, Siding on walls, and the building will last for generations. And it will do more than just "last,"—it will be always fireproof, stormproof, lightningproof, neat in appearance, and dry inside.

"Metallic" building materials include "Eastlake" Metallic Shingles, original and best; "Empire" Corrugated Iron, always uniform in size and goodness; "Metallic" Siding, easily put on and fireproof; "Metallic" Ceilings, make a beautiful, fireproof, sanitary interior; "Empire" Silo Roofs, low priced but money-savers "Halitus" Ventilators, very efficient and durable; "Acherson" barn roof-lights for light and ventilation; Conductor pipe, Eave-troughing and many other specialties in metal. Made in Canada under our 30 year old motto, "Quality First." Send for illustrated booklets, price lists and our helpful building suggestions.



Thirty years of successful use all over Canada prove these statements.

**Metallic Roofing Co. Limited Mfrs.**  
TORONTO AND WINNIPEG

**USE THIS COUPON TO-DAY.**  
Put a cross opposite the "Metallic" line you are interested in, clip this out and send to us with your name and address and we'll send you prospectus, prices and full particulars.

"Eastlake" Shingles	Empire Silo Roofs
Empire Cor Iron	Acherson Roof Lights
Metallic Ceilings	Halitus Ventilators
Metallic Siding	Eave-troughing

## Overheard at Mac. Sports

"Some jumper, isn't she?"  
"Yes, and I don't know where she keeps her jump either. There isn't room for it in her stockings."

Miss Hepburn is taking the place of Miss Boughner, who is absent this term through ill health.

## A WEEK AT THE EX.

(By One Who Was There)

That sounds a very long time to one who usually found a day at the Exhibition more than enough, and longer still to those people who have tried to avoid it altogether. But everything is different in these war days, and when duty calls, in the guise of the Food Board, to help in presenting the claims of conservation and production to the public, it would be helping the Germans to refuse.

As the whole time was devoted to the problem of conserving sugar and fats, this article may seem rather one-sided to those who might justly expect to hear other things quite as interesting.

To the buxom lady and the fat gentleman this aim should have been of special interest and advantage as they could well afford to save and substitute for these particular articles, but it would not be surprising if Pharaoh's lean kine showed but a languish interest. One very thin lady was heard to remark, "If no one used more sugar and butter than I do, there would be no shortage," and one felt it would be a kindness to send her some. On the other hand a fat man accompanied by a fat wife assured us they could never do anything to help in that way. They seemed a living advertisement of "Eat less fat."

Please mention the O. A. C. REVIEW when answering advertisements

The rations of the allies proved quite an arresting exhibit, and the varied effects on the people amusing. An elderly lady surprised us greatly by laughing merrily at poor Italy's "meagre portion;" one would judge she had a bitter enemy there; while several men were heard to remark one to another, "Look at Canada and then Italy, and thank your stars you don't live in Italy." It was also a good chance for mothers to pull their unwilling small boys by the ears and point out a lesson in thankfulness and sympathy for the misfortunes of others.

The Exhibition affords one an excellent opportunity for studying people and types, and to talk to many of these proved quite enlightening. Some are keen to chat and give you all their experiences in a few minutes, while others are barely polite. A very old man and his wife, keenly interested in the problems of the day, only regretted that they had been born too soon, and assured us that we were doing wonderful things. The wife, however, claimed with some asperity that too little credit was given their generation, and asked where the present one would be if it had not been for them?

A pair of keenly interested fiancées were amusing to watch as they flitted from one war-time recipe to another, eagerly copying every detail into a small book, no doubt destined for future household use. But it was the veteran housekeepers who sought to upset our equilibrium by announcing the omission of that necessary addition "salt" from one of our recipes. We assured her, however, that we salted almost everything, fresh or otherwise. It keeps better!

I do not know if we were in any way responsible for a printed sign hung in

one of the down-town restaurants, "Put only one lump of sugar in your tea and stir like H—; we don't mind the noise." But I am sure the sentiment of it would meet with the approval of the Food Board, and may it be followed by those who might well do with less, thereby materially helping the great cause of the Allies.

In conclusion, as Bill writing to "Dere Mable," we would say,  
"Yours till the end of the war."

SUBSTITUTES.

#### RHYMES OF THE LAND GIRL

There's a little farm down Jordan way  
Where I may say, I've hoed.  
In my heart I knowed, I hoed it so  
That nothing ever growed.  
There are thistles there beyond compare;  
The grass was seldom mowed;  
When I go back down Jordan way,  
If there's a crop there, I'll be blowed.

I love you raspberry,  
You mean so much to me;  
You mean my board and lodging,  
My dinner and my tea.  
You mean my railroad ticket,  
With which I go back home;  
That's why I pick you carefully,  
As up and down the rows I roam.

I hate you raspberry,  
You've been the death of me.  
You broke my back in pieces,  
And gave me housemaid's knee.  
I've had you for my breakfast,  
My dinner and my tea,  
That's why I hate the very name  
Of a red raspberry.

**ALUMNI***(Continued from page 77)*

tremendous importance to keep absolutely up-to-date in all his tricks and methods. The other night we "projected" gas on N—. Projectors are very efficient contrivances which, on pressing an electric button, hurl from 5 tons upward of liquid gas, in drums, into a small area, so that one single breath of gas before a man gets his respirator on, will kill him instantly. (We, the British started this.) The next night we threw dummy drums over into the same place and then raided the sucker, to find him sitting with his mask on, while we dashed in without them and upset his constitution considerably—the prisoners taken were intensely disgusted and called it "A dirty trick."

Yours very sincerely,  
GEORGE SPENCER.

Mel. Jones '18 is now the Ontario Agent for the Dominion Land Settlement Scheme. His work includes the arrangement of loans to returned men who are desirous of taking up land in Ontario, and the placing of these men on farms. His office is at 24 Adelaide East, Toronto.

**MACDONALD  
ELECTIONS**

The following positions left vacant were filled on September 23rd by election:—

President of Literary Society—Miss Dora Lewis.

Baseball Manager—Miss Rebbeck.

Athletic Secretary—Miss J. Watts.

I. O. D. E. Recording Secretary — Miss Suttaby.

I. O. D. E. Corresponding Secretary—Miss Lethbridge.

A  
\$35.00  
BEAUTY

It's a man's watch—finest gold - filled case, very thin model. The movement is a Ryrie special, 17 jewel, adjusted, patent regulator, Breguet hair-spring, gilt or white dial.

It's such a beauty, that if we couldn't secure any more of them, we would be almost (not quite) sorry to see them go.

Guaranteed, of course.

**RYRIE BROS.**

LIMITED

134-136-138 Youngs Street  
TORONTO

JAMES RYRIE,  
President.

W. M. BIRKS,  
Vice-Prer.

**YOUR FARM** Will Yield Bigger and Better Crops  
if you **FEED** Your Lands with

# **STONE'S FERTILIZERS**

They are rich in AVAILABLE Plant Foods—are made from materials of highest quality. Their mechanical condition is unexcelled—no clogging in the drill. **STONE'S FERTILIZERS** give results. See our local agent or write us direct.

**WILLIAM STONE & SONS, LIMITED**

**WOODSTOCK, ONT.**

(Head Office)

Ingersoll, Ont.

Stratford, Ont.



## **THE SOLDIER'S CONSOLATION**

One of our Soldier-heroes was struck down by the enemy; he believed himself mortally wounded. To his amazement his life was spared; in telling the story afterwards he said; "My last thought before losing consciousness was—'what a satisfaction that I insured my life.'" Life Insurance certainly does give peace of mind to the husband and father—at least as far as his family is concerned. Many are racked with anxiety in their days of illness lest a fatal termination should leave the family without protection.

*Make sure that your family is protected!  
Make sure that your protection is sufficient!*

**The Mutual Life of Canada**

**WATERLOO, ONTARIO**

**GEORGE CHAPMAN, General Agent**

**GUELPH, ONTARIO**