

**PAGES**

**MISSING**

# THE O. A. C. REVIEW

"THE PROFESSION WHICH I HAVE EMBRACED REQUIRES A KNOWLEDGE OF EVERYTHING."

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No. 1

## Introduction

DR. C. A. ZAVITZ, Acting President

WITHIN the past four years about five hundred graduates and undergraduates of the Ontario Agricultural College have volunteered enlistment for overseas. Of this number about three score and ten have given their lives on the battlefields of France and of Flanders. A number have become invalided and have returned to civilian life in Canada. A few were selected and are now engaged in agricultural leadership and in agricultural teaching in Europe. The great majority, however, are still on active service in the

tunity and her responsibility. The demands upon her are great and she is responding nobly.



DR. C. A. ZAVITZ

The Ontario Agricultural College has had a marked influence on the agricultural progress of Canada. Her influence is greater than many people realize. Through her graduates and various agencies she has done much for increased production to meet the present crisis.

For the forty-fifth year the College doors are opened for the entrance of boys for the regular course. For this course

In response to calls from overseas, our College President, Dr Creelman, recently left to give assistance in connection with the Khaki University, and our Lecturer in Rural Sociology, Mr. McLaren, to aid in educational matters; the former to be gone for a few weeks and the latter until a year after the close of the war.

Previous to the war, Canada produced more food materials, per unit of population, than any of the other leading agricultural countries of the world. This indicates Canada's oppor-

girls are being admitted for the first time in the history of the institution. A number of returned soldiers are entering the regular College course in preparation for active service along agricultural lines. To meet the changing conditions and the work of reconstruction the Ontario Agricultural College has an important place to fill and her responsibilities were never greater than they will be during the next few years. May each College man and each College woman be faithful and true to the highest requirements.

## How To Take Notes

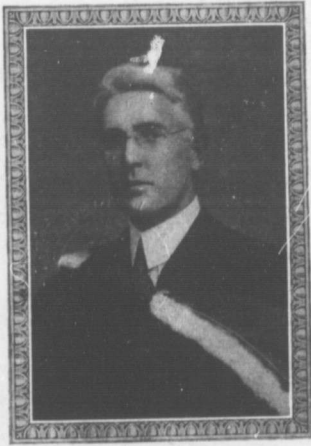
By S. B. McCREADY, B.A., B.S.A.,

Assistant Secretary, Organization of Resources Committee

THE editor has asked me to outline a few suggestions for the guidance of students in this important (?) phase of college work. I do so with some reluctance, for I realize that here is one side to the matter which involves the whole

that this is dependent to a considerable extent on knowing everything the instructor tells you in class, so you feverishly try to scribble down his last word. All the time your mind is busy in its effort at transcribing. It has been a conduit rather than a storage battery. Now a conduit has no potentialities within itself. A storage battery has. You can't recover anything from a mere transmission wire. You can from storage batteries, that's what you're at college for, to store up potentialities.

You will, therefore, require to offer some resistance to this tendency to take full notes. You will need to fortify yourself for this bravery too. Perhaps you think the professor's eye is on you, and that he thinks that you think his remarks are not deserving of recording. You do not want to hurt his feeling nor lose his regard—if you ever had it. But you realize that elaborate note taking is hindering you in grasping and holding instruction as it is given to you. You are allowing your powers of memory to slacken. You are getting a fat note book, but the "tablets of your mind" have only weak inscriptions. Even though there may be a chance of losing a few extra marks or of missing a little higher standing, it will be worth while developing your best powers. At some schools, students are not permitted to take notes. These remarks are not a condemnation of all note taking. There is note taking that is necessary in order to have an exact statement of fact regarding some technical matter. There is note taking, too, that is profitable



S. B. McCREADY, B.A., B.S.A.

question of teaching both as to aim and to method. Restricting the discussion however, to the general scheme of instruction as carried on in Canadian colleges, that is the lecture method, perhaps the following remarks may be found of some service.

### (1) DO NOT LET YOUR NOTE TAKING WEAKEN YOU MENTALLY

There is some danger of this. You are anxious naturally to do well in the final written examinations. You realize

from the standpoint of training. After you leave school, you will not take down notes very often. You will have to list the things your wife wants you to get her in town and you may jot down odds and ends regarding farm work. But there will be times, when you are a delegate at a convention, or when you act as the secretary of a club, or when you take part in the community literary society's debates, that you will need to take notes. For such possibilities a training in the best way to take notes will be worth while.

#### (2) ADOPT A SYSTEM OF NOTE TAKING

When you start your college work, do not allow yourself to drift into a "hit and miss"—chiefly miss—system. If you have no clear ideas on the subject yourself, ask some of the senior students who have been "through the mill" for suggestions. Have a look at what they themselves consider their best notes of previous years. Do not hesitate even to ask your instructors for guidance. They will be glad to advise you.

Fortunately, the loose-leaf system of note books which is in common use now-a-days, facilitates the solution of the problem. It is easy to make the right kind of start with them, or to correct any false starts. Use the loose-leaf system for all your work. Use the same size book throughout, there is even some satisfaction in always using the same kind of paper. A portfolio to hold the loose sheets until such time as you wish to bind them together has been found very satisfactory. It permits one to hold together all related bulletins with the notes.

In recording a lecture, put the date and the name of the lecturer at the top of the page. If the general topic is not announced, leave a space for this, so that you may afterwards have a head-

ing which allows you to see at a glance what matter is dealt with on the page. Indent paragraphs generously. Do not crowd the page. Use drawings and diagrams as frequently as possible. Draw these on the margin, which should be of a fair width. Insert sub-headings for paragraphs where possible, and underscore them so that they may strike the eye readily. The whole aim should be to have on the page a clear cut synopsis of the instructor's lecture. No other matter dealing with another subject should be written on this same sheet. Any space unused may be left for the next lecture by the same lecturer, for writing in matter dealing with the same subject extracted from the prescribed text book or for pasting on printed excerpts taken from bulletins or papers.

When your college career is over, you should have a comprehensive agricultural library of your own making. You may be proud enough of it to have it all permanently bound into volumes that will stand some wear and tear on the shelves of your home library. You will not likely use it as much as you thought you were going to, but you will be proud of it just the same—and your children will be too. You will realize with your maturer years and your busier life that the value of your notes was chiefly in their making and not in having them.

#### (3) LEARN TO SYNOPSIS A TEXT BOOK

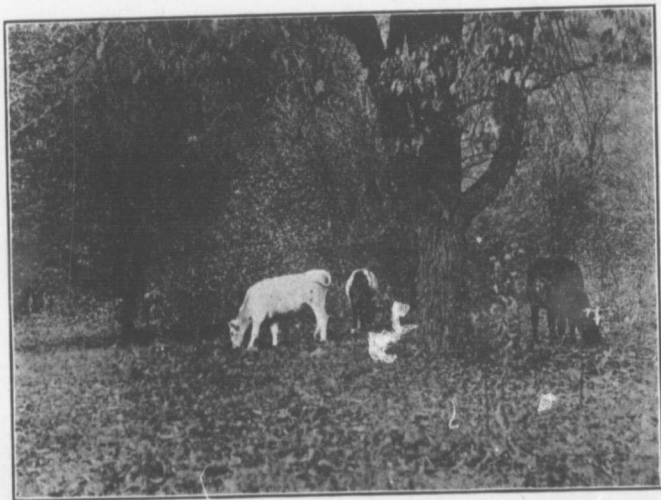
In some subjects you will not be dependent on lecturer's notes. There will be a prescribed text book, which contains all the matter for which you are held responsible. The lecturer's course will more or less closely follow the text also. This offers an excellent chance to train yourself to be a careful reader and annotator. Anticipating each

day's lecture, read the chapter that will be discussed and synopsise it. For each paragraph work out a comprehensive heading. Under this briefly tabulate the outstanding facts deserving of attention, so that by reviewing this, you could reconstruct the paragraph. If it is a book that you think you would like to keep for your library, write the synopsis on sheets cut to a size to insert. If the lecturer brings out other points not covered in your synopsis, these may be put down on the other side of the sheet. This pasted in the book and with other important things underscored in the

book, makes the texts doubly valuable to you for review or for reference.

It is a great thing to know one good book well. There is more valuable training in attaining this than in skimming through many books. This training is chiefly in the note taking.

Discipline yourself to take notes in your reading. This will help you to take the right kind of notes in your lectures or perhaps what is better, enable you to do without taking any notes at all at lectures. A student is measured, or should be by his abilities to **study** and not by his note books. But there is much virtue in making or taking good notes.



"When Autumn lays her golden wealth upon the forest floor."

## The Hampshire Down Sheep

By C. A. TYLER, Secretary of American Hampshire Sheep Association

THE ridge lands lying south of London are called the South Downs, and the sheep upon them are named for the hills upon which they feed. Reared upon the soil that furnished but scanty herbage, they were small in size, but compact in form and were noted for the excellency of their flesh. Their home was in Sussex. As the

in the earliest accounts of the sheep of the Hampshire district, that those in the eastern and northern sections of the district were more compact and symmetrical in form, with finer wool, than those in the western portions. Gradually it became apparent that each of the types mentioned had its peculiar value: the smaller, more symmetry with superior fattening qualities, while the larger were more prolific, were better mothers and had much greater hardiness of constitution. Again while these larger animals had much of the symmetry and fattening qualities of the smaller ones, they far surpassed them in early maturity and freedom from disease. There were thus clearly indicated the lines upon which the improvement must be made.



C. A. TYLER.

chalk lands extend westward into Hampshire the soil becomes deeper and more fertile affording better pasturage and heavier cultivated crops. As a result of this the sheep upon these lands were larger, coarser and stronger than the South Downs.

Through centuries of neighborhood existence the sheep along the border lines of these territories very naturally merged together. We, therefore, find,

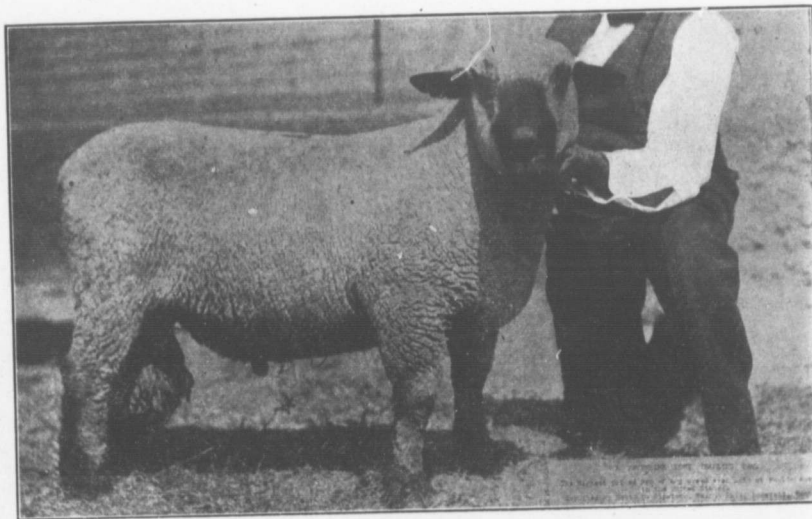
The improvement was carried on by the farmers themselves and was extended over the entire Hampshire district. The admixtures resulting from centuries of co-existence followed by the careful and painstaking selections of the many breeders, who foresaw the advantages to be gained thereby, still farther unified the blood. The course taken was, therefore, more the mingling of different strains of kindred blood than the crossing of different breeds. The Hampshire sheep then are clearly descended from an original hardy race peculiar to the country from whence they came. The strength of constitution and size have been retained and enlarged upon, and are a characteristic of the animal.

James Rawlence, an honourable ex-secretary of the English Hampshire Down Flock Book in 1858, wrote, "About the beginning of the present century, the sheep breeders of Hamp-

shire began to bestir themselves, and enterprising farmers procured rams from Sussex of the South Down breed, care being taken to select the largest, coarsest, and most vigorous and blackest faced individuals possible." In Wilkinson's "The Farming of Hampshires," I find the following: "The Hampshire Down sheep are the glory of the country as respects live stock."

John Wilson, Professor of Agricul-

ture the Hampshires, which is everywhere recognized, can be accounted for only upon the fact of the distinctly local origin of the breed. By a wise system of breeding and by skillful management, the Hampshire Down has been brought to his present state of perfection. He now illustrates what breeders of skill and intelligence can accomplish in preserving vigor of constitution and hardihood, and in adding



The \$1,600.00 Ram, owned by D. F. Detweiler, Filer, Ida.

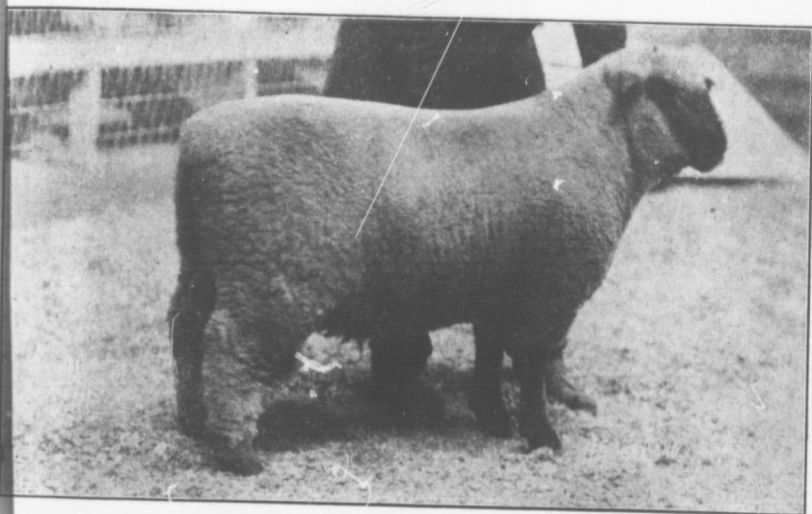
ture in the University of Edinburgh, wrote in 1855: "The rapidly increasing breed of Hampshire sheep appears to be the result of a cross or intermingling of the bloods of the pure South Down and the horned sheep of Hampshire and Wiltshire by which the hard working qualities of the former is combining with the superior size and constitution of the latter to the improvement of both." This matter is of importance, because the remarkable prepotency of

to them the desirable qualities of early maturity, disposition to lay on flesh with the fat and lean properly intermingled, and symmetry of form with a most valuable and useful fleece of wool. His head is rather large with a somewhat Roman face, neck long and usually well set on, shoulders sloping, brisket deep with abundant room for the vital organs, back straight, with a good spring of rib going around the barrel, loin broad, quarters long,

hams round and heavy, legs bony and strong, and feet large and open with a tough sole and crust. The face and legs are the blackest of any of the Down breeds. The wool is of medium length and strong fiber. It is used largely for making cheviots, tweeds and business cloths and commands the top prices everywhere. Flocks of breeding ewes average seven to ten pounds per fleece. Mature rams will weigh 300

mothers and great milkers, having udders like small cows.

Mr. Morton, late editor of the *Agricultural Gazette*, once wrote, under the caption of "The Coming Sheep," "There is no race in England or the world that can vie with the Hampshire in quick production of large sized lambs." Let any unprejudiced person attend the ram sales in Salisbury, England, in July each year, and if he



Stock Ram, owned by H. W. McLaughlin, Raphine, Va.

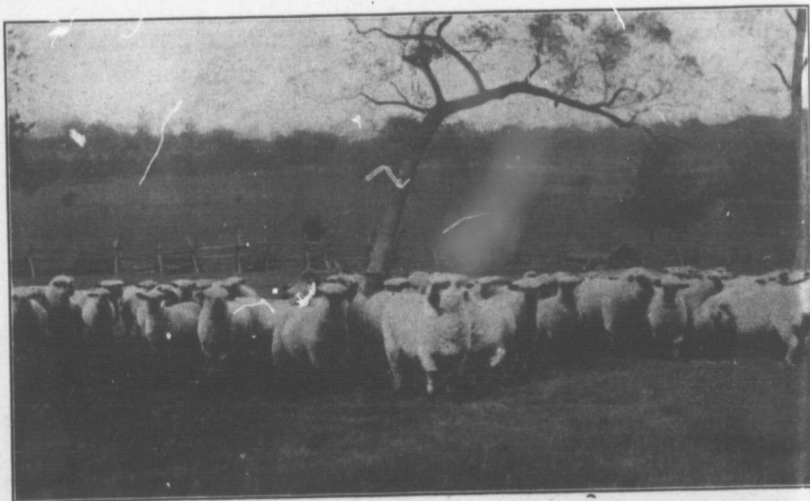
pounds or more and mature ewes 200 pounds or more. The writer has owned a flock of 40 ewes that weighed on the scales near 10,000 pounds. Ewes breed to a great age and then fatten well. Based upon their constitutional vigor, the claim seems well founded, that a Hampshire ram will serve more ewes than a ram of any other breed, except, possibly the mountain breed, which are not in evidence in this country. The ewes are very prolific, are excellent

has never before seen Hampshire lambs, he will be astonished indeed. He will there be shown **lambs that will offer him a pound weight per quarter** since the day they were born—**four pounds a day** for all the days of their life. This rapid growth is simply owing to his great constitutional vigor, thus enabling him to eat, digest and assimilate a large amount of food. No such gains can be had without the most liberal feeding possible to secure. He is the



greatest butcher's lamb that has ever existed. The quality which gives the Hampshire Down perhaps his greatest practical value to the sheep raiser at large, is his marked prepotency, viz:—the power to transmit with unerring certainty his own characteristics upon his offspring. In this he excels all others. The surpassing excellency of the Hampshire cross is well illustrated by the fact, that at the great English

needed in this country. The time is even now here, when the exclusively wool sheep can no longer be raised with a profit to the farmer. Flocks can only be improved in its mutton qualities by crossing with pure bred mutton rams and, for this purpose, the Hampshire has no equal. Each of the Down breeds has its peculiar excellencies, all are valuable, but for a combination of hardiness, of constitution,



Seven Months Old Ewe Lambs, owned by Walnut Hall Farm, Donerail, Ky.

shows, the prizes for cross bred sheep almost invariably go to those with a large admixture of Hampshire blood. Indeed, this has become so universal, that breeders of other sheep are even now clamoring for classes in which Hampshire blood shall be excluded. The value of the Hampshire cross is forcibly illustrated in the Oxford Downs, a breed, that was produced by crossing Hampshire and Cotswold blood. Blood for crossing is much

freedom from disease, ability to withstand grief, whether of exposure or shortness of feed, general useful qualities, excellence of flesh, value of fleece, strength and vigor of lambs, quick development and fitness for market, motherly qualities of ewes, docility and prepotency when crossed on other breeds or common stock, it may well be doubted whether an equal to the Hampshire can be found to-day on the face of the earth. We think not.

They have been brought to the United States in considerable numbers and found most admirably adapted to our needs. The American Hampshire Sheep Association was organized in 1889 and for a few years made seemingly but slow progress, but in later years it has gone on to the fore front by leaps and bounds until in the year 1916, the last year in which we have statistics, the demand had grown so great that more Hampshires were imported in the United States than of all other breeds combined; not only more, but more than three times as many as all others combined. What further comment is needed as to their popularity or value? Probably, no other breed of sheep on the face of the earth has made such rapid strides toward popularity during the last five years as the Hamps, and all the time, "There is a reason."

## STANDARD OF EXCELLENCE

## HEAD AND LEGS

Head—Moderately large, but not coarse; well covered with wool on forehead and cheeks.

Nostrils—Wide.

Color (head and legs)—Dark-brown or black.

Eyes—Prominent and lustrous.

Ears—Moderately long and thin, and

dark-brown or black color.

Legs—Well under outside of body, straight, with good size of bone, black.

## NECK, SHOULDERS AND CHEST

Neck—A regular taper from shoulders to head, without any hollow in front of shoulders, set high upon body.

Shoulders—Sloping, full, and not higher than the line of back and neck.

Chest—Deep and full in the heart place, with breast prominent and full.

## BODY

Back—Straight, with full spring of rib.

Loin—Wide and straight, without depression in front of hips.

Quarters—Long from hips to rumps, without sloping, and deep in thigh. Broad in hips and rump, with full hams. Inside of thighs full.

## SCALE OF POINTS

Head, size and shape, 5; ears and eyes, 3; color, 5; legs and feet, 2—.....15

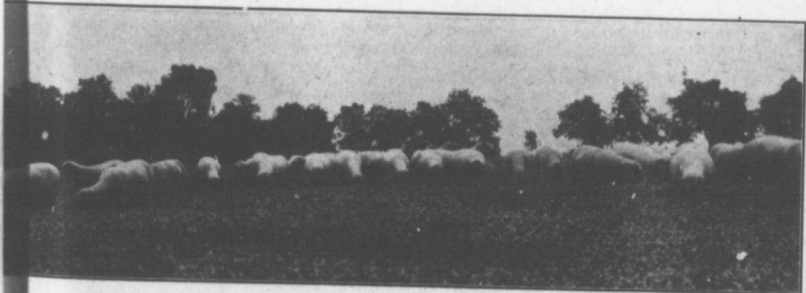
Neck, shoulders and breast—Neck, 5; shoulders, 10; chest and breast, 15—.....30

Body—Back and loin, 15; rib, 5—...20

Quarters—Length, 10; width, 10; twist, 5—.....25

Wool—Forehead and cheeks, 2; belly well covered, 3; quality, 5—.....10

Total.....100



Hampshire Yearling Rams, owned by Walnut Hall Farm, Donerail, Ky.

## Looking Back

By P. L. FANCHER, B. S. A.

I wonder how many Freshmen will read this article—Perhaps it is not worth reading!

Some of the boys will pick up the Review, look over the locals, glance over the headings and then toss it aside. Let me enquire if that is your attitude towards a college education and towards life in general. Are you going to merely glance at things in the Press, the Review and the Text Books, and assume a sleepy attitude towards what you find there? Perhaps you will read a little and find that the opinions expressed therein differ from your own. Well, what if they do! You will then go on without your own complacent opinions having been influenced in the least. What kind of an attitude are you going to assume towards the fellows in your own year, to your year organizations, towards the college organization and towards athletics? Is it going to be one of indifference on your part? If so, you will be very much like the fellow who could not swim, and upset his boat in deep water; you will be greatly in danger of missing a whole lot in life. Learn to swim, as it were, the first year you are in college.

Most of you, no doubt, are from the farm. You can do any work there is to be done on the farm, and do it well too. You can operate farm machinery. You have put in the farm crops and harvested them, and have successfully fed the farm stock. But how many of you have ever sold a load of grain, or any of the farm stock; even that calf or lamb or pig that was given to you to raise? Or, once having had it sold, ever marketed it, watched it weighed, got the check slip, gone to the

bank and got the money? Just ask your classmates about this some evening when they are in your room, and you will find that the majority of them under twenty-one years of age, have done little or none of the business of their farms. They have done every kind of farm work up until its products were ready to be turned into cash. Here, father or an older brother usually stepped in and did the business. You have learned by experience the responsibility imposed upon you by farm work and have attained a personal confidence in your ability to do it. Have you as much confidence in your business ability as you have in your ability to do farm work?

I remember one time very well indeed. I was a young fellow nearly as large as I am now. I had screened twenty bags of wheat ready for market. By the time the wheat was loaded on the wagon, and the horses hitched, father was ready to help me put on the spring seat, and ride into town with me. We drove up to the unloading platform at a mill, and I emptied the wheat into the hopper to be tested and weighed. A little two quart brass measure, mounted to act as a scale, was carefully filled, struck and weighed. After a little figuring a slip noting the weight, test and amount in dollars was handed to father, who checked it and then went to the bank to draw the money. I had done everything but the business, and should I have had to go to the bank and draw that money at that time, I would have been even more nervous about it than Stephen Leacock was, when he went to the bank to make his first deposit. I was twenty years of age, and had never

done any of the farm business, except to buy a few things in the village.

If any of you are in my class, make the business end of the farm affairs before you complete your college course. One good place to do so is on your home farm during vacations. Every boy that takes a course at the O. A. College, and goes back to the farm, or accepts a position when he is dealing with the public, is most seriously handicapped if he has had little or no actual experience in the business end of the farm. The lack of business experience among the young men on the farms is appalling.

How about those year committees of yours? Are you on one? If not, why not? Are you getting out on the football field and tackling the dummy as though you meant it? Are you training to help your year on field day? Athletics and the various organizations within the year and in the various societies of the college, offer you chances to do something for yourself as well as for your year. If you look into the records of the large number of boys who took an active part in student affairs, you will find that a great many of them gained enough experience there to help them a great deal in their work after leaving the College. Assuming responsibilities among your fellows, gives you confidence in your own abilities, and I want to say right here, that the more your self confidence is developed, the easier will you find your work after leaving college. All this tends to fit you for leadership. Such leadership developed among your fellows, is the best kind with which to face the world of affairs after your graduation.

Many will have come to the College with fears and tremblings, afraid to speak to the professors and lecturers; afraid to talk with the senior men; some of you afraid to even shout a cheery

good morning to fellows on your own flat. Forget those quaking fears as soon as possible. Learn to know and to speak to every member of the staff, and to every student at the College. Everyone at the College welcomes its freshmen most heartily, and none more than President Creelman,—unless it is the members of the Sophomore Class.

One freshman told me at the close of his first year, that he knew boys in his year, that seldom spoke to any of their classmates. They would quietly slip past any one whom they saw in the hall, and into their rooms. They took no part in any of the College or year affairs, unless compelled to do it, and so went home without having been at College, so to speak. Form friendships in your first year, and enter discussions in your rooms in the evenings—Expand! Get the other fellows' views and measure them with your own.

Then, too, remember that you are a student at a college, and something more than common is expected of you. Always use good English in your letters home as well as in your daily conversation. In this connection too, personal appearance counts for much. See that your laundry is always reasonably clean and neat; and that your suit is pressed and trim. It will give you dignity. Your classmen will look up to you for it, and the girls at Macdonald Hall, will—, well!—, yes they will if you look and act the part. When you go into the dining hall, show it the dignity that it well deserves. Always wait on the table when it comes your turn, and insist on others doing the same.

One thing more: Always be a gentleman in appearance, in action and in conversation, and you will always command a gentleman's respect from others.

## *Harvesting Niagara Peninsula Fruit*

By T. H. JONES, '19

LET us follow the fruit grower of this district for one day as he manages his farm and directs his employees in order to give the consumer choice fresh fruits, prevent undue waste, and secure a profitable price for his product.

Rising at five-thirty a.m.—often earlier—he feeds his stock and poultry and then walks or drives through his berry patches, orchards or vineyards, as the season warrants, keeping a sharp look out for fruits suitable to pick that particular day. Then, hurriedly eating his breakfast he directs his employes what fruit to pick with a view to harvest the most perishable commodity first and then the highest priced ones, because baskets cost the grower seven cents each now.

During the morning several "buyers" call on the owner. Each one endeavors to purchase his fruit by offering "more than the other fellow," or perhaps reminding the grower that they are both members of the same lodge or church. However, the grower, as a rule, who sells from day to day or contracts with the same "buyer" from year to year, makes more money than does the man who is continuously changing, because usually the "buyer" can afford to offer him more for the fruit than the ever changing man, as the "buyer" takes all this grower's crop and can rely on his patronage and packages.

One of the male employees, though sometimes a National Service girl, "gathers up" the fruit by means of a horse and dray from the orchard and conveys it into a central packing house. Here the National Service girls and quite often the grower's wife and

daughters grade and sort the fruits, if the kind and variety demands, such as peaches, apples, tomatoes and pears. As they grade the different varieties into their respective "ones", "twos", "threes," they pack them into either the eleven or six quart baskets, packages used almost exclusively in this "Garden of Canada." They then "cover" the baskets by placing four, but preferably six hooks under the rim, and nailing them into the corners and sides of the "leno cover." When this is done, they put it into its respective "pile" ready for shipment.

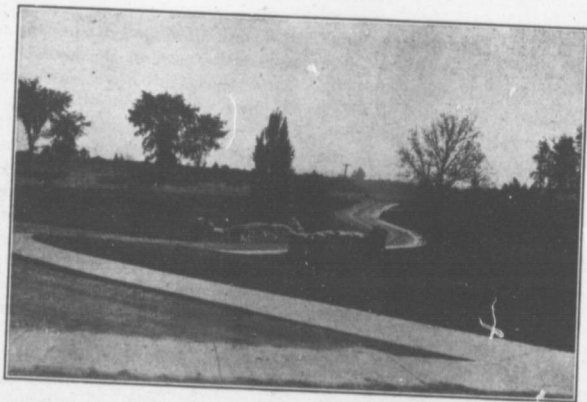
Before shipment, the respective number of the grower and the name of the buyer must be stamped on each basket, according to the new government regulations issued this season. Such an order on the part of the government is a step in the right direction to protect the consumer, the honest packer and to guard against the untidy, dishonest grower. The latter will pack his fruit correctly as a rule when he knows that the law can discover who ships fruit packed in an unsatisfactory manner. This act also requires that no immature fruit be shipped. If any consumer buys a basket of fruit which is not packed, or contains fruit contrary to these regulations he has the privilege of notifying the government officials who can ascertain the grower's name by means of this number and prosecute him or warn him against packing such fruit.

The teamster or the chauffeur, as the case may be, conveys the fruit to the station. Here the "buyer" gives a receipt for the fruit with quantity and price marked on it, or the express agent his receipt if the grower is shipping

for himself. The teamster then returns and gathers up the fruit which has been picked after train time of that day for shipment the next morning. After tea very often in the plum, peach and grape seasons, everyone on the farm works two or three hours grading and packing, so that all the crop may be harvested before decay overtakes it.

Allow me here to state, that the fruit growers in this district, are very much pleased with the efforts of the National Service girls in assisting

to harvest the fruit crop. Their willingness to hoe, pick or pack any kind of fruit, or work in the canning factories stemming strawberries, and their efficiency at these operations make them most desirable employees during the present shortage of labor. They certainly are to be commended for voluntarily sacrificing their summer holidays,—that yachting or canoe trip, that visit to the sea shore—and the comforts of home life for the sake of assisting to harvest the fruit of this peninsula.



"Entrance to Horticultural Experimental Station at Vineland"

## The Awakening

C. F. MACKENZIE, '19

"JACK Maclin certainly has a fine farm there; 'pears to me though as if he ought to give a bit of his attention to his house. Some of these days he'll be havin' it tumble down on his head if he ain't careful. There's his woman out there choppin' wood. It's a darn shame to see her workin' away like a nigger, year after year, while Jack has every imaginable convenience chucked away in those big barns and stables. Seems as if he thinks them critters of his should be better cared for than himself and Mary.

"Twenty years ago there wasn't a prettier girl in the hull Township than Mary. Then she went and married Jack, and from then on she and Jack have just worked like as if there wasn't nuthin' else in the world. Jack's done mighty good I'll admit. There ain't no finer farm around here—everything around the barn and stables right up to date. Why he pulls down most of the prizes at the fairs in the hull darn county. But Lordy! That house of his ain't got a bush or flower anywheres near it. The only convenient thing he's got for Mary is a cistern in the back shed, and Jennet Thompson says that the hanged thing ain't workin' nor hasn't been for more 'n five years.

"Ain't no mail for him to-day, only Doctor Chase's Almanac. Jack says he don't believe in wasting time reading what city folks have to say anyway." Tommy Cole had been half soliloquising and half addressing his horses as he oozed along the muddy country road past the Maclin farm.

Two days later Tommy was driving along the road. Jennet Thompson, known on account of her faculty for having the latest bit of gossip, stood

waiting by her letter-box. "Howdy Jennet, looks as though you were in a hurry to see me. I always feel better of a chat with you," says Tommy, winking at the nigh horse who had looked around enquiringly expecting Tommy to move on.

"None of your nonsense Tommy Cole. I'm just feeling terrible to-day; ye haven't heerd have ye?" continued Jennet, jealously hoping in her heart that she was going to have the pleasure of unburdening her latest news to such an attentive listener as Tommy always proved to be.

"Heard what?" gasped Tommy pushing his cap a little higher to uncover both ears for what was coming.

"Well now, just to think you haven't heerd the awful news. Why it's about Jack Maclin's woman, Mary. Last night, after supper Jack had gone out to have his smoke on the back steps. It seems Mary had asked him to do some fixing around the house, but of course, Jack ain't never wasted money on unnecessary things because, as he says, women folks ain't got no work anyway. Mary felt terribly put out about it. The next thing Jack heerd, was an awful racket of busting dishes, and knives and forks flying around the kitchen. Jack thought the Germans was coming with them there flying machines, but when he went in he found that Mary had smashed everything to pieces, and the first thing he knew Mary had gone into fits. He's got a nurse there now, and the doctor says as how Mary is suffering from nervous postulations. He says she'll get better, if no other computations set in though."

"Well, by Gol, ain't that a holy

terror. Has the boys heard of it yet?"

"I ain't sure, but I'm going over now to see how they're getting on. I was over there last night and of course Jack knows I ain't one of the kind that carries things. I'll see you to-morrow."

\* \* \* \*

"By Gum, I reckon as how Bill Young 'll set up and take notice when he gets an earful of them there news," Tommy kept chirruping to his team and fairly pushing on the lines till he pulled up in front of the blacksmith shop with a jerk.

"Well, Tommy, how's the roads along your route?" enquired Bill, as he wiped his grimy face and removed his specs. "Any new news?" wiping his specs on a dry part of his shirt.

"Oh, nuthin' particlar, 'ceptin' about Jack Maclin's woman. Y' ain't heerd I spouse?"

"No! Go on," urged Bill shifting his cud of 'stag' to the left jaw.

"Well, it's like this, so I hear, she's gone clean dippy. Doctor says as how she won't last more'n a couple of days at most. Jennet Thompson says the doctor told her all about it last night. Seems she's suffering from postulations of the nervous system. May be attacked by severe computations any moment. Jack's got a couple of nurses and last night they had several doctors insulting about the case."

"Jerusalem! I always said Jack was too durn mean to have a woman like Mary. His two boys left home, because he wouldn't give them any money, but expected them to work sixteen hours a day. Mighty fine lads they were too. Mary was nigh heart-broken when they left last year. Jack would find them better workers than that pesky furriner he has hired now, that talks like a fish and keeps waving his arms around like a clothes-reel. I do feel mighty sorry for Mary. If she

pulls through though, I reckon as maybe Jack 'll cut out putting so many new fan-dangles in the stable and do some tinkering up around his house."

"Let me hear if you get any more news about it, Tommy," he continued anxiously as the mail carrier drove on to catch the afternoon mail.

\* \* \* \*

"Any mail to-day, Dick," enquired Bob Maclin as his younger brother came into the room they shared in the city.

"Yes, Bob, I got a letter from Dad. Mother is very ill, but he says the doctor thinks she is over the worst and will be able to sit up in a few days. Dad seems mighty well broken up over it. He says he has been too selfish all along, and realizes that Mother has had to put up too hard a struggle, and without any encouragement. It's too bad, things have gone so far. Poor Mother! Let's send her some flowers; Mother always was so fond of flowers, but she could never raise any. Dad seems to think the cows and pigs needed the house for shade."

"I'll tell you, Bob, I'm going back to the farm. Dad seems to have wakened up, and he says he's going to put some improvements on the house and surroundings. When Dad says a thing he means it, and I believe he'll go the limit."

"I'm game," replied Bob. "To tell the truth, I'm almost fed up on this city life. I haven't found the shop any picnic. The Inspector insists on me putting the shells back into the machine three or four times before he'll pass them."

"I guess you feel about the same a I do," responded Dick dejectedly. "The boss gave me a calling down to-day, because I looked peeved, after pulling down everything in the store for a lady who came in. She just sniffed



at everything, and then remarked, "Oh, you haven't anything suitable. I just wished to look around anyway." About then I wished I was back on the farm hoeing corn."

\* \* \* \*

Tommy Cole kept straining his eyes as he passed the Maclin home a couple of weeks later. "Looks to me as if Jack's got quite a gang working around his house to-day," he observed to his horses. "Here's Jennet Thompson. I'll bet she's got a bit of news for me. Howdy Jennet! Ain't seen you for a dog's age. Heard anything more about Jack's woman?"

"Oh, yes, Tommy. Mary has gone home for a visit. She don't expect to be back before fall, and by that time the doctor says she'll be fully recovered. Y' ought to see Jack Maclin; he's working like mad. And say! his two boys came home from the city. I heerd as how they intend to stay home now. They've pulled the old house to pieces, got a gang of carpenters there, regenerating the whole works. Jack was saying he was going to have water running all over the house just like the city people have it. He says, he intends to put in an anaesthetic tank too."

"Well now, he wants to be good and careful that the blame tank don't blow up on him. These new fandangles get my nanny. I'm leery of them combustibles," mused Tommy.

"He's putting in a lot of bushes and flowers too," continued Jennet. "I reckon he's wakened up all right. He's going to buy a car, I heerd the boys talking about it."

"Well, that's interestin', but I must be getting on. So long, Jennet. Giddap!"

\* \* \* \*

"If that don't beat the Dutch," thought Tommy as he drove along. "An antiseptic tank! Well, I'll be cow-kicked! Who ever heard of such a thing? I never thought Jack could be pried loose from any of his money for those kind of things."

"Hey, there Tommy!" shouted Bill Young, "Come on in. I thought them horses of yours had run away; I ain't seen you for such a long time. Them horses of yours need looking after. Why, you'll soon have to tie knots on their tails, or they'll be slipping through their collars."

"T ain't from fast driving anyway," replied Tommy. "They're just naturally tired from lugging around them shoes you spiked on to them. What we need here is a real blacksmith, not a boilermaker."

Bill chuckled as he enquired, "Heard anything more about the Maclin affair?"

"Oh, yes, Mary's gone home for couple of months. By fall the doctor reckons she'll have her health back again. The boys are home now, and old Jack's got the hull blamed house torn to slivers. He's putting in all kinds of contraptions. Going to have the house as up-to-date as the barn and stables. He's ordered a car too, with an antiseptic tank attached to it. Half the mail I had was for him to-day."

"Jack ain't sick is he?" ventured Bill anxiously.

"Nope," Jennet Thompson says, he's wearing a smile as big as the moon these days." Tommy drove away.

Bill walked slowly toward the shop and removed his leather apron, muttering to himself, "Well, I'll be Hornswoggled! I reckon I'll go in and tell the old woman all them there news."

## Get a Good Crop of Strawberries

By AUSTIN RICHARDSON, O. A. C. Horticulture Department

THE late summer is the time to prepare a strawberry bed so as to produce a heavy crop next year. One of the first things to do is, cut off all the runners. If runners for making a bed next spring, or for sale, are needed, do not spoil the chances of a heavy yield for next season by letting them use up plant food, and weaken the vigor of the old plant in the present bed, but take up what are required and plant them in nursery beds. A convenient sized bed is about 4 feet to 6 feet wide, and any length. Plant them in this bed six inches apart each way as soon as the runners are ready. In this position they can be easily protected during the winter. They will also be handy to plant quickly in the spring or take up quickly to sell. If a layer of manure is put about 2 inches below the surface, the roots will cling to this and in the spring they will not suffer at all from moving. It is not absolutely necessary to do this, but it is much better and is not difficult. The next thing is to cut down the tops of the old plants so that the crowns can get sun and air. The blossom of the strawberry forms in the crown of the strawberry plant for the next year's crop, at this season of the year, so that it is important to encourage it to form a large "set" of blossoms. If, as is a common error, the

strawberry plot is left in neglect after the strawberries are picked, the plant will be too feeble to produce a good crown that will form a large lot of blossom stems. If on the other hand every encouragement is given to the plant to throw all its energy into the production of a vigorous crown by good cultivation, freedom from runners and old leaf and the help of fertilizing material, there is more likelihood of there being a large yield. The sooner this good attention is given after the fruit is picked the better: the longer it is delayed, the less likely a big crop for next season. It is a strange thing that the majority of strawberry patches are left in neglect at the most important time for the making of a big crop. In most cases the patch is left in neglect until the next season. The harm that has been done cannot be remedied then, but good cultivation then will make the best of a wrong treatment. The time to prepare for a heavy yield is in the late summer and early fall. August-September, is the best time.

When the runners are planted all the leaves should be trimmed off leaving of course a part of the stem.

If a strawberry patch is kept free of runners and kept clean after the crop is gathered every year, it will last four or five years.

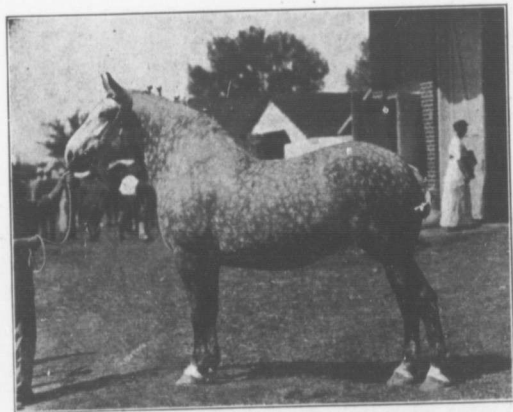
## The Percheron Horse

By WAYNE DINSMORE, Secretary The Percheron Society of America

**H**ORSES exist to do work. They are bred for power, or speed, or for a reasonable combination of the two. Outside of the few kept for racing purposes, and for saddle or cavalry, the horses now in existence are useful in proportion to their power in the collar, adaptability to the work required, and their endurance and docility. These

cal standpoint, more effective motors than any tractor engines yet devised, when all that horses do is taken into consideration. Horses are the chief source of farm power and will so continue, and we have therefore to consider what type of horse is best suited to farm use.

The man who is operating a 200 acre



"HERMINE," Grand Champion Mare, Iowa State Fair, 1914.  
Owned by Harry Early, Liscombe, Iowa.

are the essentials, whether the horses are used on farms, in cities, or on battlefields. Farms and ranches are the greatest users of power in units of horses and mules.

Horses are especially well adapted to farm work, because suited to irregular topography, uneven soil conditions in respect to moisture, and because their fuel is raised on the farm in the form of hay, straw, fodder and grain. Furthermore, horses are self-perpetuating and self-repairing, and are, from a mechani-

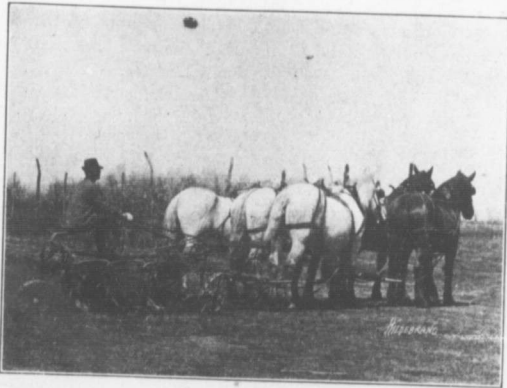
farm without hired help, except during May, June, July and August, has very definite ideas about the kind of horses he wants; and the man with 300 or 400 acres, who keeps one or two hired men the year round is equally set in his views. My acquaintanceship with thousands of good farmers in the United States and Canada, and personal investigation in the field at every season and in every kind of farm work, has satisfied me that these men, who make up the vast majority of our good farmers in

mixed farming areas, have the same ideas regarding horses needed on the farm, and those ideas are substantially as follows:

First and foremost, the horses must possess weight, strength and activity, combined with endurance and docility. The size and strength of the horses used on our best farms has been steadily increasing. Men who formerly thought 15.3 hands' height and 1,200 pounds weight, enough, now seek to have their horses average 16.2 hands in height,

are more effective, when all phases of farm work are balanced up. They have also the advantage of selling more promptly, and at higher prices than those with less size and strength.

The size and strength wanted in farm horses must be coupled, however, with activity and docility. Horses that walk out freely with a load, and that will average 3 miles per hour on manure spreaders, mowers or wagons, and at least  $2\frac{1}{2}$  miles per hour on plows, do more work per day than slower, sluggish



Percheron Mares on three bottom gang plow, on farm of T. C. Nelson, Blandinsville, Ill.  
40 Acres Ploughed in  $5\frac{1}{2}$  days with this outfit.

and 1,600 pounds in weight, in working condition; and they will tell you, in answer to questions, that these larger horses are stronger, do more work, and do it better than the ones they formerly thought were big enough. The increase still continues, for many of the best farmers in Illinois, Iowa, and North-western Canada, are now using many horses that stand 17 hands and weigh 1,850 pounds or 1,900 pounds in working flesh. Their reason, drawn from practical experience, is, that if other qualities are equal, the larger horses

horses. And so farmers seek for active, good walking horses that turn smartly, but that are withal kindly in temper and docile in work.

Practical farmers put more emphasis on this than most people think. Horses that fret and prance, wear themselves down, require more feed, and do not possess the endurance of docile horses. Our teams are rapidly developing into four, six, and eight horse teams per man in all heavy farm operations, and in these large teams one or two irritable, ill-tempered horses that are biting or

kicking at the others, or fidgeting around when the driver is adjusting collars, will cause more grief to the driver and more damage to the work of the six or eight as a whole, than they are worth. Furthermore, such horses queer the whole hitch in that they make it unsafe for boys in their teens, who are naturally a bit careless.

From a practical farmer's standpoint, therefore, docility and endurance take almost equal rank with size, strength and activity.

The Percheron horse, — and his grades, half bloods or three-quarters breds — is, therefore a farmer's ideal. Typical Percheron stallions stand 17 to 17.2 hands and weigh from 1,900 to 2,200 pounds in breeding flesh: mares 16.1 to 17 hands, with weight from 1,600 to 2,000 pounds. They have size enough and are the most active of all draft breeds, either at the halter, in harness, or turned loose in corrals, as any experienced horseman will testify: and they possess greater endurance under unfavorable conditions than any other breed of draft horses, as any number of leading British army officers have already borne witness. Their freedom from feather is combined with very clean quality of bone, so that grease or leg ailments are practically unknown to Percherons, and the task of grooming and caring for them is greatly simplified, a most important factor on a farm where a man drives an 8 horse team, cares for them, and takes care of a good deal of other live stock in addition. The old Scotch teamster drives but two horses, and has nothing to do after his day's work, but to groom them: the American farmer must do a multitude of chores, besides caring for 4, 6 or 8 horses instead of 2. I may say in passing that 6 and 8 horse teams will be as common in the corn belt next spring as pairs are in Ontario, for our

farmers have found they can drive 6 or 8 as easily as 2, and they treble or quadruple the work done per day per man. Here the docility of the Percheron gives him a great advantage. Percheron horses, — or their grades, whether half bloods or better, — are, with very rare exceptions, more even tempered, less quarrelsome, and more obedient to the word or line than any others. The strongest champions of other breeds will admit this, and it is this, combined with their other good qualities, that has so endeared them to the hearts of American farmers that Percherons now constitute two-thirds of all the pure bred draft horses in the United States.

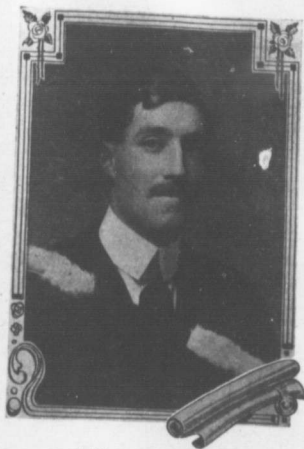
The exhaustive investigations of Mr. Alvin H. Sanders, Editor of "A History of the Percheron Horse," show conclusively that the breed is one of the oldest and purest known; and it is purity that gives Percherons extreme prepotency. No other breed of draft horses crosses so satisfactorily on mares of all sizes, types and blood lines. So strong is Percheron blood, that it dominates over even the Thoroughbred running horse in color, size and general conformation, as the writer personally knows from a critical study of some such crosses. Whether crossed with large or small mares, the colts by a Percheron sire will be good useful horses, taking after the sire in color, type and temperament; and when measured by the final test—the selling price the whole band will bring at maturity on the open market—the colts by Percheron sires, out of mixed band of mares, excel all others. This is why American farmers, after half a century of trial of all breeds, prefer Percherons. The horses that have won such an overwhelming preference in the affections of practical farmers are safe for other men to carry on.

## The Economics of Egg Production

E. W. WESTON, B. S. A.

EDITOR'S NOTE:—This article, which is a general survey of Poultry Economics has been prepared by Mr. Weston in such a way that it is a complete reference work for senior students of poultry culture. Following is a key to the references which form a most essential part of this summary.

- (O) O. A. C. Bulletin, No. 247.  
 (W) Warren's Farm Management.  
 (L) Lippincott's Poultry Production.



E. W. WESTON, B.S.A.

**E**GGs are a very important human food. They are unique, highly digestible, very attractive and require scarcely any preparation for consumption. Production is increasing, but the demand is increasing even faster, (L-21).

Although the poultry industry, especially egg production, is a mammoth business, 98 per cent of our eggs are produced by small farm flocks, (L-19).

This is due to their high perishability, causing difficulties in transportation, (W-66, 67, 68). Also the amount of disease, expense and skill required rise rapidly as the size of the flock increases, (W-204). **Chickens won't stand being crowded.** This puts intensive egg production in the same position to farm flocks as greenhouses are to farming, (L-31) with the result that a large plant, in successful operation over ten years will be found to have special production and market advantages, (L-31). Still, judging from Japan, it would be safe to double the amount of poultry kept in this country as a whole, (L-47). Professor J. M. Gowell summed it up thus: "Poultry husbandry is a legitimate agricultural industry. It occupies a special place in agriculture and will never displace other work except on limited areas," (L-39).

So much for egg production as a whole. In regard to why there is a profit for one flock and a loss for a similar one, the following gives the writer's conception of the explanation:

There are three essential factors, all of which have a bearing on the profit made. They are as follows: (1) The personal ability and fitness of the individuals who are doing the work. (2) The conditions under which the birds are raised and kept and (3) their breeding. Naturally, the first cannot help but mingle with the other two, but, no matter how good any two factors are the third will limit the profits made.

The personal factor can again be divided into two. (1) Ability as a poultryman and (2) ability as a business man.

As a poultryman one must know chickens. He must be able to judge

the breeders, hatch, raise and pick the pullets for his layers, take care of, fatten or otherwise prepare the surplus stock for market. In short, he must know the art of poultry keeping.

As a business man he must have foresight. He must be able to plan both work and business and have the inborn talent that will enable him to work out his plan.

This is needed in order to plan things, so that the weekly outgo is covered by the weekly income. In short, to make the business a going concern, no mean attainment. This means planning to avoid damp, overcrowded, dirty pens, draughty quarters and flocks which are not uniform in age, size and activity, and the nice calculation of hatching the pullets so that the end of their first egg cycle comes in cold weather in order to avoid an untimely moult, (O-10).

Many other things must be planned, in fact a calendar giving the work a year ahead might help a lot. Concrete instances of the use of this foresight in planning will drive the point home. The time of year a hen lays her eggs may make the difference between profit and loss (O-15). Again, in forcing for high production, the high cost of renewal may offset the profits, owing to the loss of vigor in chicks (O-8-11).

The second factor is environment and attention. It should not cost over 10 to 20 cents a year to house a hen (W-68). The cheapest ration should be aimed at, providing it is palatable, is narrow (1.4), contains green feed, has two or more vegetable proteins and also animal protein, and contains nothing which will spoil the flavour or appearance of the eggs. Also a hen must have two parts whole to one part ground grain for heavy production. Here is where feeding standards are valuable, and the Pennsylvania Station has worked these out. General purpose

hens eat from 80 to 90 pounds of grain per year, while Leghorns eat 16 to 20 per cent less (O-11 gives a lot on this). In general 100 eggs should pay for food consumed, allowing 30 cents for labour and 10 cents for depreciation. Large hens eat more than small hens and heavy layers more than non-layers. As for renewal, Purdue University Agricultural Station Bulletin 196 (8) gives for Leghorns, 100 eggs set should produce nearly 22 pullets, or for 100 pullets 457 eggs should be set. Leghorns are judged to be the best hatchers. (1916 cost 45 to 50 cents per pullet).

Unfortunately, the work of a poultry plant tends to pile up in the spring at exactly the time farm work is most important (W-121). Seed time and harvest are one in poultry keeping. Therefore, a plant will not fit in where large spring crops are grown unless women do the work.

One attendant looking after hens alone should be able to care for upwards of 1,500. As a hen matures she should commence to lay, and it is the attendant's business to keep her laying, for when a bird stops she is hard to start. In the country, as a rule, hens are too thin rather than too fat to lay, because an egg contains considerable fat and the temperature of a hen is high (O-10).

The poultryman must study his markets both for buying supplies and selling produce. He must keep "tab" on his business. Other industries have found that accounts are the only sure way of doing this. In fact, weekly accounts in a specialized business have a good deal to do with success or failure, weekly, because **often a yearly statement is a post mortem rather than a diagnosis**, as far as leaks and losses go (O-15). He must study these accounts and those of others. For instance, in the single item of depreciation, the

answer as to whether to sell them yearly or keep them another year or more, may be found when the price of feed, pullets, hens, probable production, etc., are known. (W-235). Also, where the egg production goes below 15 per cent in the winter months there is a very little profit. Therefore, weekly accounts are very important in a large plant.

To make a specialized egg plant a success, one must remember there are only two ways to increase profits (1) increase the selling price or (2) decrease the production costs. Also, he is producing so as to deliver at the consumer's market where he competes against the cheap producing farm flocks (W-204). Every little bit helps. Therefore, as the cost of renewal is one of the egg producers' bugbears, the old hens and surplus stock should bring as much as possible. This would mean fattening or preparing them for market and not forgetting this market when picking the breeders (O-16). Finally, whether a large plant fails or succeeds depends almost entirely upon efficiency (O-2).

The third factor, breeding, always important and essential economically, is even more so now. This is so in two ways:—(1) As it effects the cost of renewal, (a) the number of eggs it takes to get a chick (fertility, living and hatching power), (b) rapidity of growth to marketable size (2 pounds), (c) mortality. (2) As it effects the producing power of the flock.

Under present conditions the life or death of egg-producing depends on having hens which lay over 120 eggs a year. Now there is only one way to get these, that is to breed them. The best management and the most perfect environment will not make a hen lay if she is not bred to do it.

Supposing trap-nesting was practical for the ordinary producer, it would not

enable him to breed 200 egg hens. The ability to lay over 200 eggs is proving to be sex linked, the hen hands it down to her sons only, and no matter how good she is, her daughters are not necessarily so. However, there is one class (No. 1) of these sons which, when mated with all hens, will produce daughters which will be able to produce over 200 eggs. Naturally, the problem is to get this particular class of rooster.

There is one little proviso; the hen, in addition to having the ability to lay the eggs, must be strong enough to digest the food and stand the strain on her vitality. This is all that prevents more than one egg a day. The oviduct for one thing simply cannot reach up, get an ovum developed and deliver oftener than once in 24 hours. This is a hint in trap-nesting. If a hen commences to close up, not keeping 24 hours between each egg, the attendant had better take means to slow her up.

Getting complicated? No, in comparison with the real breeding problem it is perfectly simple.

No matter how faithfully one follows information on breeding, nor how accurate this is, there are all the accidents and diseases which may spoil the chicken itself or its record, from a sulky coal stove to an unreliable leg band. Moreover, the chicken is old before the test is over (3 or 4 years), which just multiplies the risk by two, then they have nearly outlived their usefulness.

Again, there is the other trouble, a hen can only have about three pullets tested in a year (far too few for accuracy), without counting all other risks. This is because, to have environment right all eggs must be hatched about the end of March. This means that ordinarily the hen will have around 20 eggs in the hatch. Ten will not



hatch, five will die and  $2\frac{1}{2}$  will be roosters leaving  $2\frac{1}{2}$  pullets, so there you are.

Again, a tremendous number of chickens are required, and for testing and breeding, must be kept in very small flocks. There are nine classes of roosters and six classes of hens and all their combination to be worked with. Also, let it be noted, nothing is being said about type, markings, etc., etc.

Records of each and every one of these chickens must be kept and accurately kept, so that simply trapping is child's play and costs nothing beside this. Also, as will be seen from the inserted paragraphs on the breeding problem itself, it requires trained and able scientific workers to carry this sort of thing on.

For this reason, the writer's notion of the economic breeding problem is for the commercial egg producers to buy high producing males, mating these with their best hens, and it is the government's job to work out the problem of supplying these. Surely, no private concern could afford the expense of paying for a class of rooster, which is already 2 to 4 years old, even if the equipment were available. The government, which will reap every profit accruing from a thriving poultry industry, however, will be repaid over and over again.

As for the theory of the problem, Dr. Pearl, of Maine, is the one who has the credit of really putting it on a scientific basis. In his first bulletin he came to the conclusion that daughters of 200-egg hens were less likely to lay 200 eggs than those of poorer hens, but that the ability of hens to lay over 200 eggs must be inherited and could be measured by capacity for ovulation (laying).

He more or less solves the problem (theoretically) in Bulletin 205. Here he shows that fecundity can be meas-

ured by the production in the winter months of November, December, January and February, also that the increase above 200 eggs comes from the addition of two extra laying cycles, the one in winter and the other in August and September, to the normal reproduction cycle. He takes the rather arbitrary figure of 0 eggs, under 30, and over 30 eggs laid in the winter cycle for the heavier breeds and substitutes 50 in the summer cycle for the Mediterranean breeds.

The factors involved are:—

1. Anatomical factor, F present or f absent.
2. First production factor which will enable a hen to lay over 30 eggs.  $L_1$  present,  $L_1$  absent, in the winter period.
3. Second production factor which will make a hen lay over or under 30 eggs in the winter period  $L_2$  present,  $L_2$  absent.

It requires of course F and in addition  $L_1$  and  $L_2$  must both be present if the hen will lay over 30 eggs in the winter.

If F and either  $L_1$  or  $L_2$  (Note: can only be  $F L_1 L_2$  f  $L_1 L_2$ ) are present alone or in double doses the hen will lay under 30 eggs, and if both are absent will lay no eggs in the winter.

To further complicate the problem,  $L_2$  is sex linked, which means that although we may get a rooster homozygous to  $L_1 L_2$  we never can get a hen, as she will throw only  $L_1$  carrying gametes to her female progeny.

In table 5 there are 9 classes of roosters and 6 classes of hens, being all the mathematical combinations possible,  $L_2$  being sex linked. Dr. Pearl had a strain of Cornish games which are all  $L_1$  or under 30 eggs and by using Barred Rocks worked out these tables.

He further worked out table 9

mathematically, so that if he knew the kind of daughters a certain mating gave he could come pretty near telling what gametes the parents produced. The records show 2 f  $L_1 L_2$ , 1 f  $L_1 L_2$   $l_2$  zero. The zero is suspected to be an accident, then looking in the table we find that a class 4 male and class 4 hen will give that supposed zero to be a f  $L_1 L_2$  which did not develop.

As for the practical side of it, these tables give a scientific basis for starting to produce roosters belonging to class 1, which will give daughters laying over 200 eggs in a year. When results are obtained one has some real explanation for them and then can go ahead.

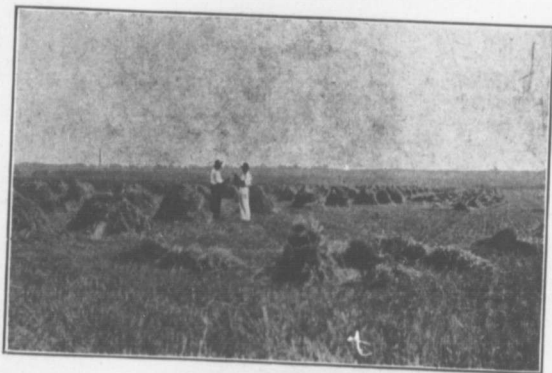
For instance, with proper equipment it is possible to isolate all classes. It is all right to mate a class 1 male with a class 2 hen, and you should have the class 1 roosters. Then a class 1 male with a class 2 hen will give all No. 1 roosters and once got, this would be a class of high producers. However, a supply of 7 and 3 males would be of tremendous value at present, and they are much easier to get. Of course,

theory and practice are different things.

The breeding problem is the real problem of economics. The art of raising, feeding, etc., is well advanced, the business end likewise. Then the only place for radical improvement is breeding, and there is certainly room there.

In conclusion, the cost of production to-day is the key-note to the economics of egg production. While feeds are soaring up and up, and wheat, one of the best poultry feeds, is likely to be prohibited as a poultry food altogether, the buying public say: "No, you cannot raise the price of eggs, we will not pay more." Unfortunately, for the producer and for the country, eggs are something that people do not think of as a necessity and while they would not go without their meat and potatoes no matter how high the price, they will go without eggs. It is a fact that they use very poor judgment, but they do it.

So it is up to the egg producer to be efficient and to **breed, breed, breed, feed and weed**, as never before.



"O CANADA"

# THE O.A.C. REVIEW

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W. C. HOPPER, '20, *College Life.*

D. O. MACDONALD, '21, *Locals.*

M. C. JAMIESON, '21, *Artist.*

M. BARBARA SMITH, '19, *Macdonald.*

## EDITORIAL

### NEW PROFESSOR OF APICULTURE.

The appointment of Doctor Burton N. Gates, as Professor of Apiculture at O. A. College, is most gratifying to students interested in the study of bees, and to all progressive beekeepers throughout Ontario.

Since the departure of Mr. Morley Pettit, who gave up his position last fall to engage in commercial beekeeping, no apiarist had been available, and considerable concern was felt lest that department should decline. Now, however, we have prospects of a splendid future.

Dr. Gates is a graduate of Clark University, having received the degrees of B. A. in 1905, M. A. in 1906, and Ph.D. in 1909. He began lecturing in Apiculture in the State Agricultural College at Amherst, Massachusetts, in the spring of 1906 and became Associate



DR. BURTON N. GATES

Professor of Apiculture in 1910. In that year, when the apiary inspection work was started under the auspices of the Board of Agriculture, he was appointed State Inspector and has since had full supervision of this work.

Ontario will provide a large and busy field for the energies of our new apiarist and we feel that we have a man equal to all emergencies. The beekeepers' problems here are many, but perhaps none are more urgent than the combatting of the bee diseases that are plaguing us. It is our hope that a strong hand will be exercised in the prosecution of apiary inspection in Ontario.

The Staff and Students of the O.A.C. join with the Review in extending to Doctor Gates a hearty welcome to our College.

#### THE ROAD TO THE HEIGHTS

No more jolting or swaying as you travel over the road to the College, whether you come by auto or street car, for the road has been re-made. From the subway under the Grand Trunk Railway at the junction of Waterloo Avenue and Gordon Street, to the bridge over the Speed River at Johnson's boat-house, we now have a creditable asphalt highway. The car line has been re-laid in the center of the road and a very promising boulevard is under way.

This announcement has little meaning to those who do not know our city, but the old acquaintances will understand just how much it means to us to have a road leading this way in place of the former lanes.

The Speed bridge has been re-built also and prospects are good for safe and comfortable travel over the road that leads to the most beautiful spot in the Province.

With this number of the Review a new executive enters on its arduous labors. The staff elected last spring will not return intact owing to the urgent demands of the nation. Some remain on their farms to serve while others have donned the khaki. However, within the next month new men will be appointed to fill the vacancies and the work will go on under the old sign, "Business as usual."

We are gratified to know that a hearty spirit of action exists among our co-laborers who will return. In answer to enquiries sent to members of the new staff we have received stimulating replies.

The Agriculture department is no small part of our paper and we look for a keenly interesting programme from this source. The following intimation received from the new Editor of this section is suggestive of what we may expect in the coming numbers.

"This department will give, during the fall months, a number of articles dealing with the history and principle characteristics of the more important breeds of livestock.

"A number of other subjects will be taken up also—such as: Co-operative Marketing, Principles of Breeding, Educational Value of Auction Sales and the Breeding, Feeding and Management of Sheep.

"These subjects will be handled by men of ability, men who know whereof they write, so we have no hesitation in assuring our readers that they may look for real live 'dope'.

"In carrying out this programme, however, we must have a certain amount of support. No sub-editor can fill the pages of his department with promises. So, when the boys are called upon to contribute to our worthy page, they must either say 'yes' or 'no,' and mean it.

"We have set a high mark and mean to attain it being just as determined as the negro who was bent on changing his color by drinking buttermilk, who said, 'I am resolved to bleach or bust!'"

(Sgd) C. F. MACKENZIE, '19.

The Experimental, Horticulture and Poultry sections will be well cared for by their respective editors, and the 'Alumni' will receive special attention. Our Alumni department is really the ex-students' section and is dependent on graduates and men of former years for support. We are always glad to hear of the old boys and assure our readers that items regarding them are very welcome. Join with us in making this a most welcome monthly news letter for all our ex-students.

The Review intends to forge ahead in spite of the visible difficulties confronting us. To do this we require unity and determination. We have the determination, all we need is the co-operation of every one to ensure unity. Let us hear from you.

#### THE COSMOPOLITAN CLUB

One of the brightest and happiest features of life at the Ontario Agricultural College, is furnished by the existence of the Cosmopolitan Club, which has its headquarters in a comfortable club house opposite the consolidated school. There are many activities about the College itself, which engage the students' attention, but in dormitory life, pleasant as it undoubtedly is, there is always a certain feeling of limitation, a missing of the freedom of one's home. It is this need perhaps, to which the Club more particularly ministers.

The Cosmopolitan Club, which has branches in nearly all the colleges of America, claims as its prime object the creation of the ties of brotherhood

among students of all nationalities. Membership carries with it the privilege of wearing a distinctive club pin recognized by members wherever they may be. The club house at the O. A. C. is spacious enough to accommodate several regular roomers, besides being open to all members for purposes of recreation or study. There is a fully equipped billiard room, a piano and a victrola with a good stock of excellent records. The book-case is well filled with attractive reading, and every article of furnishing, lends itself to freedom and comfort.

In common with all other college and lay institutions the Club has felt the severe strain of war-time conditions. Decreased membership in consequence of a small enrolment of students, higher rents and generally increased expenses have made the financing of the Club a most precarious undertaking. At the close of the last College session, the Executive seriously considered abandoning the task which then seemed, and still appears practically impossible. But the high opinion of the great need supplied by the Club as voiced by some of our returned student heroes, has given the men remaining at College the determination to "carry on" and not let the Club drop out of sight, even though it be necessary to appeal to ex-members for financial aid.

The staff and older students need no explanation of the opportunities offered by the Club to make them recognize the unique place it occupies in college life. All that can be asked of them is the continuance of their generous co-operation. But to new students the Club wishes to extend its heartiest invitation to come over to the club-rooms, look around and get acquainted. We hope that many helpful members will come from Year '22.

With the continued interest and

support of staff and students we aim to make the coming year the most successful in the annals of Club history and render the institution even more worthy than it has been in the past of its venerable motto, "Corda Fratres."

—J. M. SHALES, '19.

#### O. A. C. IN KHAKI.

The Review plans to compile a complete list of the many hundreds of O. A. C. boys who have enlisted in the armies of Great Britain or her Allies. This honor roll will be published in the Christmas number. We solicit the assistance of all our readers who may be able to contribute some-

thing. We require the Name, Number Unit, and Address of every O. A. C. boy in khaki, if this is to be complete. Also state if killed, wounded or missing.

This intimation is really an appeal for help in preparing an honor roll and we sincerely hope that every reader will immediately respond. Send us his name!

#### THE REVIEW COMPETITION.

Next month a full announcement will be made regarding the Review competition. As in other years, we will offer prizes for the best short stories and poems. Plan out your story or poem now.



#### "ACHIEVEMENT"

*Trust in thine own untried capacity  
As thou would trust in God Himself. Thy soul  
Is but an emanation from the whole.  
Thou dost not dream what forces lie in thee,  
Vast, and unfathomed as the grandest sea.  
Thy silent mind o'er diamond caves may roll,  
Go seek them—but let pilot will control  
Those passions which thy favoring winds can be.  
No man shall place a limit in thy strength;  
Such triumphs as no mortal ever gained  
May yet be thine if thou wilt but believe  
In thy Creator, and thyself. At length  
Some feet will tread all heights now unattained—  
Why not thine own? Press on! achieve! achieve!*  
—Ella Wheeler Wilcox



M. Kelleher, '15, writes from France.  
Somewhere in France,  
July 21st, 1918.

Dear Mr. Le Drew,

Just a few lines to let you know I am alive anyway and fairly well. I have written once or twice, but my letters must have gone astray as I did not get any answers. Well, to-day I went to see Sergt. Creelman at "somewhere in France" and had a very interesting talk with him, we met quite by accident the other day. He was looking after some men spraying potatoes and I was over to get some cabbage plants—you know when the gardening stunt started in the spring the job of starting one for my unit came to me—At the present time I have a really nice acre of garden, half in potatoes and the rest truck. It is wonderful what you can do, if you try, with old salvaged implements to work with. Anyway, it is a bomb proof job or pretty near it, and right in my line as you know, so I am glad of it. Besides, since I was badly wounded in the jaw in September, 1916, my jaw has never been right. At times it gives me quite a bit of trouble, but I have managed to

get along out here since June, 1917, without getting wounded again. It has been more by good luck than management, especially in that little trip up to Belgium last fall. My present address is, 10th Canadian Infantry Brigade, Trench Mortar Battery, B. E. F., France. This address will find me if you have any time to write. Just at the present time we are having some much needed rain with now and again a fine spell. It has been desperately dry for months until these rains started.

Well, I will break off here for the present, please excuse the writing and pencil but one cannot have everything just right out here. With very best regards and wishes,

I remain yours truly,

127072 PTE. M. KELLEHER.

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Bertram, '15, has returned to Canada wounded, is now on Headquarters' Staff at Niagara Camp.

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N. Curtis, '15, has returned to Canada wounded, and is now farming near Simcoe.

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N. R. Martin, '15, has been honorably discharged from the service and is now farming at Springfield.

E. G. Hogarth, '15, formerly with the McConnell and Ferguson Advertising Agency, at their London office, as copywriter, and for the past year and a half in charge of their Windsor branch has been appointed in charge of the Advertising Department of the Ford Motor Co of Canada, Ltd., Ford, Ont.



A. MACLAREN, B.S.A.

Alex Maclaren, B.S.A., Lecturer in Rural Sociology at the O. A. C., has been called to England to lecture in the Khaki University. Mr. Maclaren is well known to a host of O. A. C. boys and to the Ontario Rural Leaders, who have taken summer courses in his department. He is a graduate of class '09, and since 1912, has had charge of the College Y. M. C. A. work. Prior to his returning to Guelph he was engaged in lecture work in Carolina and Y. M. C. A. work in Toronto.

As yet the exact nature or duration of his work is not known, but we hope to see him return to Canada, when his

mission in England is completed. Here's wishing him success in his new work.

We are glad to publish the following letter, the first that we have received in response to our appeal in the June issue of the Review. Communications such as these, accompanied by plenty of real news, are very encouraging to those who are endeavoring to make the Alumni Department a real source of interest to our readers. We take this opportunity of thanking Mr. Henry R. Orr most heartily for his interesting news of old boys in the Maritime Provinces.

July 23rd, 1918.

A. W. MEAD, Esq.,  
O. A. C., Guelph, Ont.

Dear Sir:

Noting your Macedonian call in last issue, and carrying back in mind to a similar personal experience twenty-one years ago, I beg to enclose you a few dots about some Bluenose old boys which will, of course, require touching up, but will at least bring the records up-to-date. Since the rise of Macdonald, there have been fewer boys from here going to Guelph and still fewer being appointed hereabouts. Doubtless, there are more than I list but I can't just recall them now. The "Review" of this date is a somewhat more pretentious publication than in the earlier years and is always read with interest. Keep up the good work.

Yours very truly,

HENRY R. ORR,  
11 Goodrich St.

W. R. REEK, B.S.A., has since March 1917, been Deputy Minister of Agriculture for New Brunswick, and has much more than made good. His various plans for co-operative marketing, and



in general the more active business participation of farmers in their work are being widely taken up. His office is in the departmental building at Fredericton, but Reek is usually out in the rural districts, following up his work.

A. G. TURNEY, B.S.A., is the Provincial Horticulturist for New Brunswick, and is now reaping the results of several years of the hardest kind of work, because the Province had first to be converted to the idea of being a fruit producer, and this entailed a generous propaganda through the Boards of Trade and in every other way. His annual apple show has become one of the events of the year and the exhibits of McIntosh Red, not to mention other sorts are the envy of all visitors. In addition to his official duties, Turney has backed his arguments in the most practical way by purchasing a large farm about 12 miles below Fredericton. Having two brothers in the war besides his parents being residents of Belgium has given him a very direct interest in events, but thus far he has not measured up to the required physical standards for enlistment, greatly to his disappointment. Still single.

A. C. McULLOCH, B.S.A., an old protégé of Professor Graham's has during the past year been attached to Reek's staff as Poultry Superintendent and is doing excellent work in getting New Brunswick into line with Prince Edward Island as an egg producer. Mac's poultry clubs and egg circles are the talk of the rural districts and his plans have been laid with a thoroughness and on a scale which ensures success which will establish his reputation very quickly.

JAMES R. OASTLER, B.S.A., '97, was for some years Farm Manager for Sir William Van Horne at Minster's Island, St. Andrews, New Brunswick. About

two years before the death of Sir William, he was transferred to the farm at East Selkirk, Manitoba, where he still is, working hard and doing well. Having taken one of New Brunswick's fair daughters to be Mrs. Oastler in 1908, James quite frequently re-visits the Province and is always welcomed.

WM. KERR, B. S. A., is the Secretary of the Prince Edward Island Co-operative Egg and Poultry Association, the largest organization of its kind in the Dominion and one of its most marked financial successes. It is freely granted on all sides that Kerr is largely to blame for this and few men can so readily and convincingly deal with a rural audience. Friends regularly suggest to William, that if he applied the same "pep" to, say, life insurance, not to mention the ministry, he would lead the field in no time. Still single.

W. HAROLD, B.S.A., follows mixed farming at Fairvale, a suburb of St. John, New Brunswick. His older brother is Major in the Canadian Heavy Artillery and wears the M.C. His father has for two years been Mayor of the Loyalist City.

S. J. GOODLIFFE, went over as Captain in the 115th C.E.F., and is still in action. His farm, "Maple Forest," Sussex, New Brunswick, was recently sold. It is hoped by all his friends that "Syd" returns to the province of his adoption when he is through with the Kaiser.

CHARLES R. PETERS, farms very successfully at Elmhurst, New Brunswick, home dairying and general mixed operations.

KENNETH RAYMOND, a cousin of Peters, is located on the homestead at Bloomfield, King's County, New Brunswick. Like Peters, he has enjoyed the advantage of a good start, and is following up readily.

H. R. Ross, B.S.A., '98, is rounding out his eleventh year with the New Brunswick Cold Storage, a C. P. R. subsidiary at St. John, and the plant is now exceeded in size in Canada by that at Prince Rupert, which however, does a far less diversified business. He is also President of Pacific Dairies, Ltd., operating a modern dairy in St. John and a large farm at South Bay. Ross himself lives in the edge of Rockwood Park, St. John, and is always ready to meet old boys. The family consists of four sturdy girls.

HARVEY MITCHELL, Dairy School, '98, is Superintendent of Milk Testing and Federal Dairy work generally in the Maritime Provinces. Needless to add, Harvey is doing his work well at all times and few men stand higher amongst the farmers. His annual 'moose hunt,' has been the subject of many a magazine article, and his party is always hand-picked. His present chief object in life is to improve the quality of New Brunswick cheese, which has latterly fallen off somewhat, during his years in Prince Edward Island. Also, he has been giving considerable time to a new creamery company at Moncton.

Gunner C. W. Hoard, '18, No. 335005 of the Ammunition Column, has been sick and is now in Hartley College Auxiliary Hospital, Alexander Road South, Manchester, England.

D. Hart, '19 and Scouten, '19 were visiting at the "Cosmo" recently. They have both been transferred to the R. F. C., and are training at Longbranch.

W. H. Sproule, '18, of the R. F. C. paid a short visit to Guelph last week. "Prof" is looking well and has taken to his new job quite kindly.

France, June 24th, 1918.

Dear Editor:

Am at present sitting in a small dug-out for two. We are fairly comfortable in spite of cramped quarters. Though, the life here is not so comfortable as living at O.A.C. We have many odd experiences and many things which are very interesting. I am with the Battery Commander's party, which is especially interesting in a cavalry brigade.

I wanted to tell you how thankful I am to have received a copy of the Review. It brought me back to civilization for a time at least. I have not run across any O. A. C. boys in this brigade.

With best wishes for the O. A. C.  
324896 Gr. H. G. OLDFIELD,  
B Battery, R.C.H.A.  
B. E. F., France.

Jack Parsons and Mrs. Parsons renewed acquaintances in Guelph a few days ago. Jack is a '17 man, and is now a successful farmer near Jarvis, Ont.

"Hugo" Clark, B.S.A., '17, paid us a flying visit the other day. Hugo is now on the home farm near Stouffville, and has bought a new car with a fine H. A. cut out, as an aid to production.

Percy Vahey, '17, and Riley, '16, are in the R. A. F., and are now at the School of Aeronautics at Toronto University.

Wiggins of '17, has also joined the R. A. F. He is in Toronto.

"Syd" Lord, '18, is now attached to the strength of the W. O. R., at London, with the rank of Lieutenant. His duty will be that of draft conducting officer.

J. C. Neale has joined the Canadian Engineers at London. His address is,  
50 Craig Street,  
London, Ont.

After over a year's silence John Hempson, '18, dropped in on us last week and contributed several Alumni notes to the Review. Hempson is second Air Mechanic at the School of Aviation, Toronto, and has frequently met many of our boys who are in that branch of the service. His address is,

No. 170107 John Hempson,  
Staff Residence,  
118 St. George Street,  
Toronto.

We congratulate R. G. Newton, B.S.A., on his appointment to the position of Assistant Superintendent of the Experimental Farm at Lethbridge, Alberta. Newton is a graduate of year '18.

Word has been received that Walter T. Ziegler, '19, was on land in New York State recently. "Zieg" enlisted in the United States Navy over a year ago and has avoided land almost ever since. He is enjoying his training work and hopes to be a real old "Salt" in time.

George McColl, '14, who lost a leg in the fighting at Ypres two years ago, has been in the Davisville Hospital, Toronto for several months. He expects to call at Guelph as soon as he leaves the hospital. We are always delighted to have our heroes call on us when they can. A hearty welcome awaits them all.

We were glad to receive the following "newsy" letter from D. G. Townsend, '16.

Milford Camp,  
Surrey,  
July 4th, 1918.

Dear Review,

If I had written you once for every dozen times I've thought of doing so, the past two years and a half, this would make a complete volume.

However, what I like about the Review as a correspondent is, that she always accepts without questioning.

To-night, I have finally collected enough information to warrant this attempt being of interest to the readers, Perhaps!

Possibly, if I were to explain that for this past hour, Gregory of '17, has been in and we have had the usual reminiscences of old O. A. C. days, which is inevitable when two or more of the boys meet, then you will see my motive for writing to-night.

Gregory is a Sergeant in the C. R. A. in the camp, having returned from France some few months ago. As for myself I am trying hard to live up to the rules of a gentleman cadet. I often wish I had the fellow here, who convinced me one night in France, that I would make a good officer, because he played a cruel joke on me I am sure. But since I am so nearly finished now I have decided to complete the course, which is a matter of another month.

There are several of the old boys in the course at present, G. L. Smith, '17, Murray, '17 and Surgenor, of '19.

Stan Thompson of '16, my old roommate and Hele of '17, have both completed the course and have returned to France, so you see the old College is well represented

I saw Kinstead, of '17, at New Years, and since then he has been decorated with the D. S. C., this no doubt is old

news to many, but to others quite new.

Bunny Hare, of '16, is at present taking a brush up course at the O. T. C. and A. C. Cleaves, of '15, is Assistant Adjutant in the school of gunnery. Bob Murray, of '16, Manton, '16, C. L. Lee, '17, H. Campbell, '17, are all in this camp.

Bill Knox, '17, is at Woodcote Park, Epsom, and Ray Ure, of '17, has gone back to the 35th Battery. Chas Good, '14, is Captain, and went to France a few months ago, while Ken Welton and Blondy Wilson are with the 4th and 55th Batteries respectively.

I have heard of Play Hales several times, but have failed to meet him, but he is doing very fine work in the air service.

I received a good letter from Rusty Zavitz the other day and he related all the latest official from O. A. C.

Bob Hinman, of '15, has just recently gone to France, and while his unit was stationed in this camp he played a very active part in organizing the Khaki College and by his efforts and lectures, put the college in this camp on a good sound footing, for which he deserves great credit.

For the summer months the college has closed down, but will open with the cooler weather, a new campaign with renewed vigor.

For instructors the very best material is available in the camp, there being a goodly number of ex-students and "grads" from O. A. C. and MacDonald here, besides many from Toronto University, McGill, Queens, etc., who are quite willing to offer their services as it not only helps others and the cause, but gives them a chance to brush up for after the war.

Tommy Fortier, of '15, is here now and is expecting to take out the O. T. C. course shortly. We have many good talks on days that were and agree that

some day the old Alma Mater will welcome to her bosom a goodly number of her loyal sons to take up their thread of life where they left it, and many and varied will be the tales of adventure which her venerable old walls are destined to hear.

I am afraid some of the past masters at imagination will be forced to retire when the boys get back, as from what I can gather, there will be keen rivalry as to greatest ability to spread it.

Now dear Review, I haven't succeeded in making this very interesting but the news of some of our boys will be welcome I know.

In closing, I wish to extend my best wishes for success to the faculty and our returned boys, to say nothing of the good old College.

Yours sincerely,

CADET D. G. TOWNSEND, '16,  
O. T. C., C. F. A.  
Milford Camp,  
Surrey.

Mr. J. A. Neilson, B.S.A., has kindly contributed the following list of '15 boys now with the colours.

L. Amos, 56th Battery, C.F.A. in France.

A. R. Burrows, Reg. Sgt. Major, 55th Battery, France.

Capt. L. Burrows, Wounded, now Staff Officer Dominion Military Police, Ottawa.

J. A. Cuthbertson, 55th Battery, France.

P. H. Ferguson, P.P.C.L.I.

T. H. H. Fortier, Capt. L. Gevelman, Capt. E. W. Hart, R.F.A., Berwick-on-Tweed.

C. F. Higginbotham, 101st Engineers, U.S.A., in France.

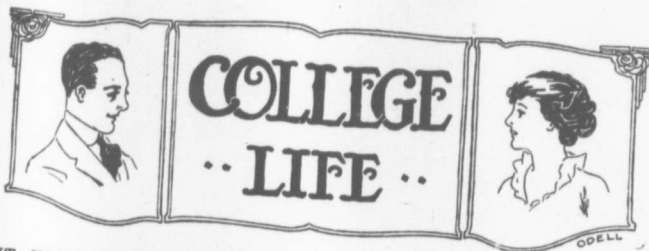
Lieut. C. G. Higman, R.N.V.R. H.M.M.L. Immingham.

- R. B. Hinman, 5th Div. San. Sec.  
C.A.M.C., France.
- P. Horobin, U.S. Army.  
W. P. Horobin, U.S. Army.  
S. F. Jones, C.F.A., France.  
Lieut. J. R. Kirkley, R.H.A., France.  
D. G. Laird, 55th Battery, France.  
R. Murray, P.P.C.L.I.  
G. S. Paren, 49th Bde, R.F.A, Belgium.
- S. Porter, 4th Can. Reserve Battalion,  
Bramshott.
- D. R. Sands, 2nd Can. Field Ambulance,  
France.
- E. H. Shuttleworth, wounded, now  
on Headquarters Staff, London, Ont.
- D. M. Smith, 55th Battery, France.  
R. G. Sulton, Can. Field Ambulance,  
France.
- Capt. W. A. Townsley, 4th Battalion,  
1st Bde., C.F.A.
- J. M. Varey, 66th Battalion, France.  
W. R. White, 66th Battalion, France.  
G. Whittingham, Transport, 196th  
Battalion, Army P.O., London.
- Lieut. J. R. Wilson, 55th Battalion,  
France.
- L. H. Wood, C.M.T.S.  
D. M. Foyston, C.F.A., France.  
S. G. Freeborne, C.F.A., France.
- J. M. Creelman, Agr. Detail Can.  
Corps, B.E.F., France.
- Lieut. R. W. Donaldson, 52nd Regt.,  
Imperial Army.
- Z. McGee, C.F.A., France.  
M. McCharles, Prisoner of War,  
Carsel, Germany.
- Major. H. M. Scott, 177th Battalion,  
C.E.F., Army P.O., London.
- Lieut. T. Sanderson, 54th Battalion.  
J. Frances, Western Can. Artillery,  
France.
- Capt. J. P. Hales, R.F.C.
- R. J. Chambers.  
A. R. Dow.  
H. C. Herder.  
A. W. Kilgour.  
Capt. Leigh.  
H. A. McLaren.  
M. Porter.  
G. T. Raynor.  
R. Rumsby.  
M. F. Smith.  
J. D. Walsh.  
N. I. Wilson.  
J. C. Shopton.  
J. R. Winslow.  
H. H. Lindesay.  
W. M. Kedey.  
N. H. Pawley.  
J. Hiddleston.

Dr. C. A. Zavitz has spent considerable time in New York State this summer purchasing wheat for use as seed in Ontario this Fall. The seed bought is all No. 6 wheat, a grain closely resembling Dawson's Golden Chaff. In tests at Guelph over a period of nine years the No. 6 has proved a slightly better yielder and a better milling wheat than the Dawson's Golden Chaff, though not quite so strong in the straw. The district from which this seed is being procured is at about the same latitude as Guelph. It should therefore do quite well here. All the seed bought is subjected to the most rigid examination at the shipping point, where it is cleaned, and again at Niagara Falls where it is thoroughly cleaned at the Shredded Wheat Company's plant. It is estimated that between 25,000 and 50,000 bushels will be supplied according to the demand. The seed is to be distributed through the millers.

This supply of good clean seed should do much to alleviate the seed shortage and encourage the farmers to sow a record acreage of fall wheat this year.

The following is a list of '15 boys reported killed in action or died of wounds:



### PUT YOUR SHOULDER TO THE WHEEL

Our ranks have been decimated and redecimated. This year will most probably find the halls of the red and blue echoing fewer voices than ever. But, though there may be fewer voices to resound through the corridors, that is not sufficient reason for less noise.

"Carry on" is a term much used, but, at such a time, it never becomes trite. In fact, in this the fifth year of the war, the practice of these two simple, meaningful words was never more necessary.

Every man entering college this fall should do so with the intention of maintaining a part of college life. Every talent should be invested to the extent of his ability; in everything he attempts he should exert himself to his utmost. This is required if the various O. A. C. organizations are to retain their present standard.

If there is a rugby team—and there is no reason why there should not be—every man fit to buck the line should step into a uniform and trot out between the goal-posts. This applies to every college and class team. Don't be over-modest, hustle out and try your hardest to bring the best material of the college into action.

If you have a few practical ideas on any agricultural subject, dress them up in words and volunteer the article to the Review. It is a College Magazine

by the students and for the students. It is as much your duty to maintain it as it is the editors.

When a debate is announced and you are selected to uphold your year jump with joy at the opportunity. If you are a descendant of Pan exert your efforts towards the welfare of the Philharmonic. Every man should interest himself in Y.M.C.A. work.

There never was any sympathy for the man who is capable and yet does not attempt to excel in anything. If you can't do anything else be a college jester. Laughs are essential and we have lost many of our great fun-makers.

—G. B. H.

### JOIN AT LEAST ONE OF THE COLLEGE CLUBS

Agriculture is apparently the object of study of everyone at the college. The student listens more or less attentively to lectures on the various subjects essential to a proper knowledge of the great business of farming. Agriculture being extremely compound and the college course, except in the fourth year, very general, many subjects are necessarily neglected.

Thus a man genuinely interested in agriculture is prevented from obtaining as much knowledge or practice in certain subjects as he desires. Even though this were not the case, every man who wishes to reach the top of his profession or business must absorb

more facts related to that profession or business than will net him thirty-three and sixty per cent in an examination.

Thus some find in existence certain college organizations, supplements to the regular course. There are clubs in four lines: Animal Husbandry, Horticulture, Poultry and Apiculture. Their object is the furthering of the students' knowledge along these lines, particularly judging, in which experience is the great essential.

Each club should be organized early. Anticipate the organization meeting by discussing the suitability of various men for the executive. An active executive is the main-spring of any organization. Men full of enthusiasm and "punch" should be elected officers of the club, men possessing enough interest to be present at the majority of the sessions.

Everyone interested in any subject covered by one of these clubs should be a member. No one knows so much about any subject that he cannot gain more information by being a member of such a club. It is the duty of every man, for his own sake, for his profession and for his fellow countrymen to become as efficient in his line as his capabilities and opportunities allow. If there is no club covering your particular subject, originate the idea. The present clubs owe their origin to someone's idea.

The success of any organization depends on its members. Every man should so arrange his "dates" as to permit his attending the weekly session. He should go with the intention of obtaining the most out of it. Then will the club do good work.—G. B. H.

#### ATHLETICS

Last year, despite the small student body, athletics were carried on at the O. A. C. the same as ever. This year, prospects point to a smaller student body, but even so, the athletic side of college life should not be allowed to drop.

Many of the old stand-bys of last year will not be back this fall. Some of them have graduated, others are in training for a bigger game.

The freshmen no doubt, will have some good athletes in their year, and we will look to Year '22 to do its share in filling the gaps. In their first year at college many fellows are backward about turning out when practices for the different sports are called. This should not be the case. If they neglect athletics in their first year, they are likely to do so throughout their entire course. Even though you are of the opinion that you have no chance for the teams, turn out, and give the fellows who are fortunate enough to catch the teams, a better practice.

Another thing that applies to all is, that when a practice is called, do not say to yourself, "Oh, well! there will be enough out to-night without me, I guess I'll not bother about it." Nothing discourages the captain or coach more than to have poor attendance at workouts, and lack of interest shown in the game. Make it a point to be out at each and every practice.

Now is the time to commence training for the Annual Field Day Sports. Do not leave it till the last week. Last year both in-door and out-door meets were highly successful and we look forward to a repetition this year.

Freshmen who wish any information re college athletics will find D. J. Matheson only too glad to give it.

H. A. SMALLFIELD, '20.