

PAGES

MISSING

THE O. A. C. REVIEW

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

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NO. 1.

The Man Who Wins



HE man who wins is an average
man,
Not built on any peculiar plan;
Nor blest with any peculiar luck—
Just steady and earnest and full of
pluck.

"When asked a question he does not 'guess';
He knows, and answers 'No,' or 'Yes';
When set a task that the rest can't do
He buckles down till he's put it through.

"So he works and waits till, one fine day,
There's a better job with bigger pay;
And the men who shirked whenever they could
Are bossed by the man whose work made good.

"For the man who wins is the man who works,
Who neither labor nor trouble shirks;
Who uses his hands, his head, his eyes—
The man who wins is the man who tries."

A Little Journey Among the School Ma'ams

I HAVE a habit of taking little journeys. The idea has occurred to me that it might be of interest to the reader and of value to history and science if I should from time to time give to the world at least a few of the various impressions and facts of interest that I glean on these journeys.

As I do not crave notoriety, and as I have several other little journeys in mind before I depart from the O. A. C., I do not wish to disclose my name, but beg of you, kind reader, to receive with credulity the observations and incidents that I note from time to time in my travels.

Just as our worthy Professor of Veterinary Science prides himself on his ability to handle a horse, so do I pride myself in my ability to size up a school ma'am. Now the school ma'am of fact and the school ma'am that I conjure up from the half shadows of a sea-coal fire are at variance—but I am ahead of my story. I want to start at the beginning.

At the tender age of six I first made the acquaintance of a school ma'am, and regret to confess that I am still busy. Maybe it was fate that ordained it; but, anyway, at this tender age I started my little sailboat on the great wide scholastic seas of the world, with a school ma'am at the helm. Through storm and calm, through choppy seas and smooth waters, I ever looked at the one at the wheel until, anon, the ship has outgrown its helmsman and I must seek in other realms for

guidance. This, in short, explains my presence at the O. A. C. But what a chain of pleasant recollections follows back into the bygone days. In those days I saw her through strange glasses indeed, for, oh, how wise she was, how good, how beautiful—a heroine indeed. It seemed that the school ma'am of my youth was a guiding star of those younger days. The hard seat, the whispered consultations, the patch on the seat of my pants, the busy hum of the school room, all were but minor settings of my school days. The outstanding jewel of the group was my school ma'am. With head buried in my geography on a studied search for Timbuctoo, have I not peeped around to look at her, and at the same time with swinging subdued strokes of my jaw silently masticated a doughnut? Was it not the devil himself that ruled my spirit when, contrary to her wishes, I plugged well chewed paper wads at the map of Europe in the far corner? And how timidly I rubbed the calloused sole of my bare foot up and down my shank as I stood alongside her desk after school and asked her home to tea. Even now my eyes grow misty as I think of my happy boyhood days, and of the simple trust and boyhood love for that friend of all friends—my school ma'am.

Time, the goddess blind, is ever turning her rolling, restless wheel. Years roll on. I grow old anon; childish impressions change, childlike sincerity is lost, and a few brief years bring the school ma'am before

me, but in a different light. I am a college student now. When I was a child I saw as a child, but now I see with eyes that have become more skilled in the ways of the world, and yet are not slow to recognize a good thing. Now I have arrived at that age where discretion battles with impulse, while worldly wisdom and common sense assert themselves in matters of affection. It was on this little journey that there came home to me the fact that the school ma'am of reality and the school ma'am that I conjure up from the half shadows of my boyhood days are hard to reconcile.

As I walk into the school room and gaze at the rows of variegated kiddies with their wide open eyes and eager faces, I am impressed with the occasion. A sense of seniority of guardianship, of responsibility steals over me. As I turn and behold the school ma'am, the guardian angel of their destinies, standing up by her little desk, a mingled feelings of joy and of sadness, of delight and of sobriety enter my body.

I appreciate her position in society, her troubles, her trials and her responsibilities. But I also catch her eye and realize after all that she is only a girl of human flesh and blood, of human likes and dislikes, of human virtues and failings, and the psychology of the occasion hath its charms. She may look with a stern eye at the small chap that drives a well masticated paper wad with unerring aim at its mark, she may whip little Willie Jones for telling a lie or playing hookey, but, yet, take her from her little kingdom, put her as a student in a classroom, and she herself may prove a clip, a cut-up, and a

little devil. She may maintain the dignity of her position in the community, may seem a person of power and responsibility, and yet I find she is delightfully susceptible to a long stroll down the town-line road, and that she, too, delights to linger in little by-paths and meadows.

When we say school ma'am, we pause and linger and think of something just a little bit better than the ordinary. The very appellation savors of superiority, but the hard, cold fact of the matter is she is just as ordinary as you or I.

I often wonder if she knows anything at all. I have tried to draw her out on science and found there was nothing there to draw. I have tried to read her and found her disappointingly easy to interpret. I have dealt with her in a business way and found her provokingly lax in her obligations. I have written charming letters to her, to find her lack lustre replies fail to "fizz" on me. In fact, I have found her overrated, irresponsible, untutored and savoring of ignorance. No, no, I do not mean all this either. This is too strong, but you know what I mean. She is all this, and yet her faults all smatter of a charm and personality that rob them of their force.

And now, dear reader, with the same breath I have exalted and I have condemned, and that is exactly how I found her on this little journey of mine. But her spirit walks abroad and turns my own sword upon me. I must end by confessing that there is something about her that is all-conquering and irresistible. I must admit that in this case the subject is greater than its author, and confess that I hate her because I admire her.

Farm Poultry

By W. H. SMITH, B.S.A.

District Representative Leeds and Grenville Counties.
(Whereby the District Representative may be beneficial.)

ASSUMING that the readers of the O. A. C. Review are principally of two classes, that is, practical farmers and agricultural demonstrators or instructors, the purpose of this article is to endeavor to present in a manner interesting to both these classes of readers the problem of farm poultry as it appears to one who has given it more or less consideration during the past few years in connection with district representative work.

While certain conditions may vary in detail, in general what applies to these counties in connection with the poultry problem will hold good elsewhere.

Undoubtedly poultry is one of the best side-lines for the average farmer to handle. To those who have given the matter attention, this fact is self-evident, and the problem, as I see it, is, first, to interest those who have not given the matter serious consideration; second, to point out the error to the class who for some reason or other think poultry on the farm is not a factor to be considered in the general management; third, to assist those who have already arrived at the conclusion that farm poultry pays. That we have in the farming community the three classes already mentioned is a fact; why such classes exist is a different proposition, and in this brief article the writer will endeavor to present what appears to be in part the why of existing conditions, and suggest

some lines of thought that may be followed out by farmers and agricultural teachers working in co-operation which will tend to improve farm poultry conditions.

The pertinent cause for a class who have not given the matter serious consideration is the prevailing system of marketing eggs. Eggs are traded at the general store for provisions, no cash transaction taking place, and the farmer does not get a proper perspective of the producing end of the poultry business. He is only personally in touch with the supply end, and is sure that the few eggs he eats are not sufficient to make up for the large quantities of grain consumed by the poultry, consequently he concludes that poultry is one of the necessary evils which he must endure for the sake of the women folk, the fresh egg supply for the home table being a sort of recompense for his tolerance. We are certain that were the system of selling eggs for cash generally in vogue more attention would be paid to the poultry business by the general farmer.

Those who conclude from past experience that poultry is not considered in the system of farm management or that poultry does not pay, give a great variety of reasons for arriving at this conclusion; but on investigation these reasons show that the real reason for such a conclusion can invariably be attributed to improper conception of

the cost of equipment or to improper methods of feeding and housing, which may be interpreted as lack of knowledge on the part of persons keeping poultry rather than an endeavor to find out the proper methods of handling poultry, their inclination to follow the line of least resistance results in their verdict that poultry does not pay. After three years of educational work in connection with the poultry business, we are inclined to think that the most efficient way to benefit the two classes of people just mentioned is by the work done in assisting the third class; that is, those who do believe poultry pays. The result is achieved indirectly by success of the occasional person here and there in communities taking an interest in improved methods of poultry keeping, and, as a result, reaping sufficient reward to cause him to continue paying more attention to the poultry side-line. In order to render the most efficient assistance to these people who are really anxious to secure information, it is our firm conviction that these men will get in line more readily when the District Representative or Instructor actually demonstrates that the methods which he recommends are practicable and applicable to general farm conditions. Hence the demonstration flock that actually produces eggs during the winter months in one of Prof. Graham's type of open front houses this flock being renewed from year to year with young stock raised on open range in colony houses, is really the argument which is needed to fully convince the farming public that poultry can be made to pay on the farm.

To convince the farmer that the farm flock should be of a pure-bred variety and that strains and varieties vary as much in utility qualities as varieties vary from each other, should be part of the work of the agricultural instructor. In addition to assisting in securing a general interest in farm poultry, the demonstration flock handled under the direction of the District Representative may be made to serve a further purpose, that is of supplying pedigreed male birds from trap-nested hens to the farming community. As trap nesting is an expensive operation and as it is only with the use of the trap-nest that we can secure male birds known to carry high egg producing power, the work of producing these males is certainly worthy of consideration.

In farm poultry, as in any other lines of endeavor, it is much more satisfactory to work with an organized body than with separate individuals; consequently, it is not a matter for surprise when we state that our greatest success in educational poultry work has been achieved in connection with one of the farmers' clubs of our county, this being the only one with which we took the work up to any considerable extent.

For three seasons the club has been selling the eggs to the members through an egg circle. By this means the pertinance of each farmer having a pure-bred flock was forcibly brought out. So in order to make it possible for each member of the club to have pure-bred flocks at very small expense, the club executive made arrangements with certain members of the club who had their pure-bred flocks headed by bred-to-lay males of known breeding, where-

by the club members could secure eggs from these flocks at an advance of five cents per dozen over the price of circle eggs. The two breeds of poultry recognized in this club are bred-to-lay Barred Rocks and White Leghorns. This system has been in vogue two years now, and of the one hundred and some odd members of the club there are very few who have not a pure-bred flock of one of these varieties.

In addition to the more uniform quality of the eggs brought in by the members, the surplus poultry, which is also marketed co-operatively by the club, is of a superior quality. That finishing Leghorns as broilers and crate-fattening Barred Rocks or other general purpose breed as roasters is the proper method of marketing these birds, is more convincingly shown when it is undertaken by a club, and a regular supply can be marketed from week to week. Our experience thus far has been that the District Representative could well afford to co-operate with the executive of farmers' clubs, judging from statement of sales of eggs and birds from the club mentioned, and they can well afford to follow the direction of the District Representative in this regard.

It would not be fitting to conclude this article without a brief mention of the marketing of eggs. It has been stated previously that the writer believes the prevailing system of marketing eggs to be the cause for so many people being disinterested in poultry. We also believe it to be the cause of the people who are interested not being more interested. The egg circle or

co-operative method of marketing eggs is a step in the right direction. This co-operative marketing of eggs is as yet in its infancy, consequently we need not expect the system to be perfect. From the better care given the eggs marketed through circles, enhanced prices result. This is not the most beneficial result of the circle, as from our observation the increased interest taken in the care of the farm flock due to this enhanced price is of greater importance. Invariably where a circle has been operating the number in each flock is increased, the quality of poultry is improved, and so is the general care and housing of the flock. Marketing the eggs through the circle puts the poultry business on a cash basis, which does a great deal to interest those who have previously given little attention to poultry. One of the factors now existing in connection with the majority of egg circles and which should be remedied is the matter of paying for the eggs. Prices should be quoted f.o.b. shipping point, and the eggs should be paid for when delivered. These matters are being adjusted by some of the circles, and doubtless the system will be perfected as time goes on. Another benefit of the egg circle is that experience obtained in co-operative marketing. Production is a good maxim, but proper distribution is equally important, and the most economical distribution will never result so long as farmers' products are handled by speculators. With proper co-operation, the farmer can place his goods in the hands of the consumers, and the time is coming when he will do it.

The Literary Society

By W. P. MACDONALD, President Literary Society.

ONCE more we are all assembled at college, some of us for the first time. A wonderfully busy place it is to the new man (freshman). Why, the twenty-four hours seem altogether too short with all that is crowded into it. Four lectures in the forenoon, laboratory work or student labor in the afternoon, secret year meetings before lectures, between lectures and after lectures, all preparing for something unforeseen. Compulsory society fees having been paid, the President of each society announcing that he wishes to meet the freshmen class in the parlor at a certain hour to outline the workings of the society and to explain the plans of the society for the coming season. City church receptions for the new men, one each night of the week; last, but not least, in fact, the most enjoyable and the one which will leave the most lasting impression on the new men is the first "at home" at Macdonald Hall. Thus are the calls upon the time of the college man during the first week of college life. With all these demands, the Literary Society craves a hearing, and more especially a hearing from the new men.

Now that you have come to college to learn and to practise the best farm methods, to fit yourself for the highest and the best in your profession, you have not been satisfied to follow on and to do things on the farm as your forefathers have done them. Your intention is to go back on the farm and to be an incentive to better ways and better means of

farming. Each one of you will be looked upon as an example and a leader in his community. Men who will have a broad view, not only of farm life, but also national life. As community leaders, you will often be asked to express your opinion from the public platform. Now is the time to begin and to get the necessary practise. Attend all the literary meetings. Take part in the debates when asked to. What the Literary Society will do for you is just what you will do for it. It may be your first experience as a debater. Prepare well and do your best. Don't think of the other fellow; he was once a beginner.

The Literary Society is composed of three societies: the Delphic, the Alpha and the Union Literary Society. The Union Literary Society meets once a month for inter-year debates. Here is where the fiery broadswords are taken up and hard contests are fought for class honors by men who will be our country's orators. These are our anxiously looked for social as well as literary evenings, when each student enjoys the company of his fair friend from across the way.

The Alpha Literary Society is composed of the second, third and fourth year class men.

The Delphic Literary Society is the one we expect great things from. Some men will be discovered to themselves and to the college. These are the men who are to be the life of the college for the next four years. The

freshman class is divided into two divisions—A and B divisions of the Delphic Literary Society, so that each member will be given one, two or three chances to take part in the debates during the season. The society meets once a week, six men taking part in the debate. The upper class men act as judges and criticize the debate. These are the enjoyable and profitable evenings, made all the merrier by the musical talents of our own students, each year bringing its own quartette of new musicians. Freshmen, take hold of your Literary Society, boost it for all you are able,

work for its success. Begin by attending the first meeting, work for the improvement of your society. Suggest new ideas which will make for improvement. Make it better than it has ever been before, and these efforts will characterize your college course.

The Literary Society not only holds debates and social evenings, "at homes," oratorical and public speaking contests, but also supplies a reading-room in the library, with all the best magazines and current literature for the benefit of all the students.

An Opportunity

By E. E. REILLEY, '16.

A PROMINENT writer recently commented on the pleasure it gave him to see productive and constructive science in Canada patiently working towards greater things, in striking contrast to the destruction caused in Europe by the scientific genius of an arrogant nation. These comments were inspired from visiting and inspecting the work of various experiment stations of the Dominion. A complete and universal change in economic conditions has been the immediate effect of the war, and although agricultural work is proceeding much as usual, the effects on agriculture have been as great or greater than on any other industry. The German supply of potash has been completely shut off, and more important still, the great seed growing industry of Germany, Belgium and France must be practically dis-

continued until the end of the war, and even then it will be years before it can provide a world supply again. These two important branches of agriculture can be taken as examples of the many opportunities to establish new industries in Canada of great financial importance, and which are now absolutely necessary to the development of Canadian agriculture. These phases of agriculture have remained practically untouched in Canada until quite recently, and we are just beginning to realize the value of home supplies.

The artificial production of potash is being worked out, and with every indication of successfully releasing us from the German potash syndicate.

Regarding seed growing, the fact of its requiring two years to produce the seed is possibly the factor that has previously prevented the advance

of the industry in this country. Besides this delay in returns, there is also the possibility of failure from careless or improper treatment during any of the stages of production.

The seed growing of field crops, mangels and turnips has been experimentally carried on at the various experiment stations of Canada. The results obtained at the Ontario Agricultural College strongly indicate that it would be a success com-

encouraging to the beginner in vegetable seed growing.

There are at least four distinct stages in vegetable seed growing:

1. Development of the root or bulb.
2. Selection and storing for the winter.
3. Setting and cultivation in the summer.
4. Gathering, threshing and storing of the seed.

In the old countries, a large per-



Selected Onions (Yellow Globe Danvers) Grown for Seed.

mercially. The highest percentage of germination for mangel seeds obtained at eight different sources was obtained from College-grown seed (average of three years). The highest yield of mangels obtained in experimental work at the College was from seed of their own production. Little experimental work has been done in the past on seed growing of the various vegetables, but yields and results that have been obtained from field roots and beets should be very

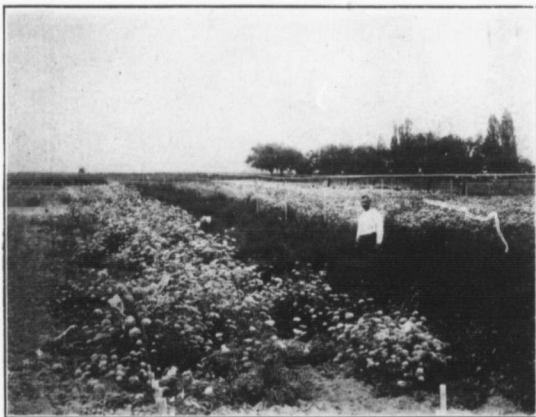
percentage of the root seeds are grown from young, immature but well developed roots, called "stecklings." The seed that is to produce the crop of stecklings is drilled in six weeks later than if sown for a feed crop, and are sown much closer together, the drills being eighteen inches apart and the roots two inches apart in the row. Where root seeds are grown in large quantities, the steckling method is almost always used. The chief advantages are: a greater con-

venience in storage over winter (when small roots are used), greater ease in handling the (root) crop, selection is to a greater extent made possible with smaller losses from discards, and the roots can be grown late in the season as a secondary crop. The stecklings (mangels and beets) are harvested when about the size of a small table carrot, and are selected for uniform type and good uniform size. If the seeds are grown

ant consideration, as the size of the head and the amount and vitality of the seed varies largely with the size and vigor of the bulb.

Type and uniformity are the most important points to be considered in selection. A root should be free from any abnormalities, and a typical form should be selected in both roots and bulbs.

Roots may be kept in ventilated pits or root cellars, but onions re-



Carrots and Beets Grown for Seed at Horticultural Experimental Station, Vineland, Ont.

in small quantities and there is sufficient storage, the large roots are the more satisfactory, as they produce larger plants and more vigorous seed. Large roots can be selected for variety type if there is any chance of a variety being mixed. It is the practise in Germany to grow the seed for the stecklings from the largest and best mature roots they can produce to prevent the variety from degenerating. In growing onion seed the size of the bulb is a very import-

quire better treatment while in storage. Onions are best stored in well ventilated crates in a cool and fairly dry cellar.

The planting out should be done as early in the spring as is consistent with good preparation of the ground. The soil most suitable for growing a vegetable seed crop is a deep, rich clay loam that has received a heavy coating of manure. The rows of onions should be about three and one-half feet apart, beets and carrots

four feet or more, to allow sufficient room for cultivation and for the growth of the large spreading branches. A light furrow may be made with the plow to set the roots in if they are large and the root placed so that the top is even with the ground.

Continuous cultivation is necessary and irrigation where practicable may be beneficial. As the stalks develop they can be continuously ridged up

duction, as great care is necessary to prevent waste and to get the seed thoroughly dried.

Beet and carrot stalks may be hung up to dry or special frames made and the stalks piled on these. When dry, they are drawn in on a canvas-covered wagon rack and threshed on a canvas with a flail or with a special threshing machine if a large amount is grown. Premature frost is one of the hazards in seed



Onions Grown for Seed on Herold Farm, Beamsville, Ont.

until finally they are well banked up with earth. This is very important, as it prevents the stalks being broken by the wind and saves the seed that would otherwise rest on the ground and be lost from mould and decay. Staking is unnecessary for onions, but carrots and beets may require staking as well as banking up.

The gathering and threshing of the seed is the most laborious and tedious process in the cycle of pro-

ducing, and damage from such may be guarded against by setting the roots early in the spring.

The cost of production is high and the risks taken are considerable, but the returns are enormous. The yield from the crop of beets shown in this illustration has been estimated by an authority to be two tons per acre. The price of garden beet seeds ranges from fifty cents to one and a quarter dollars per pound, so that the possibilities of the industry are

startling. There are some things however that must not be forgotten; it takes two years to grow the seed, it takes knowledge and patience to make a success of the business, the

industry must not be over done, and it requires continuous selection to maintain even our present standards of type and quality.



A Plot of Corn in School Garden at Marden, Ont.. Riddle—Find the Teacher.

Telephone Development and the Farm

IT is superfluous at the present time to waste any printer's ink in describing the place which the telephone has made for itself in the business, domestic and social life of the people in the cities of all civilized countries. The greatest telephone development is found in the United States where competition not only doubled the number of telephones in cities and towns, but gave the telephone to the residents in the rural communities, until to-day in some States there is a telephone to every five of the population in the rural districts.

During the last six or seven years,

telephone development in Canada has reached out and included the farmer. In Western Canada, that is, in the Provinces of Manitoba, Saskatchewan and Alberta, the Government has undertaken to handle the telephone business, and this, of course, means that in each case the supplying of telephone service to the farmer gets full consideration, although the method and organization by which it is supplied differ in each province.

In Ontario, the growth of the rural telephone movement has been remarkable, and to-day the Government statistics show that over five million dollars have been invested in local

telephone systems, the large portion of this investment being supplied by the farmers of the Province. It is therefore almost as unnecessary to refer to the benefits of the telephone on the farm as it is to refer to the place the telephone has in the life of the city or town, but it is worthy of comment that while local companies and associations were supplying this local telephone service for the first few years, over fifty municipal systems have been organized in Ontario during the past three years, and are operating most successfully, giving telephone service that includes practically every ratepayer in the municipality at a very reasonable rate. The average cost to each subscriber of these municipal systems would be about \$12.00 per year, and this charge is only made for ten years, when the service will be supplied at the actual cost of maintenance and operation. These municipal systems are established under Part 2 of the Ontario Telephone Act, and the Ontario Government is entitled to credit for having passed legislation which has made these municipal systems possible, and has also safeguarded the interests of the local companies and associations throughout the Province. All these systems are under the jurisdiction of the Ontario Municipal and Railway Board.

The above reference to telephone development was suggested by the telephone exhibits seen at the Canadian National Exhibition at Toronto this year. Among these exhibits was one in the Process Building by the Canadian Independent Telephone Co. of Toronto, which company has been actively identified with the development of the independent local telephone systems in Ontario, and for

that matter throughout Canada, since the commencement of the movement. The company manufactures the highest class of telephone equipment for every kind of telephone service, whether it is for the city, town, rural party line, factory, departmental building or residence. They have built up a large business during the past three years, and were the first manufacturers of what is known as "independent" equipment in Canada—the "independent" meaning that they were not connected with the Bell Telephone Co.

They have, therefore, given special attention to the rural telephone business, and have literature specially prepared to give information in regard to the establishment and operation of rural telephone systems.

Their exhibit was one of the most interesting in the Process Building, because, besides the most up-to-date magneto telephones and switchboards such as are used on rural systems, they showed such advanced telephone equipment as the Presto-Phone, which is an automatic system for inside service, operating one hundred telephones without the service of any operator, and furnishing a service which has many advantages over any manual system. They also manufacture an automatic system that operates large exchanges in cities and towns. These up-to-date automatic systems show the progress that has been made in the telephone art by Canadian manufacturers.

The company's representatives at the exhibition stated that they would answer any correspondence from those interested in the telephone line, and that telephone information would be supplied gladly and without charge.

Philharmonic Society

By E. CULP, President.

AMONG the persons with whom we come in contact, it may be safely said that the ones most admired are those which are classed as "good all around fellows," and rightly so. The "all around" person is broad-minded and is not so deeply buried in his own affairs that he hasn't time to lend a helping hand when the occasion demands it. In an institution like the Ontario Agricultural College, the societies play no small part in making those in attendance forget themselves and take a saner and broader view of things. It is in this connection that the Philharmonic Society comes in. The purpose of this society is not to turn out professional musicians, but to do its "bit" to aid in the uplift and betterment of the student body that more "all around" men may be found there.

The departments of the Ontario Agricultural College Philharmonic Society are as follows: Choral Club, Chapel Choir, Orchestra, Dramatic Club and Rooters' Club. Each one of these departments has a man in charge to make arrangements for practices, etc. Two "made in

O. A. C." concerts are given during the college year—one in the fall term and one in the spring term. The benefit that may be derived by becoming an active member is worth while. Anyone who follows the work of one or more of these departments carefully and diligently is bound to be stronger and better for having done that work.

Admittance to the Philharmonic Society is not restricted. Every student is welcome. The main requirement is that the applicant be really desirous of accomplishing something.

Although much has been accomplished in the past, much more might be done. To those who intend to identify themselves with the Philharmonic Society, we would urge that the work be taken up early in the term and that practices be attended regularly. Show that you have a definite purpose in view; show some enthusiasm; you will derive greater benefit, the executive committee will be wearing the smile that won't come off, and the year's accomplishment will be set down as having been "more than usual."

Athletics

THE OUTLOOK

PERHAPS we should just label it "Probabilities," and express it in terms of athletics instead of in terms of meteorology. To give a forecast for athletics at the college this coming season is an uncertain

thing; but there are several things which may be noted at this stage.

In the first place, the outlook for rugby football must be good, for both Captain Wilson and Manager Gandier have it on the slate that we are to win the Dominion junior champ-

ionship. Last year we came so close that it was only by losing the final game that we lost the championship, and this year we are figuring on winning the final game. As far as we know, a goodly number of the men that brought the Junior Intercollegiate championship to the O. A. C. will be seen out on the campus in their old familiar suits. These, with some real good material coming on, should make up a great team.

On the track the outlook is extremely bright. Manager French will not lack for material, and with a few men of the calibre of Wallace, White and "Young Husky" Evans, it should be an easy matter to annex the Toronto Interfaculty Championship.

But while we are looking on the bright side, we also must face the dull side. We are at war, and there seems to be something in it that says, "Do not go too far." In time of war conditions call for many sacrifices, and certainly there are many things that receive space on the sporting pages of our daily papers that could, with profit to the country, be cut out. We can hardly say this though of the type of athletics found at our college here. There is nothing that could fit a man better for war outside of actual military training itself than athletics. The rugby field is the greatest moral equivalent for war there is to-day, and if the Kaiser would put his excess energy into Prussian football instead of Prussian militarism the world would be better off. Some of our best fighting men at the front have learned the fighting game on the tracks and rinks and rugby fields of our colleges. So we can hardly feel that it would

be out of keeping with the spirit of the day to maintain our games and sports as they have been maintained in the past. So let us all come back to college resolved to do our very best for the glory of our Alma Mater.

TO THE FRESHMEN

The Athletic Association of the Ontario Agricultural College takes this opportunity of extending a hearty welcome to the incoming class of Freshmen. We are at the college for your benefit. We are proud to have you join us. We would like you to early learn the significance of a society such as ours, the part it plays in a college education and the lessons to be learned in the field of athletics. We come here mainly to learn more about agriculture, but while we are here let us also learn something about athletics, their place in our life and the life of the nation. We want you to enter into our association with a broad and open mind, feel that you are welcome in any line of sport, feel that we are mighty glad to have you and that we want to be of service to you and to the student body in every possible way.

TO THE STUDENT BODY

For the coming season the Athletic Association has in mind better things in the line of athletics.

As we meet it at the college, there are three units in sport. There is the college, our own year and ourselves. The greatest of these is the college. "The college first" is the foremost maxim of our athletics. Then work for your year and her glory; and, lastly, do not forget

yourself. But do not forget you are last and it is only by putting these others first that you can derive the greatest benefit for yourself.

The association is going to endeavor to establish a greater degree of training and of discipline in the student body. These are the first laws of effectiveness in the efficiency of any sport, and we are going to try and instil them more and more into our association. We cannot adopt arbitrary methods, but we are going to try and make the student realize that it is his duty to the college, the student body and to himself to give them his best. We are also going to make it convenient for the man who does train and inconvenient for the man who does not. We must of necessity stand for clean sport. The "roughneck" will not be tolerated. Just as we have recently learned that peace at any price is sometimes a dishonorable and ignoble thing, so we must learn that victory at any price may be a dishonorable and ignoble thing, and just to the extent that we use unsportsmanlike methods to win games, so to the same extent our athletics are a failure.

Again we are going to give more time to coaching on the field and in the gymnasium; in short, we are going to try to put more brains into athletics. Just as work void of intelligence puts a man down to the level of a dumb animal, so does athletic games void of brainwork lose half their value and usefulness. We want you to see that there is something more in athletics than mere physical effort, that they have their lessons in morality, and that they have embodied in them lessons

in life that demand a place in our best ideals.

So let us again extend a hearty welcome to the student body, and hope that the forthcoming year may be a year of advancement towards better sport and bigger victories.

A WORD OF WELCOME.

We take this opportunity of welcoming Mr. Efton M. James, our new Director of Athletics. Mr. James was born in Vandalia, Mich., attended High School at Ann Arbor, where he took an active part in athletics, especially baseball and football. After being out of High School two years he entered Adrian College at Adrian, Mich. He remained here one year, only playing baseball and basketball on the College teams. In the Fall of 1912 he entered the University of Michigan at Ann Arbor, played on the all-Freshman's football team of that year, and on the Varsity team of 1913 and 1914, and took an active part in inter-class basketball, baseball and track. He is a graduate of the University of Michigan.

Mr. James comes to us excellently recommended and writes that he is coming "to give the best that I have in me to you boys." This sounds good, and we can only again give him a hearty welcome to the O. A. C.

A FOREWORD

(By Efton M. James, Director of Athletics, O. A. C.)

College men are often asked to justify the existence of Athletic contest in the school. Off-hand it seems that there is no real reason for such games, that physical development can be acquired in the gymnasium. However, therein lies the difficulty. Is physical development the only thing

to be gotten out of athletic contests?

Ours is a commercial age, a fighting age dominated by the word progress. Progress recognizes no single class. Man is taken for what he can do. Efficiency is the measuring rod of progress, and in order to get on man must be just a little more capable and skilled than the others. That is efficiency, and it comes as a result of constant effort to overcome natural and physical hindrances. It is the reward of bodily and mental control. The sooner man starts to overcome his natural obstacles the quicker he will be able to assume his place in the world, and there is no better means of attaining that control than

through clean athletic contests.

Our athletic field, play grounds, and tennis courts have all made for an efficient race of men because they have learned that the spirit of the clean contest is only a miniature of the great game of life. Men come to have keener insight, to think more quickly, and to be squarer with their fellowmen. They learn to smile at defeat, not because it is welcome, but sometimes is inevitable and as such should be met in a manly way.

Let us all help to justify our athletic games. Let us start to lay foundation for better and more efficient lives. There is a game for every man—play it and make this a year of years for O. A. C.

Helping The Community Through The School

By SUSAN V. POWELL.

State Organizer School Improvement Associations, Jackson, Miss.

A STUDY of wheat or corn is more important to the boy than for him to be able to name the plants of the frigid zone. A knowledge of the history, habits and care of live stock is worth more to him than to know the names of the huge animals that prowl through the jungles of the torrid zone. The one may be every bit as cultural as the other.

The industrial clubs for boys and girls should be made a department of the county teachers' association and the regular school work. The opportunities for correlating the school work with the club work are many and obvious. The canning club girl, who is taught how to measure accurately the one-tenth acre plot and lay it off according to direction and estimate the amount of soil she

is cultivating, six or eight or twelve inches deep, is learning mensuration in a thorough and practical manner. When she keeps an exact account of the cost of her plot, including rent, fertilizer, work at ten cents an hour, and the cost of canning supplies; and from the proceeds of her club work estimates her gain or loss, she will certainly learn profit and loss, percentage and accounts in a manner she will never forget.

When she makes daily observations of her plants, the effect of rain, drouth and wind on the leaf, stem, flowers and fruit, and the diseases and pests that attack them, she is learning nature study and geography as well as practical agriculture. When she composes the written history of her crop and writes an account of her work as a

club member, she prepares an English composition that calls for a knowledge of spelling, capitals, punctuation and the right use of the words and paragraphing, just as if she had written on Faith, Hope and Charity.

When she learns that bacteria and spores are in the vegetables and develop rapidly and spoil the fruit unless thoroughly sterilized and hermetically sealed; when she learns of the needs for vegetables and fruits to supply a balanced ration, she is learning physiology pure and simple that she will remember when she has forgotten the number of bones in the body. When she learns the effect of light on vegetables, when she mixes zinc solder and muriatic acid to make the soldering flux, when she puts her capping steel into sal ammoniac and solder and finds that it puts a silvery coating on the dark metal, when she studies the nature of the soil and determines what is needed in the form of fertilizer, whether lime, nitrogen or potash, she performs experiments in chemistry that cannot be excelled for practicability or culture in any college laboratory.

When she reads the bulletins sent her by the Bureau of Plant Industry, and the farm journals containing instructive articles on her club work, she is getting the thought from the printed page instead of merely calling words without reference to their meaning, as is often done in a formal reading lesson. When she enters into the club spirit, helps to elect officers or acts as one herself, carries out carefully the instructions sent her by those in authority, contributes the proceeds of her plot to

the family income and to the wealth of her community, she is learning lessons in good citizenship and forming civic ideals that are more important than a knowledge of the meaning of gerrymandering or the substance of the eleventh amendment to the constitution.

Everything I have said about girls' canning clubs applies with equal force to corn clubs, pig clubs or poultry clubs or cotton clubs. Our attitude towards these industries and clubs determines their cultural value.

The industrial clubs for boys and girls are brilliant examples of the power of co-operation. The canning club work in the three years of its existence has achieved remarkable results. Beginning with only two counties in 1911, this year thirty-three counties were organized, and these club girls converted thousands of pounds of vegetable products that were going to waste into a marketable commodity, and still other thousands of gallons into palatable products for the home.

At least a score of these club girls made sufficient money from their co-operative club work to enter college, and thus saw their opportunities broaden for a useful and successful life.

These industrial clubs have changed country schools into popular social centres, not only during the school term, but throughout the vacation, when heretofore the schools have suffered most from vandalism and neglect. The club meetings bring to the school not only the boys and girls, but the mothers and fathers, to study the plans and purposes of the club work, the methods of cultivating the crops and fighting

plant diseases and pests. During vacation they meet there to hold their canning demonstrations, and often become aware for the first time of the needs and deficiencies of the school, and hasten to supply these. In the fall they meet there to give reports of the work, exhibits and judge the products and award prizes and listen to talks and addresses on practical subjects.

I have seen a group of stolid, timid country girls who were afraid of themselves and their audience taught a lively yell which embodied the spirit of co-operation, and afterwards summoned to the canning work which they accomplished with ease and dispatch. A uniform white cap and apron adopted by the club girls and worn at public demonstrations taught them the lesson that house work and slouchiness in dress do not necessarily go hand in hand.

We want an organization of patrons and pupils in each community under an active, interested, intelligent teacher, to crystallize public sentiment into actual school improvement. The local association

should, in turn, keep in close touch with the county organizations. The teacher should be a member of it and understand thoroughly its plans and purposes. He should study these plans and modify them to suit the local conditions and translate its purposes into the needs of the individual schools. He should interest his patrons and pupils in the industrial clubs and use these as one means of vitalizing the course of study and bringing his school in close touch with the lives of the people. He should invite the extension workers and experts to visit his school and instruct his pupils in health, agriculture, etc. He should use the bulletins supplied him for supplementary work on reading, agriculture, etc. He should bring all these forces to bear on the improvement of school and community, educate his people into the habit of looking to the school for help in solving their problems and coming to the school for a discussion of these. He will thus realize the modern pedagogue's ideal of making the school the social centre of the community.—Ag. Gazette.



JUNE EXCURSIONS

Excursionist to Fancher (on O. A. C. campus)—“Have you lived here all your life?”

Fancher—“Not yet.”

Overheard at the Institute after Choral Club practice, when the choir was practicing the amen.

Prof. Sheldrick—“Don't hang onto the—men so long, ladies.”

A Red Cross Appeal to the Farmers

OUR country, with its allies, is waging a great war for justice, for the protection of small nations in the enjoyment of their rights, for continued and growing freedom, and for the maintenance of its pledged work of honor. Much destruction and desolation are being caused. Lives are being lost by the thousand. Canada's first contingent is now in the thick of it. Some will fall sick; many may be wounded; some will pay the last full measure of devotion to their country and its cause.

The Red Cross Society exists to succor the sick and wounded in war. The need of Red Cross Service is great, and growing greater as the war goes on. The price of progress towards lasting peace is very, very dear. It cost lives, homes, health and much besides. Canada's part in the process of payment, through giving for Red Cross work, is mercifully light and easy, even when all have given to the extent of really feeling it.

The soldiers and sailors pay the price exacted by the desolating struggle from week to week. What they paid in blood and did in sacrifice a month ago was not enough for them. Shall we say it was enough for us? What they are doing and suffering and achieving have put aside, for the time, all their thoughts and plans for individual welfare, comfort and safety. They don't hesitate to establish precedents. But they are precedents of heroic sacri-

fice for our country and its cause, for our principles and ideals that they may be upheld.

Farmers, individually as well as through their institutes, clubs and cheese and butter factories, are in a position to help very greatly. Their business does not suffer from the war. Prices of nearly all farm products have gone up. While labor is scarce there is time to think of the boys at the front and to send the Red Cross Society a gift to be spent for the sick and wounded.

Farmers are generous in sentiment and generous in giving when their hearts and heads point the way. This is a case when they do so point clearly, persuasively and urgently. In this crisis, in the lives of nations and in the lives of stricken soldiers, none can pray too much, do too much or give too much.

I appeal to farmers to send me sums from \$1 to \$50. Every \$50 provides for one additional hospital bed with the giver's name over it. By sending me about \$10,000 you would serve your country well, bring credit to yourselves, and make all of us very proud of you. For the sake of the wounded boys, make the gift substantial. It will be an investment towards the recovery of some Canadian soldier who stood in our stead that our cause might be upheld.

Faithfully your friend,
JAS. W. ROBERTSON,
 Chairman Red Cross
 Society at Ottawa.

The Farmers and the Red Cross Society

WE publish this a second appeal on behalf of the Red Cross Society, by Dr. James W. Robertson.

Dr. Robertson is still best known to the farmers of Canada as Professor Robertson. He began his official public service at the Ontario Agricultural College nearly thirty years ago. Twenty-five years ago he went to Ottawa as Dairy Commissioner for the Dominion. The dairying service of the Department of Agriculture soon become known and trusted throughout Canada. From Prince Edward Island to Alberta, farmers profited by the illustration dairy stations and the travelling instructors. The output of cheese and butter in Canada added to the reputation of its rural workers.

Other public services of continuing and growing value were inaugurated while Professor Robertson was Commissioner of Agriculture. Among them were the Live Stock Branch, the Cold Storage Service, the Seed Grain Competitions, Trial

Shipments of Fruit to the United Kingdom, and Extensions of Markets.

Besides there were the Manual Training Movement, the School Gardens, Household Science, and the Consolidated Rural Schools.

In more recent years, Dr. Robertson was Chairman of the Royal Commission on Industrial Training and Technical Education. Farmers in all provinces are familiar with the survey of farms by the Commission of Conservation and the illustration farms by its Committee on Lands, of which he is Chairman.

In these and other ways, Dr. Robertson has given the farmers of Canada the best that was in him. He says he is their debtor for many opportunities, for much kindness and for warm appreciation. But they are his debtors too. And he now reminds them of that for the first time in order to establish his right and privilege to appeal to them for this worthy cause.

Preparing For Winter

By W. F. STRONG, '16.

IT may seem rather early to mention winter, but right now is time to get everything ready for wintering the laying stock.

April and May pullets should start to lay by the first of November, or even sooner, and they should be in their winter quarters several weeks before they start to lay, so

they should be brought in as soon after October 1st as possible.

The first thing to be attended to, and the one most frequently neglected by the average farmer, is the preparation of the house. On the college poultry farm, every summer the houses are all cleaned out and whitewashed. The whitewash is

made from fresh lime and applied while hot with a spramotor or force pumps. About six or eight per cent. of crude carbolic acid is added to the wash, also a small pail of buttermilk added to each barreiful makes it stick better. Everything moveable in the house is taken out and disinfected. Nests receive particular attention. When fresh straw or shavings is put into the nests and fresh litter on the floor, the house is perfectly clean and healthful for the reception of winter layers.

When the house is ready, the pullets should be brought in from the ranges, and the hens which are to be kept over the winter should also be housed at the same time.

It has been believed by many poultrymen, and investigations seem to bear out the belief, that hens which moult late are better winter layers than those which moult early. Those hens which moulted in August and are now starting or have started to lay, are likely to stop again when the cold weather sets in. So now is

the time to pick out the hens to keep over winter.

The ragged looking ones should be put into the laying house and fed well to help them through the moult, and they should start to lay at the same time as the pullets and keep at it till spring. All males should be kept separate from the females until breeding season opens, as it gives them a better chance to produce vigorous stock when it is wanted. Also some breeders claim that feather eating is sometimes acquired through hens picking the pin feathers of a moulting male and thus developing a taste for the animal matter in the quills.

This is just a little homely, old-fashioned chicken talk, but it is practical and may help someone to remember that winter is coming and we should be prepared. A little attention in October means dollars in December; for if pullets do not get started to lay before December, they are not likely to start before February.

Soil Moisture Determinations

BY C. M. LAIDLAW,

AN attempt will be made here to discuss some of the factors to be considered in the determination of soil moisture and the presenting of the measurements obtained.

The first consideration is: How are the measurements made to be presented? The more common reports show the moisture as the percentage by weight of the soil, but do not state whether the percentage of moisture shown considers the soil and water together as 100 or whether the dry

soil is taken as the unit and the moisture expressed as equal to so many one-hundredths by weight of the dry soil. The latter method is the better. If we consider the first method, and for example, suppose a soil to contain 20 per cent. of moisture. This would mean 20 pounds of water to 80 pounds of dry soil. Now if the moisture was doubled we would have 40 pounds of water to 80 pounds of dry soil, or 40 pounds of water in a total of 120 pounds, or $40 \div 120 \times 100$ would give

us 33-1-3 per cent. of moisture. The soil containing 33-1-3 per cent. of moisture has twice as much as that containing 20 per cent.

By the second method 20 pounds of water and 80 pounds of soil would be expressed as $20 \div 80 \times 100$, which would be 25 per cent. of water, or 25 pounds of water to 100 pounds of soil. If, as in the former example, the water were doubled in quantity there would be 40 pounds of water to 80 pounds of soil, or 50 per cent. of water. The percentage by the latter method shows clearly just how much change has taken place while the former method does not.

The amount of water by weight does not, however, indicate very clearly the amount of water in the soil, because soils vary greatly in weight, or in both apparent and real specific gravity, and we do not usually think of the soil in quantities by weight, but rather in quantities by volume. We think of an acre or a square rod of ground, to a depth of one or several inches or feet as the case may be. We have found that the apparent specific gravity or the weight of dry soil in a unit volume varies greatly, not only between the top soil and the subsoil, but also in the different layers themselves. The apparent specific gravity of the top soil in one field at one time varied from .781 to 1.207, and in the subsoil from 1.679 to 1.877. The real specific gravity also varied.

Comparing percentages by weight with percentages by volume, using the second method of percentage by weight, and considering the percentage by volume, on the same basis, namely, that 25 per cent. of moisture by volume would mean 25 volumes,

say cubic inches or cubic centimeters, of water to 100 volumes of soil.

Now if the top soil has an apparent specific gravity of 1. and the subsoil of 2, let the top soil have 40 per cent. of moisture by weight and the subsoil 20 per cent. We would naturally think that there was twice as much water in the top soil as in the subsoil, but such is not the case. In the top soil one volume of soil weighs 1. unit of weight, and one volume of water weighs one unit of weight, so the top soil has 40 per cent. of moisture by volume.

One volume of the subsoil, however, weighs 2 units of weight, or it is twice as heavy as water, so we multiply the 20 per cent. of water by weight, by 2 and we get 40 per cent. by volume. Thus it is shown that there is, in the example considered, just as much water by volume in the subsoil as in the top soil. Or for each 10 inches in depth of top soil there is the equivalent of 4 inches of water and for each 10 inches of subsoil there is also the equivalent of 4 inches of water. The percentage by weight does not show it in this way.

Making the Determinations.

Soil samples are usually taken with an auger. An inch and a half auger with the shank extended to make the total length 4 feet serves well for ordinary sampling. Round tin cans 3.8 inches wide, and 2.5 inches deep make very good containers. A preliminary investigation should be made to determine at what depths the samples should be taken. This can be done by digging a hole so that the layers of soil may be seen.

Each markedly different layer should be sampled separately. If the soil and subsoil are uniform in character it may be sampled in convenient

layers, say each foot. Ordinarily the top soil will be greatly different in makeup and density from the subsoil, and whatever its depth it should be taken separately, may be the subsoil in two distinct layers. Just below

the top soil is a layer of blue clay, below that is a layer containing considerable sand. The table below shows some of the characteristics of these layers. A physical analysis has not yet been made of this soil.

	Moisture.				Apparent Specific Gravity.	A. D.	Determinations.	Real Specific Gravity.	A. D.	Determinations.	Per cent. Pore Space.
	Per cent. by Volume.	A. D.*	Determinations.								
First 7 ins..	32.2	.076	3	1.021	.012	3	2.380	.004	4	57.1	
Second 11 ins.	30.2	.63	3	1.587	.010	3	2.571	.033	2	38.4	
Third 12 ins.	25.0	.45	2	1.818	.045	3	2.650	.004	2	31.4	

*A.D. If another set of determinations had been made at the same time, the mean of those determinations would not have been likely to vary from the mean given in this table by more than the amount shown in the column A. D. It is a measure of the reliability of the work.

The pore space is computed from the real and apparent specific gravity by the formula:

$$R. Sp. Gr. - Ap. Sp. Gr.$$

$$P. S. = \frac{R. Sp. Gr.}{R. Sp. Gr.}$$

The determination of the moisture must be made by weight and the percentage by volume calculated by multiplying the percentage by weight by the apparent specific gravity of the soil.

For the top soil where the moisture content and the apparent specific gravity varies greatly from place to place and from time to time a determination of the apparent specific gravity is made each time the samples are taken. For the subsoil less frequent determinations of the apparent specific gravity are required. It is hoped that investigation will show how the density of the various soils under observation vary with changes in moisture content so that frequent determinations of apparent specific gravity will not be necessary to give the correct factor for changing percentage

moisture by weight to percentage by volume.

The method of determining the apparent specific gravity was devised, following the suggestion given by the Journal of Foreign Agricultural Intelligence for January, 1915, on page 16.

Lumps of undisturbed soil are taken, placed in soil sample cans, that they may not be broken or lose moisture in being taken to the laboratory and waiting to have their volume and moisture content determined.

In determining the volume of the undisturbed lump of soil (lump of soil in field condition) it is suspended by a string and weighed, then immersed in paraffin heated to just above the melting point, then weighed again. The paraffin forms a water-proof coating over the lump. The lump is then weighed in water. The weight in air with the paraffin less the weight in water is the weight of the volume of water displaced. All weighing being in grams the number of grams lost when weighed in water equals in

number the number of cubic centimeters of the whole lump, wax and soil. The weight in air with the wax less the weight in air without the wax gives the weight of the wax, and the weight of the wax in grams divided by its specific gravity equals its volume in cubic centimeters. The total volume less the volume of the wax is the volume of the soil. The wax covering is now removed and the percentage of dry soil determined. From this the amount of dry soil and the apparent specific gravity are calculated.

Where worm holes are present the wax runs into them and an error occurs. A remedy or correction has

not yet been found for this.

All notes and figures should be kept in a concise and convenient form and all properly labelled that there can be no doubt as to where they belong.

For division and multiplication of small numbers, three or four figures or less, a slide rule reduces very much the time and effort required, also the chance of mistakes. The determination of the probable errors when a few determinations are made will show to how many decimal places the weighing should be made and how many figures should be retained in the final result.

The Students' Co-operative Association

BY J. E. McLARTY, President.

AT the present time the need for co-operation among the farmers is being keenly felt. The Ontario Department of Agriculture, realizing that something must be done, has appointed a specialist in the person of F. C. Hart, B. S. A., to deal with the problem.

At the O. A. C., the demands have been no less urgent than those among the farmers. To cope with these demands, the students have joined themselves into one of the most efficient co-operative associations that may be found in any college. The students do the executive work and thus receive a good training in this line.

It would be rather a long story to go into the success of the association. Suffice to say that all branches are doing a very successful business. The publishing branch has possibilities ahead of it almost beyond

the expectations of the most optimistic. The supply department is on a fair way to become the largest assembling book room for agricultural books on the American continent. Already its merits have spread from the Atlantic to the Pacific. It is just a matter for the students to further the business as much as possible. Two years ago the rink was a blissful dream to all students; to-day it is a "howling" success. It is now a stronger structure than when completed—thanks, may we say, to the heavy snow storm which caused its collapse last winter and inconvenienced the skaters for a couple of nights only.

No stronger argument can be advanced for the success of the association than to say that just last spring a portion of land was purchased upon which to erect a large students' building to provide the

needed accommodation for the increasing business that is rapidly piling up.

To the new students who come to the college for the first time, and also to the students who are returning to continue their work, let me point out to you the desirability of your becoming a member as soon as you register. Remember it is purely a students' organization, and its success or failure depends upon the united support of each and every student. It is to your advantage and also to the advantage of the associa-

tion that you become a member as soon as possible. In short, each member receives a membership ticket which entitles him or her (1) to the regular monthly editions of the college magazine, (2) a season ticket to the skating arena, (3) to share in the profits of the association in proportion to goods purchased. Think it over seriously, and come prepared to link yourself up as a member with a determination to further the success of the association to the best of your ability.

Feeding London

The British Navy and Canadian Railway Expansion.

THE present conflict in Europe has demonstrated beyond the possibility of doubt that the maintenance of Britain's superiority at sea and the expansion of wheat areas in British Dominions have been linked together as basic factors in the consideration of plans for imperial offense and defence. The lawmakers in London, as a matter of policy have allowed nothing to interfere with the building up of an all-powerful navy, and they have steadfastly ignored the protests of Englishmen who have contended that Great Britain would be in an impossible position if war should develop with a powerful maritime power. There were numerous men in England who believed that in the event of an important European struggle involving Great Britain, "the hunger of London would dictate terms of peace." But the admiralty were convinced that the sea power of Britain

would keep all the routes open for foodstuffs. The lands in the British Isles which might have been devoted to the growth of more wheat were left as before, and the investors of Britain, by placing their funds in the bonds of railways in Canada, in South Africa, in Australia and in New Zealand, where vast stretches of fertile country remained to be opened up, encouraged the production of a steady supply of foodstuffs which might be called upon in case of emergency. The under-water craft of Germany have failed to throttle the shipping of Great Britain. Her ships come and go almost as they please. And the resources of wheat lands, in themselves many times the area of the British Isles, are available for the need of the people of Britain.

In facilitating the expansion of the various railway companies in the Dominion during the last thirty years, the successive governments,

federal and provincial, have enabled Canada to take the burden of a greater production in this year of the Empire's peril. Canada is measuring up to her advertised destiny as the "Granary of the Empire," or, more emphatic still, "Bread Basket of the World." The prophecies of leaders of thought for three decades are on the verge of fulfillment. The large exportable surplus of the wheat fields in Canada will go to feed a fair proportion of the dependent millions of England and, probably, the war-harassed Belgians as well. The railway lines which have been constructed east and west and north and south throughout the country have made her present position possible. Without these essential traffic arteries the Dominion would have been merely a helpless spectator while the greatest war in history rumbled through to a conclusion. Canada's most important contribution to the cause of Empire is in wheat and flour and bread.

The bulk of the supplies of Canadian wheat for export are drawn each year from the wheat fields of the prairie provinces. The total supply may be computed by a study of the carryings of the railways. During the crop year 1913-4, the Canadian Northern alone handled from the territory served by its western lines, 47,295,000 bushels. Estimating the increase this year at 20 per cent., the C. N. R. should haul

out approximately 56,750,000 bushels of wheat from the provinces lying between the Great Lakes and the Rocky Mountains. That quantity of wheat converted successfully into flour and into standard loaves of bread would feed Greater London, with its estimated population of 7,252,963, for more than four and a half years.

According to the millers, a barrel of flour, 196 pounds, is made from $4\frac{1}{2}$ bushels of wheat, and, according to the bakers, 187 standard loaves of 24 ounces each, are made from one barrel of flour. The anticipated carryings of the Canadian Northern this season, then, represent 12,611,111 barrels and 2,358,277,757 loaves of bread. If this were divided in London, each individual in the Imperial City would receive 325 loaves. If you divide the population of the capital into families of three, each family would be provided with 975 loaves. Allowing a liberal supply of four loaves a week to each family would extend the foodstuffs over 244 weeks, or more than four and a half years.

There is no need to carry the illustration further. So long as Britain holds command of the seas, the available supply of foodstuffs from Canada alone should suffice to overcome the handicap her critics maintain she imposed upon herself by producing but a quarter of the wheat she annually consumes.



Ontario Agriculture

Some Points From the Annual Report of Hon. J. S. Duff

RURAL school fairs are helping to interest the youth of Ontario in the land. In 1914 there were 148 fairs held in 37 counties, including the children in 1,391 schools. There were 75,602 entries and a total attendance of 95,310.

Several orchards are rented annually by the department to demonstrate the value of proper cultivation, pruning and spraying. Demonstrations in packing apples, particularly in boxes, are given at fall fairs and elsewhere.

A co-operation and markets branch has been established by the department in order to assist the agriculturist in solving marketing problems and to deal in an educational way with such matters as the name of the branch would embrace.

Pure-bred surplus stock of the herds at the Ontario Agricultural College are sold periodically by auction. At the 1914 sale, prices as high as 13 cents per pound were paid for steers on the hoof, and the proceeds of the entire sale exceeded \$4,000.

To clear Ontario of "scrubs" and undesirable sires, the department is proceeding to enforce the law which requires the compulsory inspection of stallions. This law provides that no grade stallion shall be allowed to stand or travel after August, 1918.

In factories and mercantile establishments, with 229,480 employees, and inspected under the direction of the department last year, only in 94 cases were employees found to be

under 14 years of age, and in these cases the law was promptly enforced.

Despite the unsettled condition following the outbreak of the war, the attendance at the Ontario Agricultural College in 1914 totalled 1,551. Ontario students totalled 466 and those from other provinces 74. Ontario students the previous year numbered 449.

Farmers' sons take great interest in the Feeding Hogs for Profit Competition, and in the 20 competitions last year, the average net profit of the 20 winners was \$6.40, while the average of the first five winners was \$10.10 per hog, and that of the lowest five \$4.55.

The ravages of the army worm last year were reported from 42 counties or districts and 234 townships. The last serious outbreak occurred in 1896. At that time Brant County escaped, while in 1914 the outbreak apparently began there, and this county was the chief sufferer.

The benefits of tile drainage are being shown under the auspices of the Ontario Agricultural College by means of demonstration plots showing the results from drained and undrained land. Prior to 1914 eight of these had been started, and the first reports show an average increase per acre of \$14.12 on drained land.

The increase in the use of electricity, which is rapidly overtaking steam power, is shown by the factory inspection branch of the department in a statement of the horsepower employed in provincial industries as follows: Steam, 386,-

767 h.p.; electric, 273,357 h.p. water, 58,896 h.p.; gas or gasoline, 7,042 h.p.

For promoting the study of agriculture in the public schools, the following were features of work at the Ontario Agricultural College: Normal Teachers' Class in Elementary Agriculture; Summer School Course for Public School Teachers; Summer School Course for High School Science Teachers and the first Rural

Teachers' Conference in Ontario.

Experiments being carried on at the Experimental Fruit Farm at Vineland include one to determine the value of plum roots for the peach under certain conditions; another in pruning, in which 200 spy trees are being used; one to determine the value of dynamited holes; others to test varieties of strawberries, plums, pears, cherries, currants and gooseberries.—Weekly Sun.



PRICES NINETY YEARS AGO

Following are a few prices of commodities and luxuries prevailing in Eastern Ohio nearly a century ago. The prices given are taken from charges in an old "counter book" of 1825-1826:

Eggs, 4c a dozen.
 Butter, 8c a pound.
 Sugar, 10c a pound.
 Pepper, 50c a pound.
 Coffee, 31c pound.
 Tea, \$1.50 a pound.
 Bacon, 6¼c a pound.
 Whiskey, 25c a gallon.
 Wheat, 40c a bushel.
 Oats, 15c a bushel.
 Corn, 25c a bushel.
 Muslin, 20c and 37½c a yard.
 Calico, 36c and 50c a yard.
 Flowered wall paper, 4½c a yard.
 Salt, 2½c a pound.

—Blue Valley Bulletin.

COMING TO STAY (?)

First Freshman—"I've lost my baggage."

Second Freshman—"What happened?"

First Freshman—"The cork came out."

"Ma, what does 'd d' stand for?"

"Doctor of divinity, my dear. Don't they teach you the common abbreviations in school?"

"Oh, yes; but that doesn't seem to sound right here."

"Read it out loud, my dear."

My Dear (reading): "Witness—I heard the defendant say: 'I'll make you suffer for this. I'll be doctor of divinity if I dont!'"—Milwaukee Sentinel.

IN SEPTEMBER



D C McARTHUR 1915

THE O. A. C. REVIEW

REVIEW STAFF

A. M. McDERMOTT, Editor-in-Chief.

J. C. NEALE, Associate Editor.

D. M. McLENNAN, Agriculture.

I. MORSE, Experimental.

C. C. DUNCAN, Horticulture.

W. STRONG, Poultry.

C. N. GRAHAM, Query.

F. F. SELWYN, Alumni.

C. M. NIXON, College Life

E. E. CARNCROSS, Athletics.

D. A. McARTHUR, Artist.

E. T. CHESLEY, Locals.

MARGARET SAXTON, Macdonald.

Editorials

INTRODUCTORY

This, our first number in a new college year, is an introductory one. During the summer months while the college is closed to the regular courses, the Review experiences difficulty both in maintaining itself and in reaching its student readers regularly each month, but now with the opening of college normal conditions are again reached. We expect as usual a large freshman class, and to them this is especially an introductory number.

The new staff assume their duties with this issue, and they realize that if the record the Review has had is to be maintained during critical circumstances such as we are passing through they will need the help and co-operation of every student, new and old, enrolled at the college. No staff, however earnest and enthusiastic, can produce a college magazine which should be near to the heart of every student and organization in that college without the active sympathy of each one of those students

and organizations. Remember, the O. A. C. Review is the press organ of the Ontario Agricultural College, and every student has at once an opportunity and a responsibility in its pages—a privilege of contributing his ideas to its readers; a responsibility in that it should have all the news of doings in and around college, and it is his duty as much as that of any one else to see that it gets it. Of course, we are handicapped through our magazine being a monthly instead of a weekly or daily publication, but that is no reason why our matter should not be up to date. Experience has taught us very clearly that the local city press cannot be depended upon in matters of truth and detail as regards our student activities, and the country looks to your college magazine for a review of your college life activities. This is the way to make it the best: Read the Review, get acquainted with the staff, give them the benefit of your ideas and experience, and when oppor-

tunity comes your way, get your ideas in print on the pages of the Review.

A WORD OF WELCOME

By the time this number reaches our readers, the college halls and grounds will be alive with the new life of another student body. Pending the formal reception under the management of the hazing committee (if such there be this term) we take pleasure in welcoming new students to our alma mater. We have asked the Presidents of the different college organizations to give us for this number a brief introductory article in this issue for the purpose of acquainting new men with them. With the compulsory fee in force, every student must become a member of these organizations, but membership is not enough. Let your active sympathy and interest go with your membership fee, for, be assured, every one of these societies has been organized and is operated with the interest of the student at heart. The Y. M. C. A., the Cosmopolitan Club, the Literary and Philharmonic societies, as well as the different clubs, are well worth the effort, time and money that should be invested in them; and

the talents of all, new students as well as old, are needed to make their work a success.

THE NEW STAFF

This is a special number, since heretofore no September number has been issued, and we are indebted both to the new and old staff for the matter contained herein. The staff elected at the close of last term, however, begin work with this issue. Conditions are far from normal this year, and "a long pull and a strong pull and a pull all together" will be required to carry the Review through the crisis. But the staff should be the representatives only of their readers to a large extent, and, hence, all have to do with the matter which is to appear in our pages during the coming year.

A CORRECTION

In a recent issue we published an article on the Nova Scotia Agricultural College and credited our agricultural editor with the same. We are indebted to Professor M. Cumming, principal of the above college, for the article which should have appeared under his name. We regret the occurrence of this error.



Alumni

The world is waiting for you, young man,

If your purpose is strong and true,
If out of your treasures of mind and heart

You can bring things old and new;
If you know the truth that makes men free,

And with skill can bring it to view,

The world is waiting for you, young man,

The world is waiting for you.

There are treasures of mountain and treasures of sea,

And harvest of valley and plain,
That Industry, Knowledge and Skill can secure,

While Ignorance wishes in vain;
To scatter the lightning and harvest the storm

Is a power that is wielded by few;
If you have the nerve and the skill, young man,

The world is waiting for you.

Of the idle and brainless, the world has enough,

Who eat what they never have earned;

Who had the pure stream from the fountain of truth,

And wisdom and knowledge have spurned;

But patience and purpose which knew no defeat,

And genius, light gems bright and true,

Will bless all mankind with their love, light and life;

The world is waiting for you.

Then awake, young man, from the stupor of doubt,

And prepare for the battle of life;
Be the fire of the forge, or be anvil or sledge—

But win or go down in the strife!
Can you stand though the world into ruin should rock?

Can you conquer with many or few?

Then the world is waiting for you, young man,

The world is waiting for you!

—Prof. S. S. Calkins.

(No doubt many O. A. C. men have joined the colors, and the Review has not had opportunity of hearing from them. We are glad to receive such letters as the following.—The Editor.)

Editor O. A. C. Review,
Guelph, Ontario.

Dear Sir—Just a line to keep the Alumni Department of your paper in touch with the boys. I have been selected to go on the 5th Overseas Contingent, with the 76th Battalion, in command of the 77th Regiment quota. Through a grave error of judgment on the part of the O. C., I have been lucky enough to secure a captain's commission with the said Battalion, and intend to move to Niagara Camp on Monday.

I must take this opportunity to congratulate the O. A. C. on the excellent showing she has made in sending so many undergraduates forward for overseas service, and I feel sure that both they and graduates of past years will continue to step forward at the call of duty.

Yours truly,

L. B. HENRY, '13,
Captain

Kapuskasing Camp,
via Cochrane, New Ontario.
July 16th, 1915.

The Editor O. A. C. Review,
Guelph.

Dear Sir—Being an old subscriber
to the Review. I thought you would
like to hear of one of the Guelph

cars, with their tents and supplies
for the summer. Some of them had
to go 270 miles further west in this
manner. They are going to call for
their pictures in September, on their
way down.

I remain yours truly,

H. B. LOWE, S.S.M., C.A.S.C.



The Alumni Editor on His Vacation.

boys whom I chanced to meet at MacPherson, 70 miles west of Cochrane. I am enclosing a couple of snapshots I took of a bunch of students who were on the way to their various beats as fire rangers. One, M. A. Watt, first year man of the O. A. C., is on the left, with hand resting on his hip, standing. The second picture shows the boys after lunch at Kapuskasing camp, ready to start off again on their hand-pump

Wilfred Singleton—At O. A. C. 1907-8 and 1908-9 (Dairy School). Went to New Zealand in autumn of 1909, being manager of a large creamery. At the outbreak of war joined the N. Z. Field Ambulance of Expeditionary Force as a lance-corporal, seeing active service on Suez Canal; thence to the Dardanelles, where he gained the D. C. M. for gallantry in bringing in the wounded under fire.

Died of wounds on 20th June, 1915.

172nd Company, A. S. C.,
28th Divisional Train,
British Exped. Force
Belgium—France
July 29, 1915.

To the Manager O.A.C. Review,
Guelph, Ont., Canada.

Dear Sir—If you will kindly turn up your correspondence file of last year, I think you will find my letter terminating my subscription to the Review, and assuring you of the ever-pleasant remembrances of college life and of my ever-grateful feelings for what it has done which always accompany those remembrances.

If you are compiling any war record of college students, my own

name and also that of another ex-student (particulars of whom I give you on another sheet) may be of some slight interest.

With renewed best wishes to my dear old alma mater of ever affectionate memories, I remain sincerely yours,

GEO. L. ATKINSON,
Lieut. A. S. C.

R. N. Morgan, B. S. A., manager of the B. F. Avery & Company branch at New Orleans, La., recently visited the O. A. C.

Mr. Davison, an O. A. C. graduate, formerly with Department of Agriculture, P. E. I., joined the composite battery of heavy artillery, in training at Halifax, in January, as farrier sergeant.

Macdonald

Graduates of the Two-Year Normal Course in Domestic Science (1913-1915):

1. Miss C. Tena Black, Hawkestone, Ont.
2. Miss Jean C. Bradley, 316 Brock St. N., Sarnia, Ont.
3. Miss Lila M. Cockburn, 40 Park Ave., Guelph, Ont.
4. Miss Grace Conover, Brampton, Ont.
5. Miss Jessie Crews, R. R. 3, Trenton, Ont.
6. Miss Ethel G. Dickenson, 4 Park Row, Rennie's Mill Road, St. Johns, Nfld.
7. Miss Kathalen Dowler, 66 St. James Place, Winnipeg, Man.
8. Miss Lena Grothier, Newboro, Ont.

9. Miss Ethel G. Hannah, 78 Elliott Row, St. John, N. B.
10. Miss Mary L. Kelso, Brandon, Man.
11. Miss Bessie McDermant, Lakeview, Ont.
12. Miss Gladys Manning, 156 Mavety St., Toronto, Ont.
13. Miss Renee D. Rocher, Koster, Transvaal, S. Africa.

Graduates of One-Year Normal Course in Household Science (1914-1915):

1. Miss Muriel Foote, Fontill, Ont.
2. Miss Zella E. Hanham, Port Colborne, Ont.
3. Miss Olive E. Hayes, Parkhill, Ont.

4. Miss Lilla B. Isbister, Wingham, Ont.
5. Miss Hazel W. Jacques, 81 Brunswick Ave., Toronto, Ont.
6. Miss Catharine Kennedy, 269 Brock St., Sarnia, Ont.
7. Miss Jennie M. Kiteley, R. R. No. 1, Bradford, Ont.
8. Miss E. Jennie Rogers, Wardsville, Ont.
9. Miss Winnifred Westcott, Sault Ste. Marie, Ont.

Graduate of the One-Year Normal Course in Household Science (1910-1911):

1. Miss Iva G. Everson, Westmount, Oshawa, Ont.

Graduates of the Housekeeper Course (1913-1915):

1. Miss Winnifred Downey, 260 Dundas St., Belleville, Ont.
2. Miss Pearl M. Gray, Eden, Ont.
3. Miss Carrie H. Martin, Box 54, Preston, Ont.
4. Miss Elizabeth Master, New Dundee, Ont.
5. Miss Mary Montgomery, Lanark, Ont.
6. Miss Lenora Panton, Milton West, Ont.
7. Miss May Smith, Petrolea, Ont.

Graduates of the Associate Course (1913-1915):

1. Miss Margaret H. Davis, New Westminster, B. C.
2. Miss Miriam J. Dunbar, 99 Quebec St. E., Guelph, Ont.

Graduates of the Associate Course (1912-1914):

1. Miss Mary I. Campbell, Preston, Ont.
2. Miss Louise Creelman, O. A. C., Guelph, Ont.

Graduates of the Homemaker Course A. (1914-1915):

1. Miss Isabel Cochran, 225 Spadina Rd., Toronto, Ont.
2. Miss Agnes Hallett, 23 Liverpool St., Guelph, Ont.
3. Miss Margaret Hanna, 236 Brock St. N., Sarnia, Ont.
4. Miss M. Naoma Horning, Ancaster, Ont.
5. Miss Jean Kemp, R. R. No. 6, Owen Sound, Ont.
6. Miss Alice Lahay, 124 Alfred St., Brantford, Ont.
7. Miss Louise M. Laughlin, Caledon, Ont.
8. Miss Isabel S. Murray, 39 Shel-drake Blvd., Toronto, Ont.
9. Miss Emma F. Oldham, Wallaceburg, Ont.
10. Miss Catharine F. Sparrow, 120 Heath St., Toronto, Ont.
11. Miss Marjorie C. Widdifield, Newmarket, Ont.
12. Miss Mary C. Williamson, St. Marys, Ont.

Graduate of the Housekeeper Course entitled to the Professional Housekeeper Certificate as having accomplished six months Institution Housekeeping (1912-1914):

1. Miss E. May Lees, 514 Gilmour St., Peterborough, Ont.



My Boyhood Pantaloons

To-night as I sit in my cozy den
My mind runs back to that old time when
I'd just completed a couple of Junes
And had been presented with pantaloons.

Mother had made them of Pa's old pants
Without a pattern and taking a chance
That the things would fit—little they did,
But I was the all-fired proudest kid
My folks had seen for a month of moons
When I broke out in pantaloons.

Even to-night my old skin itches
When I recall those boyhood breeches;
The cloth was "jeans," a jiggery stuff
That was always stiff and always rough;
Wherever it rubbed it left its mark—
Scarred up the skin like hickory bark,
And my little legs were always sore,
Because of the boyhood pants I wore,

It occurs to me now that it gave me pain
When I learned how easy the cloth would stain;
That in spite of all I could do
To keep them clean for a Sunday or two,
Something'd happen—I'd spill some juice,
Tomato or apple—it was no use;
Those spots would get there all too soon
And soil my boyhood pantaloons.

—But in gray-haired age I'd freely trade
My present pants that were tailor made—
The corduroy kind and the hand-me-downs—
The kind I've bought in a hundred towns—
I'd give them all and much to boot
For the principal part of that coatless suit
That I got at the end of a couple of Junes—
Oh! I love them yet—those pantaloons.

—Selected.

A Lazy Chap

I'm the laziest chap, I reckon, that a feller ever seen;
 Feel drowsy at the tinkle of a bell or tambourine;
 Warn't never made fer reachin' where the revenue is foun'—
 I'm what you'd call "a lazy chap," jest built fer lyin' roun'.

Contented? Mighty right, I am! when spring winds whistle sweet
 In the meadows where the daisies make a carpet fer your feet,
 Where the nestin' birds is chirpin', where the brook in witchin' play
 Goes laughin' on, jest pushin' all the lilies out his way.

You'll find me almost any time, a-huntin' shady trees,
 With the lull song o' the locust, and the drowsy drone o' bees
 Above me an' all roun' me; I'm a queer one, so they say,
 Fer I'd ruther hear the birds sing than to shoot 'em any day!

I wouldn't nigh be guv'ner, though it's kinder great to be,
 An' the Georgy legislatur' ain't a drawin' card fer me!
 An' as fer that old Congress—now' what's its biggest seat
 To a feller on a river bank with lilies at this feet?

Jest let 'em take the offices an' keep 'em in a whirl!
 I'd ruther have a vi'let from the sweet hand of a girl
 Than run the whole United States! So let th' country roll!
 Fer a streak o' April sunshine is a-lightin' up my soul.

I'm a-rollin' in the blossoms as they come a-tumblin' down,
 An' I'm glad as all creation there's a fence 'twixt me an' town;
 I'm a rakin' in the sunshine an' takin' of my ease,
 Whistlin' when I want to an' singin' when I please!

Jest laziness, they tell me, an' I reckon that they're right;
 But the world's so full o' beauty, an' the sun goes down at night!
 But diff'runt folks has diff'runt minds, an' drink a diff'runt cup;
 When I'm talkin' to the lilies, they're a-plowin' of 'em up!

My field's a pasture fer the cows, an' though it never pays,
 It's a powerful source o' pleasure jest to see the creeturs graze!
 The tinkle, tinkle o' the bells is sich a-pleasin' soun'—
 But I'm a lazy chap, you know, jest built fer lyn' roun'!

—James Whitcomb Riley.