


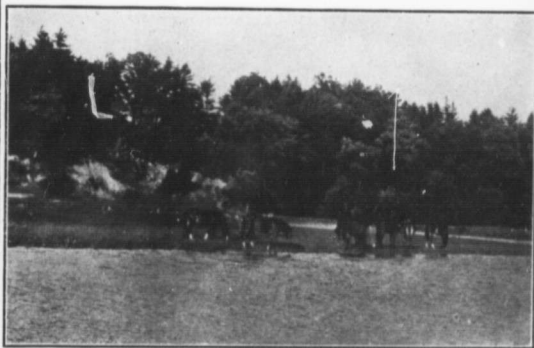

Volume XXVII.

Number 9




O.A.C REVIEW

June
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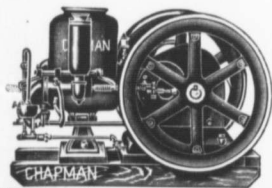
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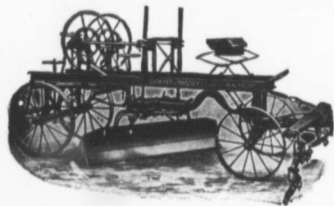
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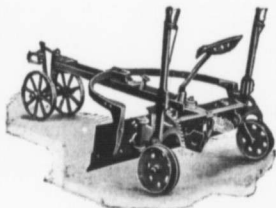
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OFFICIAL CALENDAR

OF THE

DEPARTMENT OF EDUCATION, FOR THE YEAR 1915

JUNE.

1. Collectors in Unorganized Townships to report to Sheriff uncollected rates for previous year. (On or before 1st June).
 Assessor in Unorganized Townships to return assessment roll. (Not later than 1st June).
 Public and Separate School Boards and County Council to appoint representatives on the High School Entrance Boards of Examiners. (On or before 1st June).
 By-law to alter school boundaries or form Consolidated School Sections—last day of passing. (Not later than 1st June).
3. King's Birthday (Thursday).
7. Normal School Final examination begins.
9. Upper School examination for Entrance into the Faculties of Education and Honour and Scholarship Matriculation examinations begin.
11. Pharmacy Matriculation examination begins.
 Provincial Normal Schools close.
 University commencement.
14. University Pass Matriculation, Senior High School Entrance and Senior Public School Graduation Diploma examinations, and the examination for Entrance into the Model Schools begin.
16. The Lower School examination for Entrance into the Normal Schools and into the Faculties of Education begins.
 Junior Public School Graduation Diploma examination begins.
18. English-French Model Schools close.
19. Last day for receiving applications for Summer Schools.
21. Junior High School Entrance examination begins.
22. Inspectors' report on Legislative grant due. (Not later than 22nd June).
24. Middle School examination for entrance into the Normal Schools begins.
29. High, Continuation, Public and Separate Schools close. (End on 29th June).

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NEW No. 21 MOWER.

Light Draft.

In our long series of Tests under all kinds of conditions we have failed to find any Mower of the same width cut which draws as light as the Massey-Harris New No. 21, as shown by the Self-Registering Draft Tester.

A New easy-acting Foot-Lift.

A Lift different from any other, works very easily, is attached directly to the Frame, practically all Steel and not likely to wear or get out of adjustment.

No Side Draft.

The Tread is wider than on any other Mower—the Wheels are large and carry the Bar in such manner that side draft has been effectually overcome.

Pole Removed by simply removing two Bolts and without affecting Lift or any other Parts.

This is a great convenience for Shipping or Storing.

No Looseness of the Cutter Bar.

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Fully described in a Special Circular. Free by Mail or from the Massey-Harris Agent.



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Farming to-day is nothing like the monotonous drudgery it used to be years ago. Intelligent efforts have been put forward in all directions to make farm work easier, pleasanter and more profitable. And nothing has done more to further this than

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For forty-seven years Louden Equipments have been the pioneers in their own particular field. They are to be found wherever good farming is done. They eliminate the drudgery of farm work and add to the profit-making side of it. Your own studies will be more helpful and interesting if you make yourself familiar with Louden Equipments. Send to us for a free copy of the Louden Booklet.

See Louden Equipments in use at the O. A. C.

LOUDEN MACHINERY COMPANY.

Guelph, Ont.

To Live In

To Make Money In

To Work In

ONTARIO

is still the best Province in
the Dominion

Ontario has great agricultural opportunities for fruit farms, dairy farms, mixed farms, or for very cheap farm lands in the clay belt. In planning your future and in talking to your friends keep these things in mind.

HON. J. S. DUFF,
Minister of Agriculture, Toronto, Ont.

H. A. MACDONALD,
Director of Colonization, Toronto, Ont.



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The O. A. C. Review is published by the "O. A. College Students' Publishing Association," O. A. College, Guelph, Canada, monthly, during the college year.

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THE O. A. C. REVIEW

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

VOL. XXVII.

JUNE, 1915.

NO. 9.

What is Farming?

"FARMING is not breaking clods; farming is not moving soil; farming is not ploughing—that is one of the little bits of inevitable, unavoidable experience and labor. Farming is gathering sunshine; preparing the soil and the seed that the plant may come and, spreading its leaves, gather in sunshine, strength of old Mother Earth, down through the leaves. Then, when man eats the bread and butter, the old sun, let go inside, runs the man. That is gathering wealth out of chaos. That is better than making money on the stock exchange, whereby the other fellow becomes poor. That is gathering and humanizing for the service of the race, the great unused powers of nature."

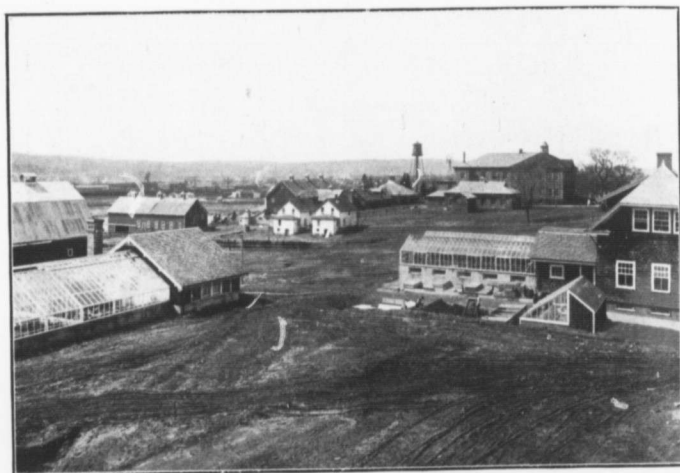
—JAMES ROBERTSON

The Nova Scotia Agricultural College

By the Agricultural Editor

A SCHOOL of Agriculture was established in Truro in 1885. It was a faculty of the Normal College, the single Professor and Principal being a member of the Normal College staff and a considerable part of his duties being those of training teachers to give agricultural instruction in the common schools. The school was

are exerting a marked influence on the horticulture of this Eastern Province. Both of these institutions were limited in their scope largely owing to lack of financial support, which was not forthcoming until 1904, when it was decided to unite the two schools into a College of Agriculture at Truro. Thus it came about that in



View from New Science Building, Nova Scotia Agricultural College.

also attended by a number who entered for the explicit purpose of preparing themselves either for practical or professional agricultural work among whom were men whose names rank high in the educational institutions both of Canada and the United States and not a few who are now recognized as leading farmers in the Province. A few years later, 1893, a school for the teaching of Horticulture was established in Wolfville, and through its halls also passed men who

February, 1905, the present Nova Scotia Agricultural College was formally opened under the principalship of the writer.

The old School of Agriculture was a faculty of the Normal College; the new College was affiliated with the Normal College, the main difference being that whereas in the former days the major part of the work was that connected with Normal College students, now the major part of the work had to do with those students

who came expressly to study agriculture. The affiliation still continues, and is now given concrete expression in a Rural Science School conducted expressly for teachers during the summer months, the instructors being members of both institutions. This arrangement is proving very satisfactory, for it means that the interests of the faculties of the two institutions are concentrated during the Fall and Winter months on those students for whom each Institution was organized. But during the Summer months the members of the Agricultural College faculty are, through the Rural Science School, brought directly in touch with the educational problems of the Province, and the members of the Normal College faculty are in the same way brought intimately in touch with the agricultural problems of the Province. While in this connection I am anticipating myself, I will for the purpose of brevity, conclude my reference to this Rural School education work by stating the salient features. Each Summer, 100 or more teachers from the Province study, in the Rural Science School, those sciences related to Agriculture. The course is so graded that a teacher by commencing the first of May may complete it in August, or may attend for three vacation periods during July and August and cover the same amount of work. On the conclusion of the course teachers are granted Rural Science Diplomas, indicating that they are qualified to teach Rural Science, and entitling the holder to an extra Government grant varying from \$30.00 to \$90.00 per year. In connection with this system, a Director of Rural Education has been appointed, who, in addition to teaching

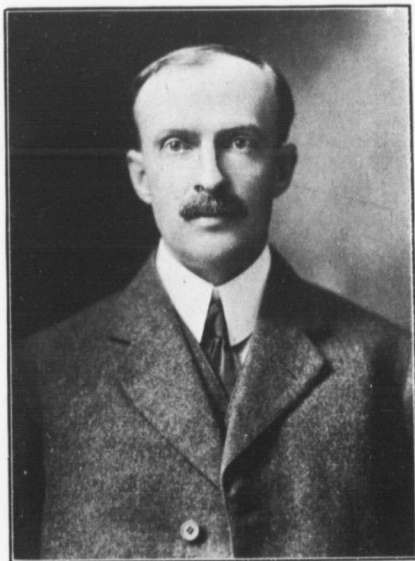
duties at the Normal College, endeavors to promote Rural Science teaching throughout the Province.

The constituency of the College in Nova Scotia is not a large one, the agricultural industry being, in extent, about one tenth that of the Province of Ontario. But while the constituency is not large, the scope for work is practically unlimited. For years, so far as agriculture is concerned, the Province has suffered from a plethora of industry. Lumbering, mining and fishing have all offered employment even to the man living on the land, and while this has resulted, for the most part, in good industrial conditions, it has retarded agricultural development. Added to this retarding influence has been the tremendous immigration first to the New England States and latterly to the Canadian West. In regard to both of these matters, a change has come about and without going into details, it is sufficient to say that never in the history of Nova Scotia have the farmers been so keen to acquire the best information available in regard to the art of agriculture. This makes work at the Nova Scotia Agricultural College very absorbing, and in a large measure accounts for a degree of enthusiasm among the members of the staff, which has been commented upon by almost everyone who has visited the Institution.

During the past ten years the College has drawn a considerable number of students from the Provinces of Prince Edward Island and New Brunswick. But, at the present time, both of these Provinces have undertaken themselves work which was formerly relegated to the Institution at Truro. No final policy has been drawn up; albeit, the writer is of the

opinion that money could be saved and more effective work accomplished if these three Maritime Provinces would get together and join forces at least in certain departments of their work. But that is a story for the future. I must now come down to the actual facts in connection with the Institution at Truro.

two years' course. The reasons are that arrangements have been made with the Ontario Agricultural College and with Macdonald College by which graduates of the two years' course, whose standing is satisfactory, are admitted ad eundem gradum to the third year at these Institutions. Up to the present time the



Prof. M. Cumming, Principal College of Agriculture, Truro, N. S.

Three principle courses are conducted at the Agricultural College. First, a two years regular course, at the end of which the student receives the Associate Diploma of the College. Second, a two weeks short course held each winter at the College, and third, the Rural Science course already described.

The reader will observe that we have confined our regular work to a

number so admitted has not exceeded 10 per cent. of the students entering the College. Practically all of the balance have taken up farming, for the most part in the Eastern Provinces.

The advantages which we reap from this arrangement are manifold, as follows: The majority of our students go in directly for practical farming, and we hold that, in the end,

these students will accomplish more for the advancement of agriculture than will the majority, at least, of those who take up the subject professionally. A large saving in the Institution itself is effected, and at very little if any loss to the Province, for the students who enter the third year at Macdonald and Guelph secure there the advantage of better equipment than we could afford for many years. Moreover the actual teaching hours of the faculty are reduced over 50 per cent. and the time so saved is spent on extension work throughout the whole Province. This has resulted in material gain, measured in dollars and cents, to the Province itself and has also greatly strengthened each member of the faculty who, by this arrangement, is kept constantly in touch with practical agricultural affairs in the Province. When for example the instructor in dairying lectures and demonstrates before the students at the College he is able to draw upon the experience of the managers of every Creamery and Factory in the Province, and the same comment might be made of the Professor of Horticulture and Agriculture, etc., each in his respective sphere. The College is not likely to be divorced, if that were possible, from the practical life of the Province, so long as the members of the faculty are, almost every day of their lives, confronted with, and helping to solve practical agricultural problems which come up from time to time in the constituency in which they occur. Perhaps it could not be worked out in the bigger Provinces of the Dominion, but, so far as the smaller Provinces are concerned the writer is convinced that the advantages, which have accrued from having the members of the faculty of

the College also members of the Department of Agriculture, are very great indeed.

The first session of this regular two-year course, which opened in 1905, was attended by 17 students. The number, in less than ten years, has grown to considerably over one hundred, which must be regarded as very healthy growth indeed.

The second course, i. e., the short course, held each winter, has proven of tremendous value to the College, to say nothing of the benefits received by the farmers who attended. In fact it has created the College constituency. In January, 1915, the enrollment in this course from the Province of Nova Scotia alone was 280, which when one considers that the farms from which we draw students are only 10 per cent. in extent, those of Ontario, must be regarded as a high pro rata attendance. And there have been bigger enrollments in the days when the adjoining Provinces of New Brunswick and Prince Edward Island had not undertaken courses of their own and were sending their students to Truro. Ten years ago the enrollment in this short course was 68. The development since that time conveys some idea of the extent to which the College influence has grown. Incidentally we can trace directly over 50 per cent. of our enrollment in the regular course to the short courses.

The Rural Science Course has already been discussed. It serves as the connecting link between the schools of the Province and the College itself, and in so far as it will prove the medium of reaching hundreds of scholars in the schools in comparison with tens at the College and its short courses,

promise to greatly extend the sphere of agricultural education activity.

The College plant and buildings are small in comparison with those at Guelph. There is no dormitory, but the students have no difficulty in securing satisfactory board in private houses in Truro. The buildings used for class room purposes number four, the main building, the dairy building, the horticultural building, and the live stock judging pavilion. By next Fall these will be supplemented by the finest building yet constructed on the premises, viz., the Science building, the erection of which was made possible by the capitalizing of part of the federal grant, for the aid of agriculture. This building, when complete, will house class rooms and laboratories for chemistry, entomology, plant pathology and domestic science. Up to the present time some of these subjects have been taught in the buildings mentioned in the foregoing and some in the science building connected with the Normal College in the town.

The buildings and equipment that compare most favorably with those at Guelph are the barn buildings which loom up relatively large in comparison with the purely educational buildings and which house superior specimens of horses, cattle and other domestic animals.

The whole property, farm, garden and campus contains about 400 acres and might be described as versatile being composed of up land intervale and marsh. The variety gives the management as well as the students a first hand knowledge of practically every kind of soil that is found in Nova Scotia. If one could have things a little more to his liking he would

wish that the College grounds were included in that belt of Nova Scotia where apples and other fruits are produced in such perfection. Like Guelph, in Ontario, however, Truro is outside of the fruit belt. Never the less gardening, including the growing of small fruits, is now a strong feature at the College and no effort is being spared to develop a commercial orchard. Moreover the College benefits from the co-operative support received from the management of the Dominion Experimental Fruit Farm at Kentville which makes possible the supplementing of deficiencies at present existing.

So far, I have dwelt almost entirely upon the work done at the College itself, and yet the outstanding feature of the College development of the past few years has been the extension work. As, already stated, the heads of each department in the College are heads of the corresponding divisions of the Department of Agriculture, and their duties call them into the country at all seasons of the year. Therefore, when the people talk creamery they go to the College; when they talk live stock they refer to the College, and so with almost every phase of farm life. The whole system of organized agriculture, including live stock improvement, creamery organization, illustration orchards, demonstration work along various lines, short courses, and the county representative system are all closely identified, in fact almost an integral part of the College itself. Of course the relatively small size of the constituency makes possible this feature of the work to an extent that could not be accomplished in a larger Province like Ontario. For example

at last winter's series of short courses, held at various centres throughout the Province, practically all the lecturers were College men, in fact the heads of the departments at the College. Some idea of the extent to which these short courses gave our College men an opportunity of coming personally in contact with the farmers of the Province may be conveyed when one observes that the average attendance at each session, morning, afternoon and evening, continuing from three to four days, at each of these courses, was 147,

which must be regarded as very high indeed.

These extension movements are full of promise for the future. They mean that the Nova Scotia College, like other Agricultural Colleges in Canada, is becoming an essential part of the agricultural community, and not a mere ornament, and when farmers realize this vital relation of the Agricultural College and its educational work to the ultimate goal of their effort they will also realize, and in a measure achieve, the unlimited possibilities of agriculture—the foundation industry of the country.

Preserving Eggs

S. G. Freeborn

DURING the Spring and early Summer months eggs figure prominently on the bill-of-fare put before our people. During the early Winter months, strictly new-laid eggs are a luxury that are enjoyed by a very few, and eggs of any history are so advanced in price that our careful dietitians have marked the pages of the cook books at the recipes calling for no eggs.

Most hens have not been fortunate in receiving either in their hereditary make up, on their birth-day, or amid their environment, the proper encouragement to lay eggs in early winter. But so strong is the age—old instinct for the preservation of the species—that every mature fowl whatever her genealogy or circumstances, tries to contribute something in time for an Easter egg offering. It is the natural reproductive season, and as the season advances the hens that have been laying since fall re-

spond to the stimulus of a genial spring sunshine, and its attendant advantages. The busy biddies are moved to fresh efforts to roll up a big record on the score board. The pullets who have not been in the game commence to bat out an odd tally. Their mothers who have had a long winter vacation make a bid to come back, begin to take an interest in the training table, and a good many home runs to the nest are made in an effort to make up for the blanks in the early innings. Increased production and the consumers past acquaintance with the decreasing quality of the general product leads to a glut on the market and enables the large city packing houses to purchase at the reduced prices large stocks to preserve for an expected premium at a later date. These heavy takings of the packers serve to steady the downward trend of egg prices. The subsequent disposal of the eggs so

held acts as ballast to the rising markets. Greater perfection in preserving methods should be welcomed by both producer and consumer alike. The methods of the packing houses offer suggestions to the country dealer who has not good shipping facilities. Some simple methods of preserving eggs should be of interest to those who would store a surplus for the day when the new-laid product is "too dear to eat." Possibly the housewife, who must buy for home consumption, will find one or another method profitable and convenient for her needs.

In keeping eggs for use in a season of scarcity and high prices, it is the appearance, flavor, and cooking qualities of the new-laid egg which we would like to preserve or counterfeit in the preserved article. This is hardly possible, but a good egg, well put up, may, after a reasonable interval between hen-cackle and breakfast bell, deceive a palate that has not been educated to discriminate between the fresh bouquet of youth and the savor of well preserved old age.

To remain fresh, eggs most certainly must be fresh when put up. Buying for preserving in April, May and June, the inexperienced housewife would like to get a fair idea of the relative youth of the hen fruit supplied by the grocer. Make a brine of two ounces of salt to a pint of water. A perfectly fresh egg will go to the bottom at once and lie on its side. Nearly fresh, it will tend to sink, small end down, and the amount of the large end exposed will depend on the staleness of the egg. This is not an infallible method, as mixed lots of eggs may be of variable specific gravity.

A much better way is, after reject-

ing all but those with perfectly clean and sound shells, to candle the eggs. A new-laid egg will transmit the light fairly clearly, the air space in the large end is about the size of a five-cent piece and not noticeable, while the yolk is almost invisible. In keeping, the liquid contents evaporates through the porous enveloping membranes and shell and the air space becomes gradually larger, while the yolk becomes opaque and more readily visible, and in long-kept eggs may be close to the shell. Cold storage eggs or eggs that have been pickled may have small air cells, but the yolks are conspicuous.

A fertile egg advanced 24 hours in incubation will show a faint yolk and a dark spot. Poached eggs in Kansas during June, July and August will have the yolk not entirely covered by the white. They will wink at you, these Topeka eggs, and betray the pernicious influence of their early environment.

When we consider that 103° is about the temperature in the incubator and that spells of 110° are not uncommon during the summer seasons in the south, there evidently will be difficulty in obtaining fresh eggs when the male birds are allowed to remain with the flock. Even in South Michigan, and in Kent and Essex in Ontario, summer temperatures often remain high enough to send a fertile egg a long way in the direction of the maternity ward. "New Laid Eggs" is the placard often seen on piles of eggs in the windows of provision stores where a warm motherly sun shines upon them and the fertile eggs advance in incubation till they become chilled, the germs die, and the eggs rot, showing a dark cloudy appearance when candled.

A hen that has her regular lunches on the manure pile, barn-yard water as a beverage, and grasshoppers as an inducement to exercise, will not lay fresh eggs. They will tend to have red yolks and thin whites and will not candle fresh while the hen is still cackling. Bury an old beef head in the manure pile and when it is moving around nicely you can count on getting that kind of eggs if their flavor pleases you.

This is another point hard to avoid when purchasing eggs for preserving—bad flavors. Eggs laid by hens fed a highly nitrogenous ration (meat scraps, green bone, oil meal mash) have been found inferior in keeping qualities and of a disagreeable flavor and odor when compared with eggs from hens fed a carbonaceous ration such as corn. Hens excessively fat sometimes retain an egg in the oviduct for several days. Just the yolk is formed at this time, but if it is fertilized the animal heat will start incubation, and when the yolk is surrounded with white, then with shell, later laid, held for some time, and finally eaten, it will inevitably be more or less decomposed and have a stale taste.

Musty tastes and odors may be expected in the product of hens picking their living entirely from the barn-yard and piles of sour decaying garbage. Decidedly objectionable odors and flavors are developed in eggs when the hens are fed on fish offal, oily fishy scrap and on onion tops. Eggs from hens fed raw turnips, burned wheat, or an excess of cabbage or rape are alike to be avoided if a high class product is desired. Rape has also a tendency to darken the yolks, but unpleasant to relate, it is a pusgerm that gives the whites

that greenish white, and sometimes ascribed to this green food. Odors of decaying fruit and vegetables are readily absorbed in keeping, and it is criminal commercial negligence to bring eggs to market in a basket that has held onions or to place them alongside the coal oil can on the way to market or in the grocery store.

Clean eggs put into damp dirty filers absorb molds, and eggs should not be accepted in dirty containers. On candling, after holding till the mold has made some growth, the trouble is plainly visible.

Granted, then, that we can obtain new-laid eggs in quantity during April, May and June how are we to ensure that they will be palatable, as well as edible, when offered for consumption during fall and winter?

Some ingenious methods have been devised. A French idea is to pack the eggs in large steel containers, exhaust the air in the eggs in a partial vacuum and then force in carbon dioxide gas under a pressure of several atmospheres, after which the containers are sealed. The pressure and sealing in the containers prevents evaporation of the moisture content of the egg. The carbon dioxide absorbed by the egg inhibits the action of bacteria that would cause decay. However, ordinary commercial methods for preserving eggs are not so elaborate as this French idea.

Packing in loose materials, such as bran, chaff, oats, sand, powdered charcoal or fine dry sawdust, is satisfactory for a short time if the materials used are sweet and clean and the eggs are kept in a cool place. The eggs are simply insulated from the air and on candling they appear

older than with some other methods of keeping as considerable evaporation occurs.

Packing in salt, carefully and completely covering the eggs, has given good eggs after seven months, though the yolks separated and the eggs lost in weight one-third of their contents. Besides insulating the salt may have an antiseptic action as it takes up moisture at the pores of the shell and forms a rough crust over the egg.

External coatings have been applied by rubbing or rolling in melted lard, vaseline, wax or paraffine, till all parts are covered, and the egg is apparently hermetically sealed. This takes time, but the eggs will keep fresh for some months if stored in a cool place, and there is less loss of weight (25%) than when packed in salt.

Cold storage is the method of preserving that is largely employed by the big dealers. Few farms or poultry plants have proper cold storage facilities. Supplied with a product of known quality, the secret of successful cold storage is a sweet, clean, well ventilated place where the eggs can be stored apart from other odorous goods, held in brand new spruce (not "pine") cases and clean white fillers, free from any possibility of bad flavors, at a temperature of 31° to 34°, a relative humidity of about 80% and proper handling in removing for immediate sale.

Washed eggs should not be cold stored as they more quickly deteriorate on account of the removal of the protective coating of mucilaginous matter from the shell. The eggs evaporate more quickly and bacteria are introduced through the pores. The eggs preserved early in the season are superior in quality to those

obtained in the heat of July and August. The early eggs have more body, they preserve better, and the first in the cold storage are the last to be removed for consumption.

When we solve the problem of how to move our surplus egg stocks from the nests to the big storages within twenty-four to forty-eight hours we will have accomplished a good deal for both consumer and producer and planted a few more flight feathers in the wing of the Ontario Hen.

Frozen eggs—an industry in connection with the refrigerating and packing plants down south. In Texas, Kansas and Missouri all fertile eggs twenty-four hours old in front of the candle are culled out because if refrigerated they would slowly rot. The eggs are broken and the yolks are separated from the whites or the yolks and whites are churned up together and then frozen solid in a freezer in 50-lb. cans. A girl will break out 300 dozen eggs a day, and from 15 to 50 girls are employed by the big Kansas packers during the summer.

Evaporated or dessicated eggs are a convenience for bakers and confectioners. They are simply eggs condensed by driving out the water and adding sugar to form a dry powder of which one pound is the equivalent of about 15 eggs. It is sealed in moisture proof packages and prepared for culinary purposes by adding water and beating up.

Where cold storage conditions are not entirely suitable for holding eggs large quantities are occasionally met with preserved in a pickle of lime and salt in the coolest situation suitable. In the Gunn's branch creamery at Walkerton is an egg storage with a capacity of about 8 carloads, 100,000

dozen eggs pickled in large wooden tubs and in cement vats 7x10x5 ft., each holding 8,500 dozen. The bulk of the takings at Walkerton is gathered by the haulers, handled at the egg storage and shipped direct to Toronto. The formula for the pickle used to preserve the surplus is published in the report of the National Butter and Egg Association, it is reprinted in nearly everything published dealing with preserving eggs and for that reason and for lack of space a page of carefully described details is omitted here.

The commercial water-glass used as an egg preservative is sodium silicate ($\text{Na}^2 \text{Si O}^3$). It is prepared on a large scale by fusing together in the proper proportions quartz sand and sodium carbonate or by melting together quartz sand, sodium sulphate, and charcoal. It is soluble in water and when the solution dries it leaves a transparent impervious coating on any surface on which it is placed. It is extensively used in the finishing of artificial stone. It is on the market in liquid and powder forms. The liquid form is preferable and comes at about 75c in single gallons, and less in bulk; 2c per pound wholesale in carbon lots. Single pounds retail usually at 10c. One gallon will preserve 50 dozen eggs properly packed.

Eggs will spoil in water-glass if the solution is alkaline. While the precautions observed with other methods are as necessary with water-glass poor results in using it as an egg preservative are usually due to following a recipe which does not give a standard for the strength of the water-glass to be used. As water-glass is soluble in water it is quite possible for commercial solutions as

sold for egg preserving to be of various strengths. Thus, one person might use a recipe which called for the dilution of the water-glass 1 to 20, and another person might use another brand of water-glass diluted 1 to 8 and yet the two preserving solutions could be of equal strength. Naturally though, if the 1 to 20 solution was made from diluted stock, it is going to be weaker than expected. Professor Harcourt directs that the water-glass be diluted to a point where a FRESH egg will just sink in it. This might be 1 to 8 with one solution or 1 to 20 with another solution, depending upon the strength of the original solution.

Do not use metal containers for water-glass solutions. Any sweet, clean barrel or tub absolutely free from odors, grease or oil may be used. Stone jars make the best containers, as they can be easily made perfectly clean and conveniently sealed when full. Pack all the eggs small end down. A five-gallon jar or crock will hold about 15 dozen. Add to the water-glass pure water, previously boiled for half an hour and then cooled, until a fresh egg will just sink in it. Pour this solution over the eggs, covering them two inches deep when the jar is full. Put on the cover and wind paper around the top of the jar or crock, tying it in place so that the paper extends a little above the cover. Pour melted paraffine wax into the groove between the paper and the edge of the cover hermetically sealing the jar, preventing evaporation of the solution and deterioration of the water-glass by the carbon dioxide in the atmosphere. Keep undisturbed in a cool place. When eggs are wanted for use the water-glass may be poured off

and corked up in clean bottles, or if the eggs are used quickly the jars can be resealed and the water-glass will keep good for many times.

If open tubs or barrels are used, the water-glass will keep good for a longer time in a cool well ventilated room than it will in the cellar where the air will contain more carbon dioxide. The carbon dioxide causes a milky appearance of the water-glass. Then a heavy sediment settles around the eggs till it is difficult to remove them without breakage. When this deposit is completed only a solution of soda is left which is of no further value for egg preservation.

After eggs are removed and rinsed, a dip in lime water removes the glazed appearance and restores a little of their youthful bloom. A pin hole should be made in the large end of the shell to prevent the egg bursting in boiling, a purpose for which it will be quite suitable. They are apparently fresh, break up well and are in no way injured for food.

A method has been tried in which one lot of eggs was allowed to remain in a 1 to 8 solution for a week, then removed and stored in clean egg cases in a cool cellar. A second lot was put in the solution and also removed and stored in clean egg cases in the cellar. A third lot remained in the solution till wanted for consumption. The eggs remained good six months, but lacked in flavor compared with the former method, which is generally considered the best household egg preservative in use to-day, though the lime and salt solution is cheaper and fairly good.

An example of the efficiency of water-glass may be of interest. Early

in 1912, eggs were preserved in various ways for experimental and demonstration purposes. The water-glass eggs, sealed in glass jars, were carried around as part of an exhibit at fall fairs, were stored over winter in the cellar, spent the following summer stored in a south room that was very high in temperature at times, used again as fair exhibits, stored in the cellar, brought up about March 1st, boiled and eaten. They did not taste exactly fresh, but they were edible and the writer and a number of others who were interested enough to dare to lunch lightly on the pickled delicacies still retain their appetite for hen fruit at any season. The eggs were fit for culinary purposes in spite of being jogged around like a Cooks' tourist for two seasons county trotting, and notwithstanding the fact that the echoes of Biddie's proud cackles had died away many, many long months since.

For some years Professor Harcourt has satisfactorily preserved eggs by making a saturated solution of lime with pure water, pouring off from the residue over the eggs and covering the surface of the limewater with oil. The oil can be skimmed off when the eggs are removed. He finds this a cheaper and fully as good a method as the water-glass and the eggs long stored in this way do not have the limy taste sometimes noticed when the lime and salt solution has been used.

Possibly you are a Western resident and this may not interest you. The public palate on the Pacific coast is a puzzle—a Chinese puzzle, for they have solved it. In spite of the weird tales of the awful atrocities committed upon those Chinese eggs before and during their missionary

visit to our shores, we still continue converts to their use. Hong Kong is only two weeks from Vancouver. Chinese eggs may yet be a strong factor in a certain class of our egg trade.

If you want to try a Chinese picnic egg, why make a mortar of clay with slaking quicklime, embalm your eggs, store them in suitably sized slabs or blocks and when you are really hungry they will crack out and peel cleaner and more invitingly than any

partridge or fish that has been baked with all its natural garments on.

Now, there are more ways of killing a cat than —, etc. And there are more good ways of preserving eggs than I am going to mention. Some highly ingenious methods have been tested here at the Hen House on the Heights. However, this institution is intended to aid in the enlightenment, rather than to assist in the deception, of the public which it serves.

Definite Aims in Horsebreeding

By P. Cannon, '16



AT the present time in Canada there is not the demand for horses that there was three and four years ago, and when prices are declining the average farmer is apt to pay less attention to horsebreeding.

The wave of industrial depression

that has been undulating in the Dominion, with little activity in building, in railroad construction, and in lumbering, is given as the cause for this lessened demand.

One is treading on insecure ground to forecast the future, but men who have studied the horse situation declare that within the next few years the world will face a great shortage of horseflesh.

War is thinning European horse ranks and many believe that horses from the North American continent

will be required to fill the gaps. Good authorities say that 3,000 horses will be a low estimate of the daily war toll from the horse kingdom, so these gaps will be considerable.

Again, on the advent of peace, great agricultural and industrial activity is predicted for this continent, and one must infer that a bright future is in store for the horse markets of the world. Soon the breeding season will commence, and it should find our farmers with plans completed to raise a colt from every suitable mare. By legislation, our government has done much in the past two years to encourage the use of sound, pure-bred stallions, nevertheless, in most parts of Ontario one finds a lack of uniformity among the farmer's horses.

It is interesting to study the average teams that are driven to the different centres, a conglomeration of kinds, forms, and sizes of horses are in evidence. By indiscriminate mating the breeds are mixed up

in all sorts of combinations so that an authority on breeds would find it difficult to make out pedigrees for some of the nondescripts we see.

How often we find that good stallions of a certain breed, say the Clydesdale, have been used for a few years in one locality until that blood predominated. Then the district may be visited by a good Percheron stallion, and the majority of the farmers, led by some fancy that they will get a general purpose team by crossing, put their mares to this new horse. Nine times out of ten they court failure. This policy is retrograde and results in destruction of much of the grading up done in the past.

Legislation can accomplish a great deal, but we can hardly look to this source as the remedy for this fickleness. Where must we look? Some people say that the importers and breeders of pure-bred stock are to blame. Anyone conversant with the great value these men have rendered to the Canadian Live Stock Industry in the past 50 years must agree that it is not their fault that farmers keep changing from one breed to another. On the whole it is the farmers themselves who are guilty of inconsistency. Real constructive horse breeding is a sadly neglected business with the average farmer. Many find a fascination or lure in breeding horses, but there is too little of that spirit of genuine appreciation and love for the raising of good horses that is essential for success. There is little or no fixity of purpose and there is perpetual motion among their ideas as to what sort of horses they want to raise. About the first thing that impresses a visitor to the various farming districts of Britain is the interest in stock-

breeding that everywhere prevails. From the King downwards you will find almost every man a lover of live stock, and they take enjoyment in raising the best. But it is no melting pot system of breeding they follow. They are breeding along special purpose lines, just as our dairymen have been doing to suit the requirements and the adaptabilities of their districts.

Over the greater part of England the farmers are wedded, one might say, to the shire horse; in some of the eastern counties their common interests merge in the Suffolk; in the northern counties and beyond the Tweed, farmers and hired men alike take great pride in their Clydesdales and some say that they are more devoted to that breed than they are to their wives.

The Farmer's Clubs which have been formed in the past few years in Ontario may be looked on to foster in the future that community interest in one breed which has been the policy of successful progress in other lands.

As an example of the value of some system at the basis of horse breeding let us inquire into the method followed in Scotland. Everyone knows that the Scotch farmer is conservative and independent in the extreme, yet, in the breeding of their favorite horse they co-operate readily. In most districts they have formed, on their own initiative, or through the efforts of their Scottish Board of Agriculture, Horse Breeding Associations. The members meet from time to time to discuss matters pertaining to breeding and appoint a deputation, usually consisting of three men, to visit a stallion show or a reputable stallion owner to hire a horse to

travel in their district for the season.

Early in the spring the best horses in the country meet at the Glasgow Stallion Show and the supreme honors for male Clydesdales are awarded—the Cawdor Cup for champion stallion, and the Brydon shield for the best stallion, 17 hands high or above, and over 4 years of age. Here also the Glasgow premium horses are picked by a special committee and deputations from other societies hire horses, although some bargain privately or at smaller fairs held at other places.

The members of these societies are mostly all tenant farmers, but the landlords also take a great interest in their affairs and often give liberal grants, while we see the Glasgow Agricultural Society bonusing the pick of the stallions to go to a special district to sire geldings, which become the pride of her city streets.

The premiums paid owners to let their horses to societies for the season vary, some associations awarding as high as \$1,500, but \$500 might be given as the average.

We can see many advantages of this method. Farmers get the horses they want, and at reasonable terms. Some of the larger societies hire two or three horses and thus the members can pick the horse most suitable for the breeding and conformation of their mares. When this is the case the terms often vary, and, as it is Scotchmen we are speaking of, one might be inclined to add that they would choose a horse to suit their purse. In the matter of service fees, however, the average Scotchman is not "tight," and displays good "horse sense" in being willing to pay for the best. Fees range from \$15 to \$100, according to the breeding and in-

dividuality of the horse, and are usually arranged half payable at the end of the season and the other half next spring if the mare has a foal.

So keen is the desire of the more enterprising societies to provide a promising sire for their members that often an outstanding yearling stallion is engaged to visit a district when he will be three years of age.

Certain districts become noted for a certain type of Clydesdale, for as there is a general breed type, there are also slight differences in form and size within the breed. Thus to fill an order for the Glasgow lorry trade, for which a heavy cart horse gelding is demanded, a buyer knows that he can get them in the Mull of Kintyre district. Other types may be met with in the North of England, in the Midlothians, and in the Highlands, although all concur in breeding for the essentials, good feet, springy pasterns, quality, good action, and all the weight they can obtain.

In Belgium, in France, in Hungary, in Germany and other European countries they have or had systems of even wider scope of national aim in horsebreeding.

In Canada it may be objected that the vastness of the country and the multiplicity of the breeds therein, renders the following of system like old country breeders difficult. These factors are no plea for the lack of system which prevails. Practical farmers can find ideas in the horse policies of other lands which may be worked out in a manner suitable for local conditions. No one but a blindly-prejudiced admirer of some one breed will say that we have too many breeds in the country. They are all useful and serve certain purposes, but until there is harmony of ideals

in each neighborhood, until the farmers and horsebreeders get together and decide on what type of horse they want for their own locality, Canada can never become a great horsebreeding country.

The educational forces of the press, of the Agricultural Colleges, of the Exhibitions, and of the District Representatives Short Courses are doing much to stimulate more intelligent interest in horse raising and before long may stamp out or give new meaning to the terms "luck" and "general purpose," which are so often met with in the horseman's vocabulary.

The Live Stock Branch of the Do-

minion Department of Agriculture realizing the eminent shortage of good horses, are putting forth great efforts to interest the farmers in community breeding. As an inducement to form breeder's clubs and consolidate the aims of a district they offer a bonus towards the service fees if a good horse is got into a neighborhood and retained.

This marks another corner-stone in Canadian horse breeding, and it is "up to our farmers" to concentrate their energies and see that this foundation embraces their district, and in a few years it will become famed for its horses.

Milking Regulations

THE following are the Rules for Milkers or "Milking Regulations" as displayed in the dairy stables of Government and Agricultural Educational Institutions:

Agricultural College, Truro.

Professor John M. Trueman writes to The Gazette:

"We have no rules for the guidance of milkers posted in the college stable. Our regulations require the men to wear white suits, use a small top milking pail, wipe the cow's udder with a damp cloth, and milk with dry hands."

School of Agriculture of Ste. Anne De La Pocatiere

1. Treat the cows with the utmost kindness. Never shout or speak roughly.

2. Clean the cows, at least fifteen minutes before milking.

3. Clean the udder and the flank of the cow before milking.
4. Have your hands very clean.
5. Milk rapidly and completely.
6. Milk with dry hands.
7. Keep silent while milking.

Oka Agricultural Institute.

1. Keep the stable always clean.
2. Avoid distributing dry fodder to the cattle or straw bedding while milking is in progress.
3. When milking is done outdoors, keep at a good distance from manure piles and infected places.
4. Wash your hands carefully and keep them absolutely clean.
5. Tie the cow's tail to her leg.
6. Wash the udder with lukewarm water and boracic acid.
7. Pass the sponge under the belly and the flank of the cow to gather loose hair and dust.

8. Wipe the udder with a clean cloth.
9. Milk in absolutely clean pails.
10. Use tin pails with a cover or a narrow opening.
11. Throw out the first four or five streams of milk.
12. Milk diagonally or crosswise.
13. Avoid anything that might disturb the cows. Keep them as quiet as possible.
14. Never strike or ill-treat your cows; kind treatment must always be the rule for dairy cows.
15. Milk with the full hand, and with dry hands.
16. Strip the udder completely.
17. Milk quickly; slow milking reduces the quantity of milk secreted.
18. Do not let the stable become cold when milking is being done; cold induces the cows to keep their milk.
19. Strain the milk as soon as it is milked, by passing it through a double cheese cloth.
20. In summer, cool the milk without aeration at about 50° F., and at a sufficient distance from the stables.
21. Milk at regular hours and at regular intervals. Any change in the time of milking always reduces the yield.
22. Always milk the same cows, and always in the same order.
23. Always wear a clean suit of clothes.

Macdonald College.

1. Cows, if outside, must be tied in quietly, and with as little confusion as possible.
2. All manure must be scraped into gutters, care being taken to cause little disturbance of litter and dust in stable.
3. Milkers must wash their hands and face, comb their hair and put on milk suits.

4. Cans must be placed in dairy, strainers adjusted, separator set up, etc.

5. Each milker must provide himself with a wash cloth, and wash his hands and cloth in luke warm water after each milking. Cows flanks, udders, teats, tails, etc., must be brushed off carefully, and then the teats and udder wiped with a damp cloth, **not washed**.

6. Each milker must be careful to do everything with the utmost cleanliness, keep his suit in as good condition as possible, avoid handling any part of the cow after washing except her udder and teats, and to keep his pail in good condition.

7. Milking must be done rapidly and quietly, no noise such as yelling, whistling or talking will be tolerated in the stable.

8. Each milking must be weighed separately and recorded for the particular cow, then emptied into the receiving can in the dairy.

9. Each milker must watch for abnormal milk, such as bloody milk, swelled quarter, or any other such trouble and report at once to the man in charge.

10. In so far as is possible each man must milk the same cows, each time, and at the same hour, night and morning.

11. After all cows have been milked, the cows, if turned out, must be treated in the same way as when put in. The stable must be cleaned at once, and put in perfect condition.

12. Milk must be attended to as directed.

The Dominion Experimental Farms. Cow Barn General Rules.

No Smoking in Barns: Visitors persisting in smoking in barns after requested not to do so, shall be turned

out of buildings. Employees breaking this rule shall be dismissed at once.

2. Every Man to be on Time.

3. Men to obey orders promptly and follow rules exactly; any neglect or difficulties in these matters to be reported to the Animal Husbandman at once.

4. Stables to be cleaned twice a day; 7:30 in the morning; 2:30 in the afternoon.

5. Calf pens and box stalls to be cleaned every second day.

6. Windows, walls, etc., to be kept clean.

7. Iron work and wooden fixtures to be dusted or wiped with damp cloths once a week or more frequently, if necessary.

8. Manure to be wheeled to centre of yard. Any manure scattered along track to be gathered up and placed on the main pile.

9. Barrows, forks and shovels to be kept clean and in place.

10. Shovels to be used for distributing feed truck to manger.

11. Trucks and all other implements to be handled carefully and kept in good running order.

Time Table.

1. Hours of Work:

Begin work: 5:30 a.m.
Breakfast: 8:00 to 8:30.
Dinner: 12:00 to 1:00.
Stop Work: 5:30 to 5:45.

2. Time Table:

5:30 a.m. Preparation.
5:45 a.m. Milking.
7:30 a.m. Feeding and cleaning barn.
8:00 a.m. Breakfast.
8:30 a.m. Finish feeding-bedding.
9:00 a.m. Sweeping and cleaning.
9:45 a.m. Grooming and washing cows.
11:15 a.m. Preparing feed.

12:00 a.m. Noon Lunch.
1:00 p.m. Preparing. Feed—Odd jobs.
2:30 p.m. Feeding and cleaning barn.
3:30 p.m. Milking.
5:00 p.m. Feeding and Sweeping.

Milking Rules.

In milking the following rules must be observed:

(a) Cows to be bedded down, at least 30 minutes before milking.

(b) Cows to be brushed, at least 20 minutes before milking.

(c) Udders and flanks to be brushed off with clean damp cloth, just before milking.

(d) Milker to wear jacket and apron. These must be kept clean. Change three or more times per week, if necessary.

(e) Sleeves to be rolled up clear of wrist while milking, but shirt not to be exposed.

(f) Hands and face to be washed before beginning to milk.

(g) Towels must be kept clean and changed each day.

(h) Hands to be washed after milking each cow.

(i) No milk to be used on hands while milking. Vaseline may be used if desired.

(j) No unnecessary talking while milking.

(k) No tobacco chewing while milking.

(l) Cows to be treated kindly.

(m) Cows to be milked quickly, gently and thoroughly that is, clean out.

(n) Herdsman will direct men as to what cows they are to milk.

(o) Carelessness in brushing, wiping or milking shall be reported to the Animal Husbandman at once.—Agricultural Gazette.

Experimenting in Ontario's Northland

By Jos. Orchard

(Editor's Note.—Mr. Orchard is an old O. A. C. boy. Last summer he successfully managed the experimental farm about which he writes.)

AWAY up in Northern Ontario, in a section of country west of Cochrane, which the Grand Trunk Pacific Railroad traverses, is a block of country comprising many thousand acres of rich clay soil. As yet this country is practically unknown. There are limited acres which have been burned over during the past few years and which can be cleared in a short time and at small expense to the settler. For the most part, however, the country is still covered with pulpwood, generally poplar and spruce, though in certain sections tamarac and jack pine are to be found.

The town of Cochrane is a divisional point on the G. T. P., some 253 miles north of North Bay. It is the terminus of the T. and N. O. Railway and the centre from which the settlers come and go. There are already quite a number of small settlements in this part of the country. In some parts French-Canadian settlers predominate; in other places Ontario or English emigrants are the more numerous. One and all, they have a strong faith concerning the productiveness of the soil and the future of the country. The foreigners, of whom there are quite a number in the larger centres, do not take to farming to any extent, and, as the railroad construction is practically completed, they are drifting out of the country. Stretching away from Cochrane, on every side there is a vast area of rich soil, chiefly a

brown clay, although in parts there is some white clay.

With a view of "proving up" this country for incoming settlers, the Ontario Government in the spring of 1914 established an experimental farm in the Township of Fauquier, 50 miles west of Cochrane, on the G. T. P. This farm was operated in two parts, a clearance of nine acres being made on the Ground Hog River, and another of twenty-five acres made two miles further west. The river farm was cut out of a green bush. After being chopped and stumped, part was laid out in quarter-acre plots for experimenting with various grain crops, one and one-half acres for potatoes, one acre for turnips, and a portion for the different vegetables. On the other farm, twelve acres of grain, roots, potatoes, etc., were put in, and a fourteen-acre fallow cleared, on which six acres of Dawson's Golden Chaff wheat was sown, August 22nd.

Each variety of grain was tested on spring-ploughed soil and on land which was simply disked and harrowed before being sown. In every instance the yield of grain and strength of straw was much better on the ploughed land.

With the exception of the peas, all the grains ripened and yielded well, while the roots and vegetables, barring corn and beans, yielded exceptionally well. The beans and corn were frosted. The fall wheat went into winter with a splendid top, also some fall rye which was put in.

The writer believes from evidence seen that timothy and at least Alsike clover will grow exceedingly well in this far north locality. Also that cabbages and onions will give large yields. Onions grown from Dutch Sets yielded 245 bushels per acre.

The country around this experimental farm is all surveyed out in townships, and a considerable number of settlers are now located be-

tween the farm and the Kapuskasing River, of interest now because of the large number of prisoners of war interned there. Throughout this country are many beautiful small lakes, in which may be found pike, pickerel and some white fish. Large game, including moose, is plentiful, while along the rivers are to be found beaver, martin, lynx, otter and other small fur-bearing animals.

Growing Potatoes for Home and Market

By W. T. Macoun, Dominion Horticulturist in Agricultural Gazette

WHEN the farmer sows or plants his seed his object should be to get the largest return from the soil. This can be obtained only by the use of good seed and by thorough cultivation; and there is no farm crop the yield of which can be increased so much by these methods as the potato. Potatoes have been grown in a small plot at the rate of over 700 bushels per acre at the Central Experimental Farm, Ottawa, Canada, but so great is the difference in the yield of varieties that while one gave this large yield, another, planted at the same time and in the same kind of soil, yielded only 154 bushels. It will thus be seen how important it is to plant a productive variety.

Varieties and Source of Seed.

A variety which is productive in one place may not be productive in another. In some places the season is too short for the later varieties, and, as a result, the crop is small. A variety which at one time did well in a certain locality may become unprofitable through being diseased or

becoming weak in vitality owing to unfavorable seasons. In such a case a change of seed is very desirable. As showing the advantage of a change of seed, it may be stated that new seed potatoes of eleven varieties from the Experimental Farm, Indian Head, Saskatchewan, grown at the Central Experimental Farm, Ottawa, yielded on the average at the rate of 368 bushels per acre, while seed potatoes of the same varieties which had been weakened in vitality at Ottawa by unfavorable seasons averaged only 97 bushels per acre. Other striking results could be given from seed from other provinces. Seed from the cooler and moister districts usually gives better crops the following year than seed from the warmer and drier ones. Potatoes which are immature when dug will usually give better crops the following year than potatoes which have been either prematurely ripened by hot, dry weather or even that are well ripened normally. It pays to import seed from cooler to warmer climates, as has been learned from experience. Some of the most re-

liable early varieties are Irish Cobler, Rochester Rose and Early Ohio, and of medium or later varieties, Carmen No. 1, Gold Coin, Empire State, Green Mountain and Wee MacGregor. British varieties which have done exceptionally well in Canada are Table Talk and Davies' Warriors.

Condition of Seed When Planted.

The condition the potatoes are in when the time for planting arrives is very important. If possible, potatoes should be prevented from sprouting before they are planted, unless sprouted in the light as described later on; and to prevent sprouting it is desirable to keep them in a cool cellar where the temperature does not go much above 35 degrees F. nor below 33 degrees F. The cooler potatoes are kept without freezing the better. When potatoes are kept in a warm, moist cellar, as they so often are, they sprout and the shoots take from the tubers both plant food and moisture, and as these sprouts are usually broken when handling the potatoes, the new shoots which are made when the potato starts to grow in the field have less moisture and less plant food to draw upon, and do not make as vigorous a growth as they otherwise would, and the yield is smaller. The best results will be obtained if the sets are planted immediately after cutting, but if the seed is prepared several days beforehand it will pay well to coat the sets with land plaster or gypsum, which will prevent evaporation. The seed potatoes should be free from disease. When potatoes are affected with the "Rhizoetonia" or "Little Potato" disease or the "Common Scab" the following treatment is recommended

before the potatoes are cut or planted: Soak the tubers for three hours in a 1 to 2,000 solution of bichloride of mercury (corrosive sublimate) or in 1 pound formalin in 30 imperial gallons of water. As the former chemical is very poisonous and will corrode iron vessels, wooden barrels or tubs should be used. Formalin is not so poisonous, but should be used with care.

Kinds of Sets to Use.

Many experiments have been tried to determine the best kinds of sets to plant, and on the average it has been found that good marketable tubers cut into pieces so as to have at least three good eyes to a piece are the best. If cut sets are found to dry up after planting, use whole potatoes for seed. It has been found to be a great advantage to "sprout" potatoes in order to have the tubers ready for use earlier than when treated in the ordinary way, and where the season is short to obtain large crops. Medium-sized potatoes are selected before they have begun to sprout and placed in single layers in shallow boxes or trays, with the seed end up. The boxes are then put in a bright, airy, cool place where the temperature is low enough to prevent sprouting. After a few days the potatoes will turn green and the skin becomes tougher. The potatoes are now given a little more heat, but still kept in a bright place. From the seed end will now develop two or three strong sprouts, and the meaning of exposing the potatoes at first to toughen the skin is now apparent, for most of the eyes do not sprout, and practically the whole strength of the potato is concentrated in the few sprouts at the

end. This is what is desired, as the fewer sprouts there are the larger proportion of marketable potatoes there will be in the crop from them. The potatoes are planted whole. If the potatoes are given plenty of light and the place where they are kept fairly cool, the sprouts will become very sturdy and strongly attached to the tuber and will not be broken off in handling, unless very carelessly used. Tubers will develop more quickly from sprouts made slowly in a bright, cool place than from sprouts which have grown rapidly in a lark place, and, furthermore, the yields will be much heavier. Potatoes which sprout in the dark are very difficult to handle, as the sprouts break off very easily. It is not absolutely necessary to place the potatoes with the seed ends up, as very satisfactory results are obtained even when the potatoes are emptied indiscriminately into shallow boxes or trays and then treated as already described. The sprout should be about two inches in length at time of planting. If longer the sets are more difficult to handle.

Soil.

The most suitable soil for potatoes is a rich, deep, friable, warm sandy loam with good natural drainage, a constant though not too great a supply of moisture, and well supplied with decayed or decaying vegetable matter. They will, however, succeed well on a great variety of soils. The warmest and best drained soils that can be obtained should be chosen for the early potatoes, and the sets in this case should be planted shallow, so that they will get the advantage of the heat from the surface soil.

Preparation of the Soil.

The more thoroughly the soil is prepared the better the results will be. Loose, well pulverized soil is particularly desirable for potatoes. While heavy manuring with barnyard manure is not recommended for potatoes, the use of a moderate quantity is advised. A good way to apply this is on clover sod in autumn; the sod and manure to be turned under in the spring. If manure is used in the spring it should be well rotted and mixed with the soil, not put in the drills with the potatoes. Chemical fertilizers, if used, should be applied at the rate of 500 to 800 pounds or more per acre, in the proportion of 250 pounds of nitrate of soda, 350 pounds of superphosphate, and 200 pounds sulphate of potash or muriate of potash per acre. This should be mixed with the soil in the drills.

Planting.

As a slight frost will injure the tops, planting should be delayed to within a week of the time when the last frost is likely to occur, but in some districts potatoes may be planted later than in others. Where extra early potatoes are desired chances are taken and potatoes are planted earlier; and, should a frost threaten, the young plants, if they are above the ground, may be protected by covering them with soil. The best results have been obtained in Canada by planting the potato sets four to five inches deep for the main crop, and twelve to fourteen inches apart in rows two and one-half feet apart. As has already been stated, potatoes planted early, or if planted in soil which is too wet and

cold for best results, may be planted shallower, say an inch deep, where the soil is warmer than it is further down. The sets should be covered as soon as possible after planting, so that they will not dry in the sun.

Cultivation.

In field culture much time will be saved in hoeing later in the season if the soil is harrowed, to destroy weeds just as the potatoes are beginning to come up, and at this time many weeds will have germinated. If the potatoes are in a garden, it may be raked over for the same purpose. As a rule, the crop of potatoes will increase in proportion to the number of times the potatoes are cultivated during the growing season. There was found to be an increase of 40 bushels per acre in a crop of potatoes cultivated six times over those cultivated three times. Level cultivation will sometimes give better results than moulding or hilling up, and sometimes the results are not so good. Where the soil is stiff, or where the soil is wet, moulding, or ridging, is desirable, but where the soil is loose and liable to suffer from drought in a dry time, level culture is recommended. Where the soil is both loose and moist and where the climate is moist, ridging will usually give best results. As the crop of potatoes will be much larger if the tops can be kept green until frost than if they are destroyed by insects or diseases in summer, it is important, in addition to thorough cultivation, to protect the tops from injury.

Protection of Plants from Insects and Diseases.

The Colorado potato beetle and the cucumber flea beetle are the

commonest insects which injure the potato tops. The former can be readily killed with Paris green in the proportion of 8 ounces to 12 ounces to a 40-gallon barrel of water, or with arsenate of lead in the proportion of 2 to 3 pounds to 40 gallons of water. Paris green kills quicker than arsenate of lead, but the latter adheres better than Paris green; hence a mixture of both in the proportion of 8 ounces of Paris green and 1½ pounds of arsenate of lead to 40 gallons of water will kill quickly and adhere well to the foliage. These poisons will, to some extent, check the cucumber flea beetle, but in addition to them, a better preventive is a covering of Bordeaux mixture on the foliage. The Bordeaux mixture should also be used to control the early and late blights of potatoes, the latter disease causing rot. These are two of the commonest diseases. To control the early and late blight of potatoes, spraying with Bordeaux mixture should be begun before the disease appears and the plants kept covered until autumn. It is safer to start spraying with Bordeaux mixture when spraying for the potato beetles. The poison of the latter may be mixed with the Bordeaux. From three to four sprayings or more will be required, the number depending on the weather. Taking the average of three years, the increase of yield from spraying with Bordeaux mixture was at the rate of 94 bushels per acre. In some years it is much larger. The importance of keeping plants growing as late as possible is well illustrated in an experiment where the total crop of marketable potatoes per acre when dug on September 1st was 234 bushels per acre,

whereas in the same field the same variety yielded 353 bushels of marketable potatoes per acre when left undug until September 22nd, or in three weeks the crop had increased by 119 bushels per acre of marketable potatoes. Bordeaux mixture is made in the proportion of 6 pounds bluestone, 4 pounds lime and 40 gallons of water. Spraying mixtures should be used at the proper time and thoroughly, if good results are to be expected.

Digging and Storing.

Potatoes should be dug in dry

weather, so that they will be dry when they are taken into the cellar. If they are diseased, the disease will not spread so rapidly among dry potatoes. If the potatoes are known to be diseased in the field, it is best to leave them in the ground as long as possible, so that diseased potatoes may more readily be seen and separated from sound ones before they are taken into the cellar. Potatoes should be stored for best results in a dry, cool, well ventilated cellar and kept at a temperature between 33 degrees F. and 35 degrees F., if possible.

Farm Labor

By C. R. Lovekin, '17

THE farm labor problem is probably more acute in Ontario than in any Province in the Dominion. At the present time Ontario is and has always been the best agricultural Province in Canada. Geographically Ontario is so situated that she has lost many of her farm people to the large cities on the American border. Protection and bonuses to the manufacturers has drawn largely all our farm help from the farm and this has built up large towns and cities in Ontario. These cities, as before said, are largely built up by our rural people. The building up of the west, both in United States and Canada, was another drain. The exodus from Ontario to the west was originally to the States. After the war when railroads were built beyond the Missouri River, Iowa, Kansas, Nebraska got thousands of our best people before the west and Dakota were opened, and to-day we have

comparatively few good men left in the country for our farms.

To stop this rapid emigration of our farm hands we should try and discover or unveil the common cause. I believe the only solution for the problem is the married man, living on the farm. These men I have found to be steadier and take a greater interest in the farm work. Give these men a ten-hour day and provide certain cheap amusement for them, for example a ball green or a place where they can enjoy any game during their leisure hours. I have found it best if necessary to keep some single men to let them live with the hired man on the farm. Under this system of hiring and managing men excellent results have been obtained.

When thorough scientific methods of agriculture are followed and the labor problem solved there are many ways of making farming one of the most profitable occupations.

Relationship of the School Garden to the Class Room

By L. A. DeWolfe, M.Sc., Director Rural Science Schools, Nova Scotia

THE school garden helps the class-room in, at least, two ways. First: it gives that healthful exercise so necessary to school children, at a time when they most need it. In this, too, it furnishes variety, and breaks the monotony of school life.

But the second and most important consideration, is that it vitalizes school work. The principles of mechanical drawing are mastered while drawing a plan of the garden to scale. Business methods are learned when buying the seeds; and, later in the year, when banking the profits. Many a boy gets his first lesson in good manners and community welfare when he is taught not to walk in his pupil-neighbor's garden plot.

The lesson on soil physics, in connection with conservation of moisture, make a tangible introduction to general physics in the class-room. Identification of weed-seedlings and garden seedlings is the first step towards field botany. The control of these leads at once to economic botany.

What better arithmetic problems can be given than the boy's own problems to find how much seed or how much fertilizer his garden requires, when tabulated amounts are per acre

The insect pests furnish good lessons on Entomology. The insecticides and fungicides form a natural basis for lessons in chemistry. The covering of plants to protect from late spring frosts introduces a phase of physical geography not often well taught.

The written descriptions of garden operations furnish unlimited exercise in English composition. No drawing lessons could be more attractive than those based on the garden and its products; and no reading should be more suitable than some of the best garden compositions written by the students.

Commercial geography will, perhaps, be helped more than any one subject.

In the hands of the skilful teacher, the school garden is the connecting link between the school and the real world.

By R. P. Steeves, M.A., Director Elementary Agricultural Education, New Brunswick

The school garden is an outdoor work-shop or laboratory to be made use of by the teacher in the process of general education of the pupil. In its construction and care are affiliated physical activity, mental development and aesthetic training. Through the senses the mind is constantly receiving impressions which must stimulate observation, thought, and judgment and which wisely guided lead to intelligent expression and application. The succession of seasons, the adaptation of supply to need, the influence of climate, the relation between labor and providence, the dependence of animal life upon plants, of these latter upon soil conditions, among the most important of which is the presence of numberless, infinitesimal bacteria, all furnish problems most intricate and difficult, but

adequate for mental culture. Moreover the concrete consideration of such topics affords opportunity for moral and spiritual development since the wisdom of the beneficent Creator is traced in every manifestation of nature illustrated in the garden and its environment. Talks by the teacher in the school room about nature may exert an influence for good upon the young, but actual participation with nature in the open air, where her laws are being exemplified, and her varying moods and phenomena are being observed, elevates all to be co-workers as it were with the Divine. Individual effort is directed, character is exalted and education is enriched by a fund of information obtained at first hand. Incidentally through such outdoor work also the school-room instruction is enlivened and enforced by illustrations pertinent because they appeal to conditions and actions with which the pupils are familiar.

The school garden may be made to occupy an important place in the teaching of the usual school-room subjects. The purpose and object of education is the production of good citizenship. It is by what we are, and how we do what we engage in, that we prove our position in the nation. Example and practice establish precept and theory.

The first element of success to secure in any school is interest. This must be obtained through the natural unfolding of the child's powers. Children are interested in life, living things, which appeal to them through their senses. Through an interest thus secured we may awaken in the child a realization of need to know how to solve arithmetical questions, to use language with clearness and

accuracy, to properly spell words used, to be able to make correct drawings and to learn the geographical and historical features of his native place. The school garden furnishes the living objects which appeal to the child's interest. Through his contact with it many varieties of arithmetical problems arise, from those of the simplest fundamental nature to intricate questions of commercial transactions. How can one better learn the principles and application of measurements than by actually making the measurements of land in the open? What better way to acquire the principles of bookkeeping than by actually keeping a set of books that represent the work of a season in a school garden, or home plot?

No better incentive to learn to draw can be afforded than for the child to realize his need of preserving the impression made upon his mind by some object of nature. The object to be drawn must be something to him, or he will not recognize the value of committing to paper his idea of it. If that drawing inadequately represents his idea, at once he appreciates his need to give more careful attention to his teacher's instruction. Later, his ability to picture the varieties of form represented in the school garden will attest to the quality of the instruction he has received.

The study of language must ever take up much time in the school. Ordinary methods of teaching are likely to lack interest because of being largely abstract. It is not the word or the arrangement of words that will attract the pupil's attention unless he realizes that his own effort falls short of conveying to others the thought in his mind. Oral should precede writ-

ten expression. Impressions should be made on the mind before expression is attempted. Personal knowledge comes largely through observation and physical effort. We talk best, most naturally, about what we know, what we are interested in. Nature study exercises, through the school garden, supply the best avenues for personal knowledge through the child's observation. By using the child's language descriptive of what he is interested in, of what he knows, the teacher is able to demonstrate successfully the fundamental rules of composition and their application in his every-day life. Illustrations taken from books may later serve to confirm decisions reached. It is, however, through the child's own language made use of as a basis for composition lessons that the best results can be achieved. Language is a medium for conveying our thought to others. When it is studied with that practical view in sight, the value of such study takes on a new significance.

The monotony of indoor school exercises which have to do with mental training alone, may be relieved through the school garden lessons and activities participated in by both pupils and teacher. It is by the mingling of the active and the mental, by the outdoor and the indoor, that the best results are obtained at the least expenditure of time and nerve.

The school garden furnishes a link between the school and the home in that it makes use of the home occupations for an educative purpose. The school premises indicate the high water mark of educational appreciation in the district. The school is ground common to all. Whatever suc-

ceeds in uniting the people in a common effort to improve will be found most beneficial. If the school grounds are dilapidated and neglected the tone of the community may naturally be expected to be sluggish and downward in tendency. Many school grounds which, before a school garden was established, were unfenced are now neatly enclosed by woven wire. The school garden has contributed its part to making the grounds attractive and has thus demonstrated its value in the education of the community.

On Arbor Day, which usually comes in May, and on Empire Day, opportunities are afforded for all the residents of the community to contribute their part in improving the school property. The teachers with the pupils contribute their part. We cannot be loyal to the Empire unless we are first loyal to our own community. We need to faithfully express our loyalty by acts. The month of May is, in country districts, a very busy time for the people, but a half day spent in connection with their school, living with their children at the school, will yield a more bountiful harvest in developing a community life sentiment than any other crop that could be put in in the same amount of time on their lands at home. Our duty as citizens in the district is to make life happier, more attractive and more social for the children while they are still at school. The best country district is the one where the teacher unites with the pupils and the parents in regular efforts from time to time to make a real centre of attraction and the school grounds a veritable local beauty spot. The school garden and nature study exercises in

the open air are the complement of the indoor mental training. In reading, language, spelling, writing, arithmetic, history and geography they may by correlation and interweaving give energy and purpose to school life. Thus interest will develop as the child passes along through the grades and thus, too, he may be encouraged to remain longer at school securing a broader, more cultural education and more practical withal, because it is being obtained in terms of his daily life and environment.

By H. W. Watson, Director Elementary Agricultural Education, Manitoba

The school garden furnishes the concrete material for the following:

Arithmetic.—Number of plots in a certain area, allowing for walks; number of ounces of seed for each plot at a certain rate per acre; yield per acre based upon the number of pounds per plot.

Elementary Geometry.—Planning the plots in various sizes and shapes on paper and drawing to a scale.

Drawing and Colorwork.—Concrete specimens are readily obtainable at most seasons of the year.

Composition.—Excellent practice may be obtained in writing descriptions and keeping records.

Farm Bookkeeping.—Children may

keep records of various expenditures and receipts in connection with their plots and hence learn the principles of keeping crop records, stock records, etc.

Literature.—Interesting supplementary reading may be obtained in bulletins, farm journals, etc.

Geography.—Maps of the gardens are made, of the school ground, the village, township, county and province. Study of the industries and products of our own locality increases the interest in the study of such for other countries.

Manual Training.—The making of window-boxes, hot-beds, flats, pegs, markers, etc., greatly increases the interest in the use of the common tools.

Botany.—Abundant material may be had during the spring and autumn, and also during the winter, by gathering and preserving such as will be required.

General Nature Study.—Concrete specimens may be had for the study of plants, birds, insects, wild animals, etc., and all in their relation to agriculture.

Elementary Physics.—Valuable lessons may be learned in mechanics, heat, light, moisture, each in relation to the practical affairs of life.



The O.A.C. Examination Results

Lists of Successful Students.

(Christmas and April Examinations
combined.)

First Year.

Maximum, 2,500.

1 Geddes	1913	39 Riley	1534
2 James	1865	40 Parfitt	1531
3 Bremner	1864	41 A. L. Watt	1529
4 Kemp	1860	42 McBeath	1527
5 McArthur	1848	43 Jakes	1522
6 Leggatt	1845	44 DeLing	1521
7 Logan	1844	45 Fairles	1512
8 Chesley	1822	46 A. W. Snyder	1497
8 A. T. Brown	1822	47 Clare	1493
10 Malyon	1814	48 Duff	1490
11 Ferguson	1808	49 Merrick	1478
12 G. R. Wilson	1802	50 Henderson	1469
13 McEwan	1790	51 Osborne	1463
14 Fidler	1755	52 Smith	1461
15 Arnold	1750	53 Howard	1447
16 Cooper	1747	54 McLeod	1440
17 Hammond	1735	55 C. F. Shaw	1438
18 Macklin	1726	56 Halsey	1428
19 Maybee	1716	57 Hamilton	1426
20 Heimpel	1711	58 M. A. Watt	1424
20 Kent	1711	59 Richard Brown	1409
22 Long	1689	60 Ralph Brown	1405
23 Newton	1676	60 Switzer	1405
23 Patterson	1676	62 W. D. Johnston	1401
25 E. Snyder	1652	63 High	1399
26 Hancock	1621	64 Sorbett	1377
26 Sullivan	1621	65 Brydon, 6	1361
28 McAdam	1618	66 W. R. Brown	1352
29 Kay	1614	67 Sibbit	1337
30 Haines	1603	68 McKee, 1	1335
31 C. S. Nelson	1597	69 Lavis	1334
32 Erb	1588	70 Knowles	1332
33 McCulloch	1569	71 Dodding	1320
34 Galbraith	1562	72 Ames	1318
35 Shorey	1554	72 Lambert	1318
36 Davis, 6	1552	74 C. V. Walker, 11	1317
37 McWhinney, 20	1550	75 Crockard, 12	1316
38 Steele	1540	76 Delworth, 19	1314
		77 Harrop	1307
		78 Scott, 7	1303
		79 Hallworth	1301
		80 DuToit	1293
		81 J. L. Walker, 9	1291

82 Boys	1289
83 Cunnington	1287
84 Middleton	1276
85 Matheson	1273
86 H. J. Shaw	1227
87 Wallace	1223
88 Finch	1214
89 Silverthorn, 9	1206
90 Stevenson	1182
91 W. Walker	1175
92 Marshall, 4	1152
92 A. E. Wilson, 12	1152
94 J. G. B. Shaw	1143
95 A. R. Nelson	1134
96 Moore, 1, 7	1134
97 Copeland, 18	1113
98 Singer, 7	1101
99 Macfarlane, 1, 11	1093
100 W. A. Johnston, 7	1090
101 Clarke	1084
102 Fleming, 4, 9	1066
103 Moses, 9, 12	1052
104 Rothwell, 9	1042
105 Foreman, 10, 20	935

Students who failed are not listed.

Students with P. T. in English:

O'Neill	1490
Wilcox, 8	953
McGregor	918
Raymond, 9, 12	852

Figure indicates subject in which students must write supplemental examinations.

List of Subjects.

- 1, English Literature.
- 4, Bookkeeping.
- 6, Soil Physics.
- 7, Mechanics.
- 9, Chemistry.
- 10, Geology.
- 11, Botany.
- 12, Zoology.
- 18, Apiculture.
- 19, Vet. Anatomy.
- 20, Vet. Materia Medica.

Second Year.

Maximum, 3200.

1 Rowley	2656
2 Cowan	2311
3 Watt	2297
4 Stokes	2296
5 Neale	2288
6 Shearer	2280
7 C. Gautby	2245
8 Brownlee	2241
9 Elder	2231
10 Williams	2225
11 Campbell	2209
12 Lane	2206
13 Hanlan	2168
14 Slack	2141
15 Fuller	2121
16 Murdock	2196
17 Hampson	2079
17 McMullin	2079
19 McKillican	2067
20 Fulton	2065
21 Davey	2062
22 Martin	2061
23 Gregory	2053
24 Bissett	2014
25 Skinner	2007
26 Mason	1987
27 McPhail	1978
28 Wodell, 15	1976
29 Steckley	1970
30 Selwyn	1962
31 Bonham	1961
31 Saxton	1961
33 Cox	1952
34 Hill	1947
35 Simmons	1943
36 ———	1929
37 Hammond	1921
38 McConkey, 16	1910
38 Wiggins	1910
40 O. C. Evans	1902
41 Smith, 12, 18	1899
42 Lee, 11, 12	1898
42 Mallory, 16	1898
42 Waterman	1898
45 Meek	1897

46 Wood	1893	E 92 McNeil, 13, 16	1619
47 Ure	1892	93 Kelly	1612
48 Timms	1884	E 94 Railton, 21	1607
49 C. Graham	1870	E 95 Morton, 7, 12	1600
50 Wilson	1859	Below 50 p.c. in General Proficiency.	
51 Lawrence	1850	96 Stickle, 7, 8, 12	1589
52 H. W. Graham	1837	E 97 Munro, 11, 18	1582
E 53 E. Z. Agar	1836	E 98 J. C. Agar	1572
E 54 Kernighan	1832	E 99 Parsons	1550
55 Boulton	1830	E 100 Sirett, 1, 8	1535
E 56 L. Gautby	1824	E 101 G. H. Edwards, 13, 14.	1489
57 Knox	1822	E 102 H. S. Edwards, 7, 21...	1412
58 Marritt	1813	Students who failed are not listed.	
59 Keirstead	1808	E. indicates students who made less than 60 per cent average in English subjects.	
60 Hunter	1806	Number indicates the subjects on which students are required to take supplemental examinations.	
E 61 Roger	1803	List of Subjects.	
E 62 Hockey	1800	1, English Literature. 7, Agr. Engineering. 8, Electricity. 11, Agr. Chemistry. 12, Animal Chemistry. 13, Bacteriology. 14, Entomology. 15, Horticultural. 16, Botany. 17, Economic Botany. 18, Plant Physiology. 19, Field Husbandry. 21, Feeding and Management.	
63 Nixon	1794	Third Year.	
E 64 Parker	1785	Year standing. Maximum, 2500.	
E 65 Davis	1781	1 Romyn	2247
65 Springstead	1781	2 Cotsworth	1997
E 67 Keillor	1760	3 Culp	1885
68 Rowlands, 8	1760	4 Strong	1884
E 69 Runnalls, 16	1759	5 Baird	1878
70 Rawson, 17	1753	6 Cairncross	1876
E 71 Henry, 16	1733	7 Ferguson	1862
E 72 Delahay	1730	8 Morse	1842
73 Luckham	1728	9 Walsh	1836
E 74 Mills	1726	10 Bennett	1800
E 75 McCook, 1	1721	11 Schuyler	1799
E 76 McConnell	1714	12 McIntosh	1776
E 77 Grerson, 8	1711		
E 78 Brubacher	1709		
79 McCurry	1685		
E 80 Fallis	1683		
81 Malcolm, 7, 12	1675		
E 82 Anderson	1670		
E 83 Fleming	1662		
83 McLaughry, 13	1662		
E 85 Fenwick, 7	1661		
86 Patton, 7	1660		
E 87 Mann, 8, 16	1653		
E 87 Newman, 17	1653		
E 89 Thompson, 14, 16	1646		
E 90 Dempsey	1637		
E 91 Merkley	1622		

13 Duncan	1774	40 Clarke	1451
14 Coughlan	1752	41 Bryden	1439
15 Oldfield	1750	42 Langley	1431
16 Beaumont	1746	43 Brownridge	1400
17 Curran	1700	44 Lachner	1398
18 Glavin	1693	45 Zavitz	1397
19 Stothers	1680	46 Scott	1379
20 Shaw	1659	47 Hill	1374
21 Elliott	1647	48 Atkinson, 1	1349
22 Aiton	1631	49 Adair	1341
23 Small	1619	50 McDonald, 5	1294
24 McCulloch, 18	1617	51 Abraham	1260
25 French	1606	52 Lawson	1239
26 Young	1582	53 Griffin, 1	1226
27 McDermott	1574	54 Wilson, 1, 13	1208
28 Riley	15..	55 Dougherty, 12, 13	1154
29 Cannon	1553	Number indicates subjects on which supplemental examinations must be written.	
30 Hogan	1552		
31 Rowland	1547		
32 Burrows	1544		
34 Welton	1543		
35 McLarty, 14	1527		
33 Elgie	1544		
36 McLennan	1525		
37 Coke	1515		
38 Townsend	1490		
39 Atkins	1476		

List of Subjects.

1, English Literature. 5, French or German. 12, Quantitative Chemistry. 13, Organic Chemistry. 14, Geology. 18, Entomology (Systematic).

The Requirements of a Good Farmer Are Four

The ability to make a full and comfortable living from the land.

To rear a family carefully and well.

To be of good service to the community.

To leave the farm more productive than it was when he took it.

—L. H. Bailey.

Who'd Be a Farmer?

By Orloff Mallory

WHY does the average person now-a-days prefer town life to country life? Is it not on account of the convenience and ease with which one can live in the town?

Let us look at life from the viewpoint of a young couple living in town. They have an income of, say, \$50 a month. They rent a house at about \$15 a month, with modern conveniences—hot and cold water taps in the kitchen and bathroom, electric lights in each room, electric iron, telephone to give orders to the grocer and butcher and have them brought to the house, furnace in the cellar, situated on a well-paved, well-lighted street. Besides this there are social advantages they can enjoy that would not be met with on the farm.

I am speaking of town life and not city life necessarily, as I believe that town life is far superior to city life. They may conveniently visit friends or attend meetings or concerts nearly every night in the week if time and money permit, and they so desire. But here is where the hard part comes—when the monthly bills for food, fuel, water and light are paid there will not be much left of the \$50, and the sociability they so enjoyed at first becomes monotonous. Friends are visited, meetings and concerts attended to quite an extent as a habit they have formed or as a matter of form. He may have an easy inside job with short hours and Saturday afternoons off, and they take pleasant trips to the country or on the water. They may have beautiful pictures of farm scenes on the

walls of their home, a nice lawn, a good garden and some poultry, but still there is a longing to get away from people and man-made things, closer to nature's heart with its quiet uplifting influences.

Now on the other hand, why do people live in the lonesome, dreary country, on the farm? Is it because their father left the farm to them, and they didn't have "gumption" to get away to town and learn a trade or profession, but remained on the farm wishing they had gone to the city or hoping that they would be able to live there soon? Do they live on the farm because they think they are going to make a fortune out of the poultry business or some similar business when they get things going properly, (which possibly will never be)? Do they live in the country on the farm because they love the farm and everything that goes with a farm, believing that God intended them to live there, working in his great out-of-doors in the fresh air and sunshine, building for themselves through all the hard work, lonesomeness, and discouragements—strong bodies and strong characters that will be a blessing to their maker and to their neighbors.

Now let us consider a young couple who have had a little experience in farming, making up their minds that they will start farming as soon as they can get in a position to do so. In order to be able to farm they will need brains, money and muscle. If there is a lack of any one of these it would be wise to consider how great that lack is before attempting to

start farming, as people who start farming with little knowledge of farm work, little capital and a weak constitution are apt to get discouraged when failures, which are sure to come, meet them, and it would be better if they could make an easier living in town, as nearly anyone can be a barber, a baker, a tailor, but it takes a man to be a farmer. However, many people who have had their hearts in the work and a determination to succeed in farming have made successes, although handicapped through having no knowledge of farming or capital when commencing.

Consider a young couple, strong in body, experienced in the general work of a farm and having \$500 in money. They live in a town, but make up their minds that they want to farm. There are hundreds of couples in that position to-day. I venture to say one-third of the men working on railroads or in stores are looking forward to a time when they will live on a farm. Possibly this anticipation will always remain as a vision as they pursue their daily work on the road or in the shop. Possibly they look forward expecting to invest in a farm, time, money and energy and get big returns.

Our young couple are able to find a farm that suits them about three miles from a good live town, and intend to go in for mixed farming—dairying, gardening, fruit, poultry, bees, pigs, sheep—anything by which they can make money without drudgery. Their farm consists of thirty acres—ten acres is bush and pasture, with a small creek running through it, and the other is good workable loam. There are no buildings, nor fences to amount to anything, on the

place, and they buy the place for one thousand dollars—five hundred dollars down and one hundred dollars a year at seven per cent. interest.

They build a house that answers the purpose for the time being for two hundred and fifty dollars, and a barn for two hundred. They will also need tools, seed, hens, etc., to be able to start operations, and we will put these at fifty dollars, thus making five hundred dollars more to be borrowed at seven per cent. Now there will be one hundred and seventy dollars to be earned and paid out at end of first year besides living expenses. By hard work in cutting wood, growing vegetables and poultry and selling them, practising economy they are able to live, make their payments and look forward to another year of larger efforts and larger returns. Probably the hardest part of farming is to get a start, and now they are started on one of the greatest vocations in the world to-day. They are able to live and work the most of their time in God's great out-of-doors, in the fresh air and sunshine, and live on the freshest and purest of food and water, which will all tend to develop healthy bodies, elevating thoughts and bright spirits providing that their hearts and minds are in their work and they try to work together and with other people in the other walks of life—commercially, socially and spiritually. This sort of work promotes a healthy, happy life, far more at least than that of the indoor worker who remains inside all day, with only a breath of fresh air occasionally.

We should not like to see everyone living on farms, as we need people to keep books, to despatch trains, to

make stoves. We have no dispute with those who work inside, unless they speak of country people as being "countrified." They fill the bill in the make up of a country in promoting health, wealth and happiness far better than their country brothers and sisters in many cases. But let us not forget that in times of peace or war the farmer is the man on whom we are most dependent. He produces our food. He produces the men and women who become the best leaders of our country because

of the natural food, natural air and natural sunshine they have taken into themselves as it were while they cheerfully struggled on the dear old farm.

I hope we see why the townsman should respect, honor, and do the best he can to help the farmer. The farmer should not feel at all below the townsman, nor yet feel that he is independent of him, but rather that they must work together, that he has one of the highest positions man can occupy.

What Are We Going to Do About It?

By P. L. Faucher

EVER since the last census was taken the people of Ontario have been discussing a topic of vital interest—vital in that it deals with the life and work of those engaged in agriculture. This topic has become familiarly known as "The Rural Problem," and has arisen from the fact that rural Ontario is suffering from the removal of a large portion of her population to the cities and to other provinces of the Dominion.

It was only a short time ago that the students of this college met in conference to discuss the facts pertaining to rural life and work as they had experienced them. From what was stated, it is plainly evident that there is a rural problem and that there is another life which a large number of the people who have been born and raised on the farm, prefer. This depopulation is not confined to any one part of the province, neither is it directly proportional to land fertility. Some of the very best countries have suffered most. It is

a fact that good farmers own good land—they are the best educated and most intelligent farmers. Then, why are good farmers and good farmers' sons and daughters leaving good, fertile farms in some of the best counties of Ontario? It must be that country life is not adequate to the demands made upon it by men of normal characters and tastes.

Of those who leave Ontario farms, some go to the Western Provinces, some follow their calling into professional life, and some go to the city simply to get away from the farm and rural conditions. Little need be said regarding those who go to the Prairie Provinces; their removal is for economic and not for social reasons, and the movement will continue so long as people can obtain land at a low cost that is not robbed of its primitive fertility. Neither is there any reason to complain because men and women leave the farm to follow their professional callings. The country has supplied in the past and

should still continue to supply a fair proportion of those thus engaged. Then, it is the last mentioned class for which concern is felt, and this class is responsible for the rural problem and must be given attention if this exodus is to be understood.

Those country-bred people who prefer city life to that of the country, cannot be said to possess any greater or any less mental capacity than those who by choice stay on the farm. If, after a few years, there appears to be a difference, it is because their environments have developed them differently. But there is a difference in their natural dispositions and their appreciations of life, and out of this difference grows their choice of environment. Then the question naturally follows, wherein does country life fail to meet the demands made upon it?

In discussing this question, it may be assumed—and I think rightly, too—that the rural problem is due to the influence of city life upon the country, creating dissatisfaction in the minds of the country people. There was no rural problem before the cities grew so large, because there was very little difference between city and country life. That is not true today. Ontario has advanced commercially a great deal faster than she has agriculturally, and as a result numerous towns and cities have grown up. And, with this advancement and growth came the greater earning power of the dollar, and a greater return for the same energy spent in labor.

Assuming this to be true, then the difference in the earning power of a dollar invested in agriculture, as compared with its earning power when invested in a commercial en-

terprise, is too great. So too, the difference in the returns for labor spent is too great; and in proportion to these differences do the standards of living in the city differ from those in the country. The inference, then, is that the country fails to meet the demands made upon it, in that it fails to yield sufficient returns for labor and capital invested, making the rural problem an economic problem—which is true to a greater extent than is generally supposed.

In a great many discussions the school, the church, rural organizations and rural society in general are given most of the blame for rural conditions as they exist. These are responsible to a great extent in that they are factors through which rural life may be helped or hindered. The rural school is the place to develop an agricultural mind in every boy and girl. The church cannot only have the social and moral welfare of the people at heart, but also their financial welfare as well, and the country church that fosters a religion which does not make a farmer a better farmer as well as a better man is not filling its sphere of influence. The same may be said of rural society in general, for by it the social and also the mental pulse of the community is quickened and strengthened.

A great deal, too, is said about the scarcity and price of labor; about the ill-equipped farm homes; about the bad roads over which the farmer has to travel, and the turnout in which he travels.

If a farmer and his wife, or a country boy or girl, go to the city to visit friends or relatives, they immediately note how well the city

houses are furnished and how well they are equipped. During a drive around the city, their attention is drawn to the splendidly paved streets and to the autos as they glide smoothly over them. The large and well equipped schools are seen, and the great public libraries, theatres, and parks and pleasure grounds are visited by them. In the evening a theatre party is organized, and all go to see an excellent play. Sunday morning comes to find them going to church. What beautiful clothes the people wear! What a magnificent building they are seated in, and what excellent music is sung by the choir! During the week, work is over each day at five or six o'clock, and usually at noon on Saturday.

The question now comes: Why don't the farmers drive their own cars over splendid roads to some theatre in town or to church on Sunday morning to hear a well paid divine or a world renowned singer? Why are not the farmers' homes well furnished and equipped up to date? And why have they not large play grounds or sporting clubs? The answer is evident: All cost money.

It is not to be inferred that farmers should lead a life as pictured in a city, for such a life is abnormal when applied to country conditions, but it is plainly evident that country life falls below the normal—and why? Again the same answer is evident.

Very little has been accomplished either in the city or country without money. The better equipped the schools are, the better the farmers' homes are equipped and furnished, the better the farmers' organizations are, or the church; or the higher the social

status of a community, the more money it requires. So it is that all organizations and social life need money, or its equivalent, for their success; and in proportion to the earning power of the dollar or returns for labor expended is there money to spend, and upon it do the standards of living largely depend.

That class of people who leave the farm for the activities of city life demand "better living." To live better the farmer must have greater returns. This means "better business and better farming," and these yield greater profits. If the farmer is to farm better, he must increase his production and receive a higher price for his products; he must use better business methods and curtail the cost of production.

"Nothing succeeds like success," and that the farmer may succeed he must know how to improve his business methods, how to increase his production, and how to obtain better prices.

This opens up the whole question of education—the greatest factor in better farming—which is too big to be fully discussed here. There are educative factors at work all over the province which are helping to solve the problems of the farmer. There is the agricultural college, the district representatives, the agricultural press, farmers' and young people's organizations, the schools, the church and many others, each in its own sphere.

There are other and more important factors than these, and upon which all the others depend—and they are you and I.

What are we going to do about it?

THE O. A. C. REVIEW

REVIEW STAFF

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

R. D. COLQUETTE, *Agriculture*

B. E. FOYSTON, *Experimental*

R. W. DONALDSON, *Horticulture*

J. P. HALES, *Poultry*

R. H. ABRAHAM, *Query*

W. H. HILL, *Alumni*

S. B. STOTHERS, *College Life*

E. E. CARNCROSS, *Athletics*

C. L. RAWSON, *Artist*

W. MALCOLM, *Locals*

GLADYS MANNING, *Macdonald*

Editorials

With the staff scattered over this Dominion, in adjoining countries and even on the battlefields of Europe, the production of this number is a work of real labor. But we offer no apology for it. Our readers (students and ex-students) have been away from the College now long enough, we think, to appreciate any news from the College even though of small bulk. We may say then the campus is at its best now, the physics building is nearing completion, so that the usual lectures on physics, including "pressure," farm book-keeping, lightning rods, Cooper's cold storage, and weather records, will be overflowing with interest, the maid's building is already started (on receipt of a stamped addressed envelope the location will be disclosed), "Don't Make Paths" signs have appeared again as an annual occurrence, "Chumpy's Castle" has disappeared, Prof. Crow has made home, for nearly every bird we find here, and Chief Randall has supplied one of his subordinates with a new hat. These are the happenings of five weeks, and during that time the Review has been

searching without reward for the summer addresses of some of the students. Therefore know ye who never read this that ye have forgotten the Review office in that respect.

"DON'T ROCK THE BOAT."

An agricultural magazine gives us some sound advice under this head. Sound, we think, for the strenuous and critical period through which we are now passing. Most of the great world powers are at war. It is difficult for us Canadians to realize the situation. We have among us those who are our enemies—many of them. We all know what happens to the hot-headed fellow, the calm and conservative man who waits for facts, who is not too loud in expression of his judgment, especially in public, is the man we need. Many events have occurred in the past few weeks startling enough and horrible enough to cause outbursts of passion. Let us keep cool. We meet many on the streets in civilian clothes who profess to be able to tell Kitchener how to manage the war. We hear those who

would treat interned enemies as report says Canadian prisoners of war have been treated, who would point out to President Wilson his duty as head of a neutral nation. Let us say to these "Don't Rock the Boat." We still have a national honor to maintain, a great fight to win, and it will require the best that is in the citizens of our country before the crisis is past. Then "Don't Rock the Boat."

COALITION GOVERNMENT.

A serious situation requires resourcefulness and firmness. The serious situation in the British Empire justified the formation of a coalition

government in England. We would respectfully recommend such measures by someone to control the insect pests which seem inevitable during the coming season. "Swat the fly" is a pernicious phrase—begin earlier than that, clean up and thus destroy the breeding places. Tent caterpillars seem to be even worse this season than last, inhabiting waste and useless trees and shrubbery. Production will be seriously impaired by these pests. Spraying, draining waste places, bogs and swamps, cutting out wild bushes about fences will do much to control if you can have coalition with your neighbor to do the same.



How We Think the Graduate Feels.

Alumni

F. M. Logan, B.S.A., has recently been appointed assistant dairy commissioner for Saskatchewan. Mr. Logan has had many year's experience in dairy and live stock work, both in a commercial and educational way. He began as manager of the Arcadia Dairy Co., in Nova Scotia, later being appointed as dairy inspector for that province. He also took the four year course at the O. A. C. Guelph, graduating with the B. S. A. degree. He was immediately appointed to work in British Columbia under the direction of the Live Stock Branch at Ottawa. He later took charge of dairy and live stock work under the British Columbia Government, where he remained for four years. Following this he became interested in journalistic work, and was for three years editor of the Commercial Review of Vancouver and Calgary.

E. A. Howes, B.S.A.

E. A. Howes, or "Father," graduated from this College in 1911. He was for some time Principal of the Macdonald Consolidated School, Guelph. His first position after graduation was upon the staff of the Seed Branch at Ottawa, later occupying the chair of Professor of Agronomy at the Agricultural College at Reno, Nevada. Mr. Howes has been principal and instructor in Field Husbandry of the School of Agriculture at Vermilion, Alberta, since its opening. He has just been appointed head of the New Agricultural College for Alberta, which is being built at the University grounds near Edmonton.

Mr. A. J. Logsdail, B.S.A., Assistant to the Dominion Horticulturist, received his early education in England. Coming to Canada, he took his degree at the Ontario Agricultural College, after which, returning to the Old Country, he spent two years as apprentice with James G. Sweet, V. M. H., F. R. H. S., proprietor of one of the largest establishments under glass in Great Britain. The following eighteen months were passed as Student Gardener at the Royal Botanic Gardens, Kew, where he was attached to the Landscape, Decorative and Tropical Departments, and secured a certificate for courses taken in economic and systematic botany, physics and chemistry.

Returning to America, he took a postgraduate course in Plant Genetics at Cornell University, and then took a position under the Ontario Department of Agriculture as Assistant Horticulturist and Expert in Plant Genetics at the Horticultural Experiment Station, Jordan Harbor. For eight months he was Acting Director of the Station.

He left this post to take his present position, in which he has plant breeding for his special field of work.

Mr. Walter L. Graham, B.S.A., Assistant to the Dominion Field Husbandman, was born at Britannia Bay, near Ottawa. He received his early training at the rural public school, the Ottawa Collegiate Institute, and at his father's stock and dairy farm. He entered the Ontario Agricultural College in 1909, taking the agricultural option. Graduating in 1912, he returned home and continued farming

in partnership with his brother until he accepted the position he now holds.

Mr. George Robertson, Assistant to the Dominion Poultry Husbandman, received his public and high school training in the city of Ottawa, and in 1894 went to the Ontario Agricultural College, where he spent two years, specializing in poultry work in the second year.

After leaving college, he took up mixed farming at Galetta, Ont., paying special attention to poultry in its various branches. In 1904, he moved to the vicinity of Ottawa and took up poultry breeding exclusively, with most of the leading varieties of land and waterfowl.

During the latter period a considerable portion of his time has been occupied in judging, lecturing and editorial work, being widely and favorably known in all these lines.

He has been an executive officer of many of the Specialty Clubs and Poultry Associations and at the time of his appointment was serving his fifth term as President of the Eastern Ontario Poultry Association.

Students of the O. A. C. Who Have Enlisted.

First Year—

Brooks, G. F.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Chester, W. M.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Christie, H. F.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Dickson, N.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Donaldson, E. R.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Hill, L.—Address not given.

Jordan, M. D.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Leach, W. B.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

McGuire, M. E.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Murray, W. J. R.—16th Battery, Guelph.

Packham, S.—Definite address unknown (went to Toronto).

Pearson, H. W.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Read, D. G.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Sampson, H.—(Scotland).

Sanderson, C. E.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Seymour, C. N.—Gunner, Bde. Amn. Col., 4th Bde., C. F. A., Ex. Park, Toronto.

Smedley, G.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Stones, J. G. K.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Ware, B. W.—"D" Co'y, 38th Battalion, C. E. F., Montreal.

Woolley, H. H.—16th Battery, Guelph.

To March 25th, 21.

Second Year—

Arnold, C. L.—London (?)

Bagsley, H. E.—"D" Co'y, 38th Battalion, C. E. F., Montreal, P. Q.

Bradley, C. A.—"D" Co'y, 38th Battalion, C. E. F., Montreal, P. Q.

Chamberlain, C.—

Cearry, A. C.—E. O. E. F., A. S. C., Immigration Bd., Quebec.

Forman C. T.—"D" Co'y, 38th Battalion, C. E. F., Montreal, P. Q.

Percival, S. E.—E. O. E. F., A. S. C., Immigration Bd., Quebec.

Waters, M. S.—34th Regiment, Guelph.

Western, E. A.—E. O. E. F., A. S. C., Immigration Bd., Quebec.

To March 25th, 9.

Third Year.

Dow, N. D.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Ferguson, P. H.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Fitzgerald, E. F.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Garlick, G.—Headquarters, 4th Brigade, C. F. A., C. E. F., Toronto.
 Hessel, E. C.—
 Huckett, H. C.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Jones, M.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Lewis, R. M.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Lord, S. N.—Ambulance Corps, Guelph.
 Murray, Robt.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Steele, J. A.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 To March 25th, 11.

Fourth Year—

Donaldson, R. W.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Kedey, W. M.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Beatty, H. A.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Shipton, J. C.—"D" Co'y, 38th Battalion, C. E. F., Montreal.
 Townsley, W. A.—16th Battery, Guelph.
 To March 25th, 5.

Summary to March 25th.

First Year	21
Second Year	9
Third Year	11
Fourth Year	5
—	—
	46

Graduates of the O. A. C. Who Have Enlisted.

Name—	Year.
Brown, W. J.	1894
Bland, A. G.	1913
Blanchard, B. H. C.	1914
Carpenter, G. H.	1904
Coke, E. F.	1909
Cherry, P. A. B.	1912
Clark, T. C.	1912
Cleeves, A. C.	1914
Davison, W.	1913
Everest R. E.	1905
Grange, J. B.	1913
Harrison, F. C.	1892
Hoodless, J. B.	1905
Hudson, H. F.	1907
Hextall, L. J.	1913
Kennedy, S.	1910
King, V.	1911
Keegan, H. L.	1913
Lawrence, C. A.	1909
Lattimer, E.	1914
Leppan, H. D.	1914
McDonald, R.	1912
Phillips, H. L.	1912
Rogers, C. H.	1897
Rogers, S.	1912
Rogers, C.	1913
Stansfield, N.	1914
Unwin, G. H.	1909
White, O. C.	1910
Wearne, H.	1911
To March 25th, 30.	

Ex-Students of the O. A. C. Not Graduates Who Have Enlisted.

Name—	Year.
Atkins, T.	'07
Bertram, L.	'15
Bond, J. H. M.	'13
Bagsley, A. G.	'17
Burnett, —	'16
Barrett, P.	'16
Barrat, —	'12
Baker, F. H.	'16

Birdsall, F. E. ....	..	McEwan, — ..	..
Curtis, N.	'15	Nourse, C. B.	'14
Campbell, A. M.	'14	Neilson, M. A.	'17
Cleverley, A. C.	'15	Neale, — ..	'17
Campbell, R.	'14	Orlowski, A. Count.	'17
Cory, A.	'15	Peren, G. S.	'15
Crohn, E. E.	'14	Pratt, — ..	'16
Caldwell, L. V.	'17	Pereira, A. O.	'17
Campbell, J. W. R.	'17	Parker, — ..	'16
Chauncey, — ..	'16	Rumsby, — ..	'15
Campbell, Walter ..	'12	Ryan, K.	'14
Campbell, W.	'12	Scott, Maxwell ..	'15
Davis, — ..	'12	Stairs, — ..	..
Davy, Fred. ....	..	Smiley, — ..	'15
Downey, — ..	'14	Shuttleworth, — ..	'15
Donaldson,, J. R.	'16	Scott, — ..	'14
Edye, H. K.	'16	Thompson, Stanley ..	'16
Fitzpatrick, A. C.	'17	Thompson, G.	'16
Fairclough, — ..	'17	Wilson, N. I.	'15
Golding, — ..	'14	Woodgate, — ..	'17
Goodall, G. M.	'17	Westra, H.	'17
Hart, E. W.	'15	Wilson, S. C.	'17
Hartley, R. S.	'17	Waterfall, — ..	'17
Hirst, G. S.	'14	Wearne, G. A.	'17
Hearle, E.	'16	McIlquharm, — ..	..
Hocking, G.	'13		
Hunt, G. S.	'14		
Holmden, — ..	'17		
Hammond, — ..	'17		
Herder, — ..	'17		
Irving, B.	'12		
Innes, — ..	'..		
Iwanami, — ..	..	
Jensen, E.	'16		
Knight, G. T.	'17		
Kelsor, — ..	'12		
Kinley, — ..	'15		
Knowles, F. G.	'17		
Lindesay, H.	'15		
Lever, J.	'14		
Lee, — ..	'16		
McLaren, G.	'15		
Mollison, R.	'15		
Millar, — ..	'12		
McClymont, A. C.	'16		
Murray, H. G. ....	..	
Moseley, L. A.	'14		

To March 25th, 39.

The following letter has been received from Pte. W. N. Campbell (Rusty), an associate of Class '12, now with 30th Battalion, C. E. F.:

Le Havre, May 18th, 1915.

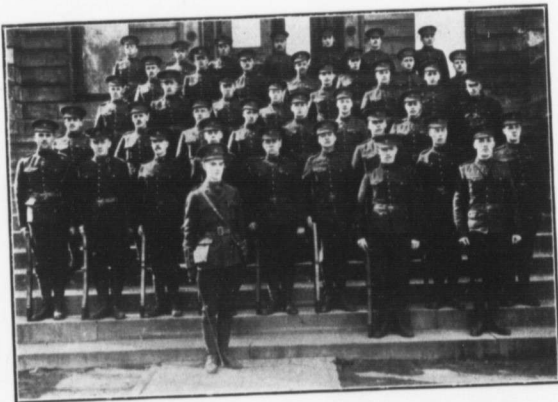
Editor O. A. C. Review:—
 Dear Sir,—I am just dropping you a line to let my old chums at the O. A. C. know I am still kicking and very much alive. Any of you chaps who are still undecided as to enlisting should have one day on the firing line to see how badly you are needed. The gaps are many and there will be many more before the year is out, and they will have to be filled. Mr. Editor, please do what you can to get those "braw" Ontario farm lads to

come along and give us a hand. The Germans don't "play the game," but they will never have the chance, with God's help, of saying the Cannucks never played it. We have several Guelph boys in the battalion, and there must be hundreds in the contingent.

Will close, hoping I may have the chance of shaking hands with many boys from the dear old "Alma Mater" out here.

Yours truly,
Pte. W. N. Campbell, '12.

partment of Agriculture, Toronto.
Creelman, J. M., Dominion Cold Storage Plant, Grimsby.
Culverhouse, P. E., Department of Agriculture, Burlington, Ont.
Cumming, R. E., Asst. Rep. Department of Agriculture, Orangeville.
Donald, F. C., Asst. Rep., Department of Agriculture, Hamilton, Ont.
Dustan, A. G., Entomology Department, Dominion Department of Agriculture.
Finn, R. A., Asst. Rep. Department of Agriculture, London, Ont.



Part of University Corps, including some of the O. A. C. Boys at Montreal.

Following is an incomplete list of this year's graduates and their appointments:

- Bell, W. J., Department of Agriculture, Charlottetown, P. E. I.
Blighe, R. D. I., Department of Agriculture, Kentville, N. S.
Burrows, L. F., Horticulture Branch, Department of Agriculture, Victoria, B. C.
Colquette, R. D., Farm and Dairy, Peterboro, Ont.
Crawford, H. G., Fruit Branch, Department of Agriculture, Toronto.
Foyston, B. E., Department of Physics, O. A. C.
Francis, J. F., J. Fitzgerald's Poultry Farm, Walkerville, Ont.
Freeborne, S. G., Asst. Secretary Grain Growers' Grain Co., Winnipeg, Man.
Frejd, D., Drainage Work, Department of Agriculture, Toronto.
Goodman, F. L., Horticulture Branch, Department of Agriculture, Victoria, B. C.

- Hales, J. P., Poultry Department, O. A. C.
- Hall, E. R., Asst. Rep. Department of Agriculture, Markdale, Ont.
- Harris, A. C., Hort. Experimental Farm, Vineland, Ont.
- Hinman, R. B., Asst. Rep. Department of Agriculture, Aylmer, Ont.
- Hogarth, E. G., Manager A. G. Rae Estate, Scarboro, Ont.
- Kerr, W., Asst. Rep. Department of Agriculture, Perth, Ont.
- Laird, D. G., Chemistry Department, O. A. C.
- Locke, W. A., Asst. Rep. Department of Agriculture, Temiscaming.
- McQueen, M. J., Live Stock Commissioner, Fredericton, N. B.
- Neff, E. F., Farming, Hamilton, Ont.
- Neilson, J. A., Asst. Rep. Department of Agriculture, Petrolea, Ont.
- Paterson, F. G., Department of Agriculture, Huntsville, Ont.
- Pawley, N. H., Department of Agriculture, Regina, Sask.
- Robb, O., Hort. Experimental Station, Vineland, Ont.
- Sackville, J. P., Animal Husbandry Department, O. A. C.
- Sands, D. R., Fruit Branch, Department of Agriculture, Toronto.

Macdonald

INITIATION.

ON Monday night, April 26, Macdonald Hall Gymnasium was the scene of a sad and painful trial, when about thirty "Freshies" of the Easter Class were arraigned before Judge Rogers on various charges of importance.

Great interest was manifested by the community, the court room being filled with an excited crowd, for half an hour before the court assembled.

Shortly before the opening of court the prisoners were marshalled in by Chief of Police Hays, whose club was of necessity very much in evidence. After gazing upon the poor unfortunates for a few moments, the opinion of the crowd was that the prisoners were to be greatly commended upon their economy in this year of hard times, evidenced by the modest and unassuming manner of their dress.

At 7:45 Court Clerk McCarthy called the first case, and several

abandoned-looking wretches were brought forward on a charge of unsociability. The case was so well presented by W. Westcott, prosecuting attorney, that defense was impossible, and a verdict of "Guilty" was unhesitatingly returned by the jury, of "twelve good men and true." The prisoners were sentenced to a feed on dangling buns, which, to say the least was vastly amusing to the spectators.

The second charge was a very serious one, namely, that of "man-hunting," and we are glad to say that only one person was involved. The sentence given was most effective and will surely discourage this sort of thing in future.

After several minor cases had been settled, seven dejected-looking prisoners were led into the dock and charged with being "engaged." The crowd held its breath in intense horror. Even Prosecuting Attorney Westcott was nearly overcome, and it was only after great internal struggle

that he was able to put the questions and present the case. The jury at once returned the unanimous verdict "Guilty, show no mercy" but Judge Rogers, out of his kindness of heart and depths of experience, deemed that the punishment of the prisoners was already greater than they could bear. With a few words of kindly, but severe advice, and admonition, they were set free on condition that they immediately write and sever all bonds.

After this, a long list of cases were brought on, of which only a few can be mentioned.

1. Breaking the speed limit.
2. Putting pins in pillows.
3. Hanging Bathing Suit out front window.
4. Matrimonial Discord.
5. Running after O. A. C. boys.
6. Rudeness to Seniors.
7. General Freshness.

For this last the two persons concerned were forced to sing to the tune of Tipperary, "If we were as smart as we think we are, how jolly smart we'd be." The excellence of this singing was the subject of much comment.

After the settlement of all cases the prisoners were declared to be full-fledged residents of Macdonald Hall, and the court adjourned.

We feel that the jury are to be congratulated on the remarkable strength of character shown by their prompt and invariable verdict of "Guilty, My Lord."

After the adjournment of court, ice cream was served to soothe all wounded feelings and at eight o'clock the crowd dispersed while the prisoners sang "God Save the King."

Note—The girls wish to thank the "Two in Ones" and Homemaker B.'s,

for one of the cleverest and most amusing initiations ever witnessed in Macdonald Hall.

Literary Society.

On Friday, April 23rd, a meeting of the Literary Society was held, each class contributing a number of the programme.

Great consternation was caused just as the meeting was about to begin, by the appearance of several girls with their usual Friday night callers. "I simply won't do it," and "I'm not going in this rig if they're going to be here," were some of the remarks heard, but they finally saw it was no use and the President opened the meeting.

A piano duet by the Misses Widdifield and Horning, of the A. Homemaker Class, was first on the program, and was greatly enjoyed, as was also a solo by Miss Margaret Neil, who represented the Short Course.

The Junior Normal Class gave a very well acted and amusing sketch "Mother Goose's Dream," in which her children in their familiar costumes appeared before her and recited their descriptive rhyme, Simple Simon, Old King Cole, Queen of Hearts, Little Bo Peep, Boy Blue and Miss Muffet were all there. Jack and Jill created their usual disturbance by falling even though there was no sign of a hill. Humpty Dumpty also fell and all efforts to restore him were useless. Old Mother Hubbard continued her search, but with her former lack of success.

A pretty fire-lit scene, given by the Junior Housekeepers, represented days of the future, when the girls of the class—grown old—sang a suitable parody on "When you and I were young."

THE **LISTER MILKER**
BRITISH BUILT
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 HEAD OFFICE & SHOWROOMS- STEWART ST. TORONTO
 WORKS: DURSLEY, ENGLAND.

Band C. Homemakers represented popular songs by shadow pictures, all of which were easily guessed except "A Little Love, a Little Kiss." Mac. girls being unfamiliar with such things.

The Senior Normals acted a charade, the first scene representing a train with typical occupants, negro porter, conductor, college student, maiden lady, a mother and two children, overburdened with parcels, and last of all, a bridal couple who became so interested in each other that they were totally unconscious of time and missed the train. Then came a beautiful love scene, which was spoiled by the small brother and sister under the couch, who, when discovered were stood in the corner. The final scene represented the whole word and showed the unavailing efforts of an adoring lover with his lady love, who

failed to understand him. The word of course was mis-understood.

The graduating classes of House-keeper and Normal courses did their part in serving the dainty refreshments, which, of course, were enjoyed by all.

Then Mrs. Fuller kindly played for a dance, which lasted till the gong, which meant that fun must end.

The whole evening was voted a great success, especially by the Freshies, who felt that it had given them an opportunity of becoming better acquainted with the girls.

Watchful Waiting

SHE—(passing confectioners' window)
 —"Doesn't that candy look good?"

LOCKE—"Uh huh; let's stand here and look at it awhile."

Locals

Love and a porous plaster, son,
 Are very much alike;
 It's simple getting into one,
 But getting out—good-night!
 —Ohio Sun-Dial.

JUST A MINUTE.

Don't sprinkle salt on the tail of temptation. Don't try to get the better of a man who hasn't any.

Don't snore in church. It's mean to keep others awake.

Don't be satisfied to pay as you go. Save enough to get back.

Don't get married with the sole idea that misery loves company.

Don't follow the beaten track unless you are satisfied to remain beaten.

Don't accept advice from a man who never offers you anything else.

Don't expect Opportunity to come to you with a letter of introduction.

Don't trust to luck. Nine-tenths of the people in the world guess wrong.

Don't buy your friends. They never last as long as those you make yourself.

Don't envy the rise of others. Many a man who gets to the top is mere froth.

Don't greet Misfortune with a smile unless you are prepared for a one-sided flirtation.

Don't make good resolutions unless you constantly carry a repair kit with you.

Don't place too much confidence in appearances. Many a man with a

red nose is white all the way through.

Don't forget in time of peace to prepare for war. That's about the only use some of us seem to have for peace.

Don't fail to have an object in view. Many a man leads such an aimless existence that he could fire at random without hitting it.

—Top-Notch Magazine.

UNHEALTHY.

Hiram writes that the first day he was in London he lost £12.

Great Caesar's ghost! Ain't they got any health laws in that town?

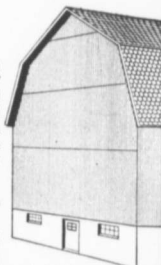
THE EDITOR'S TROUBLE.

An editor up in the northeastern part of Nebraska is in bed on account of the write-up of a wedding. The bridegroom was named Gunn and his father, Abraham Gunn. The girl's name was Smith. The editor turned in the copy to the office boy the last thing before going to press, then hurried to the train to be gone two days. When the paper was printed the article was headed "Gunn Smith," and went on to say that the bride was arrayed in a dress of "white mile" instead of white mull, and she carried a large "nose." The editor wrote that the bridegroom was a well-liked son of A. Gunn, and the boy set it up, "The bridegroom was a wall-eyed son of a gun." The editor has never been able to square it with the Gunns and Smiths and all of them have quit taking the paper.

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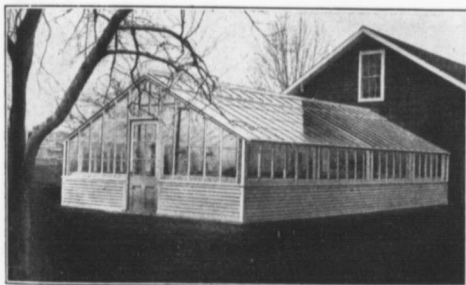
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"There's a law for this and a law
for that,
The milkman farmer sighed;
It keeps me guessing where I am at
And how my hands are tied.

"My great concern today is not
That I may shortly fail,
I have to give my every thought
To keeping out of jail.

"For profits that may comfort me
No longer can I plan,
I'm taking all my time to be
A law-abiding man.

"Oh, sorry is the plight I'm in,
I have no path to choose;
The court will nab me if I win,
The sheriff if I lose."

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Prof. J. E. Howitt (lecturing to Fourth Year Horts. on fungous diseases): "Now, the majority of this class are parasites, and we will not stop to bother with them."

Mr. Charlesworth (to Fourth Year): "Don't ask me why. Though ill at ease upon this German, I insist."

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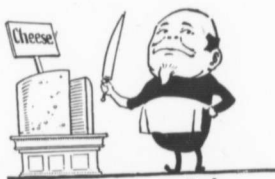
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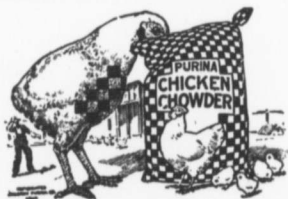
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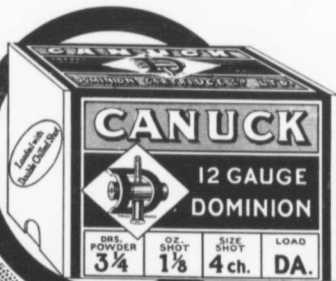
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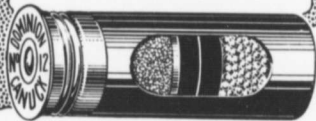
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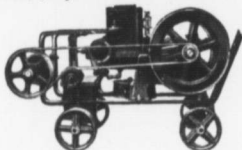
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68 King St. E., Toronto, Ont.

R. CREELMAN, Gen. Pass. Agt.
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Under the Control of the Department of
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We carry a full line of

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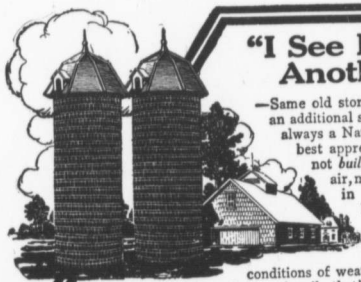
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"The Silo That Lasts For Generations"

It's built of hollow vitrified clay tile which will endure forever, and whose glazed surfaces absorb no moisture and totally exclude air and frost. It's reinforced by bands of steel laid in the mortar, and can resist all wind and silage pressure; thus a taller silo with a smaller diameter can be erected for there is no danger of a blowdown. Plan for your new silo now. Send today for a list of Natco owners in your province and ask for Catalog 7

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Made
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CANADIAN PACIFIC NEW LIMITED TRAINS

"THE CANADIAN"

Between

MONTREAL, TORONTO, DETROIT, CHICAGO Via CANADIAN PACIFIC and MICHIGAN CENTRAL RAILROADS

via Michigan Central Gigantic Steel Tubes between Windsor and Detroit. Leaving Montreal 8:45 a.m.; Toronto 6:10 p.m., arriving Detroit 12:35 a.m. and Chicago 7:45 a.m. daily.

Equally good service returning.
Through Electric Lighted Equipment.

TORONTO—WINNIPEG—VANCOUVER

Toronto-Vancouver Express No. 3 leaves Toronto 5:55 p.m. daily. Vancouver-Toronto Express No. 4 arrives Toronto 11:45 a.m. daily. Manitoba Express No. 7 leaves Toronto daily except Sunday 10:50 p.m., arriving Winnipeg second day. Ontario Express No. 8 leaves Winnipeg 9:25 p.m. and arrives Toronto 5:15 p.m. daily except Tuesday.

For further particulars apply to Canadian Pacific Ticket Agents or write M. G. MURPHY, D. P. A., C. P. Ry., Toronto, or J. Hefferman, C. P. & T. A., 32 Wyndham St.

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Fire on the Farm too often means total destruction
of all the buildings. Prevent it by using

ASBESTOCEMENT Building Materials

—made of Asbestos Fibre and Portland Cement, in various forms for different uses. All absolutely fireproof and practically indestructible.

ASBESTOSLATE CEMENT SHINGLES

give perfect protection from flying sparks and fire-brands. Make handsome roofs that outlast the buildings themselves. Many shapes and sizes, for plain or decorative effects. Three shades—Scotch Grey, Indian Red and Blue Black. Never need paint.

LINABESTOS WALLBOARD

"The only Wallboard that is fireproof." Made in uniform sheets 42 or 48 inches wide, 4 or 8 feet long, 3-16 of an inch thick, ready to nail direct to studding, joists or rafters. An economical, sanitary and PERMANENT interior finish, that checks fires starting indoors.

Details of composition and construction of Asbesto-cement products, and reproductions of photographs showing their actual appearance on buildings, and how they stand the test of fire, will be gladly sent on request. This is information you should have. Write Dept. G. R.

Asbestos Mfg. Co. Limited Address Drummond Bldg., Montreal
Factory at Lachine P. Q. (near Montreal)

Sweater Coats and Sweaters To Order



Our goods are all HAND-FINISHED.
They do not fray at edges and button-
holes.

The pockets wear as long as the coats.
Write for prices.



Thos. Warren

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TORONTO



Wayne Steel Tanks

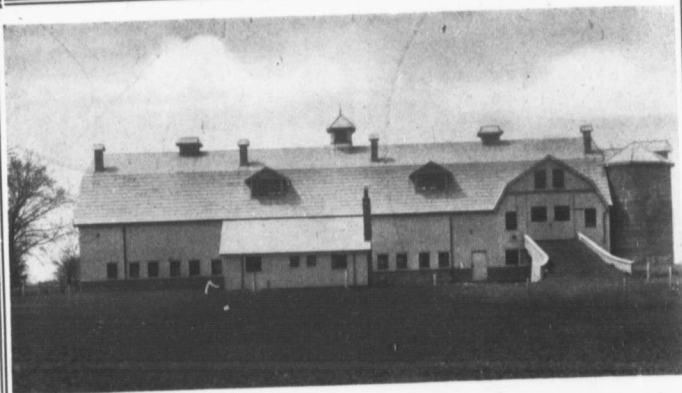
Do not buy wooden tanks or build concrete ones until you have investigated the WAYNE STEEL TANK.

The WAYNE TANK is moderate in price, and has twice the life of a wooden tank and many advantages over cement.

No fuss or muss. Use it in the barn to-day, and to-morrow put it in the yard if you wish. They do not get water-soaked, and freezing weather has no effect on them.

If your dealer does not handle the Wayne, let us hear from you direct.

WAYNE OIL TANK AND PUMP COMPANY, LTD.
WOODSTOCK, ONTARIO



VIEW of the Dairy Barn at Guelph, O.A.C. covered entirely with PRESTON SAFE LOCK SHINGLES and ventilated with ACORN VENTS.

The rink at the O. A. C., shown in the last month's Review, is entirely covered with ACORN CORRUGATED IRON.

These are but two of the many public buildings which are covered with our iron. Thousands of roofs and complete buildings all over the Dominion are protected by ACORN BRAND products.

Preston Safe Lock Shingles are a guaranteed proof against lightning. We guarantee this IN WRITING over the seal and signature of our company.

Acorn Corrugated Iron is used for a complete covering of the famous MODEL BARN which was shown at the National Exhibition, and which is being used by the best farmers of Canada.

A SPECIAL BOOK FREE

We have just issued a book on Farm Barns and Buildings, showing reproductions of some of the best barns in Canada, together with letters from many of our customers. May we send you a copy free of all charges.

Clip the Coupon to-day and send it to us.

The Metal Shingle & Siding Co., Ltd.
Preston, Ontario.

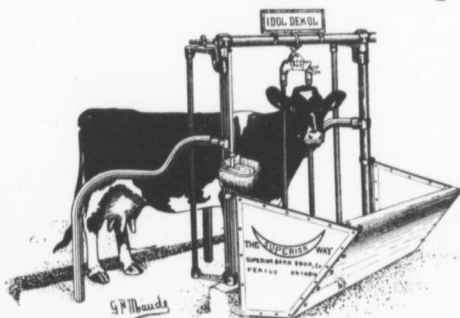
Send your Free Book as advertised in the O. A. C. Review.

Name.....

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Stable Your Cattle the Superior Way



If you are thinking of building a new barn or re-modelling your present one, I want you to know all about my **SUPERIOR SANITARY STEEL STABLE FITTINGS**

Consisting of Horse Stalls, Horse Box Stalls, Horse Stable Fittings, Cow Stables, Cow Stanchions, Maternity Pens, Calf Stanchions, Calf Pens, Bull Pens, Hog Pens, Water Bowls, Manure Carriers, Feed Carriers, Feed Trucks, Milk Can Conveyors.

Manufacturers of the only universal Rotating Adjustable Stanchion made. Get my 1915 Book; it is free; write to-day.

SUPERIOR BARN EQUIPMENT CO.

Geo. P. Maude, Mgr.

FERGUS, ONT.

THE BETTER WAY

A worthy acknowledgment of the better way to do dairy cleaning is found in the recognition given.

Wyandotte
Dairyman's
Cleaner and Cleanser

by Dairy Colleges and Dairy Authorities.

Almost to the man, State Dairy Authorities and Inspectors advise the use of this special dairy cleaner.

The better way, made possible by the sanitary cleaning ingredients of Wyandotte Dairyman's Cleaner and Cleanser, meets the approval of 85 per cent. of all butter and cheesemakers. Hundreds of dairymen, milk dealers, and creamery patrons likewise approve of the better way for they too, depend upon "Wyandotte" for their dairy cleanliness.

Indian in Circle



If you are not acquainted with the better way, why not ask your dealer or write your supply man for Wyandotte Dairyman's Cleaner and Cleanser. They will gladly supply you with the understanding that it will prove to be all that is claimed for it. Otherwise the trial will cost you nothing.

In Every Package

The J. B. Ford Co., Sole Mfrs., Wyandotte, Mich.

This Cleaner has been awarded the highest prize wherever exhibited.

Welcome to the Wyandotte Booth—Panama-Pacific International Exposition, Agricultural Building, Block 6, cor Ave. A. and Third St.

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Prove it Yourself!



I will send you absolutely FREE a

"1900" GRAVITY WASHER for 30 days FREE TRIAL

You don't pay a cent—I even pay the freight.

Everybody who has used this Washer says it is the "best ever."

Write me to-day personally for booklet and particulars.

G.K. MORRIS, MANAGER, "1900" WASHER CO.
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TORONTO, CANADA
FACTORY: 79-81 PORTLAND STREET

If you have electric light, ask me about my "1900" Electric Washer and Wringer outfit.

RIDER AGENTS WANTED

everywhere to ride and exhibit a sample 1915 Hyslop Bicycle, with all latest improvements.



We ship on approval to any address in Canada, without any deposit, and allow 10 DAYS TRIAL. It will not cost you one cent if not satisfied after using bicycle 10 days.

DO NOT BUY a bicycle, pair of tires, lamp, or sundries at any price until you get our latest 1915 illustrated catalogue and learn all about our special proposition. The low prices will astonish you.

is all it will cost to ONE CENT write us a postal, and catalogue with full particulars will be sent to you **Free, Postpaid**, by return mail. **Do not wait.** Write it now.

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REALLY DELICIOUS

The Mint Covered
Candy Coated
Cheewing Gum

Make a Corner Cosy

BY COLLECTING THE CUSHION
COVER COUPONS WITH EACH
PACKAGE

Tile and Pipe

Concrete Tile from 4 in. to 24 in. all ways in stock,

Also

Sewer Pipe from 8 in. to 60 in.

Pipe all made from crushed stone and vaporized 48 hours.

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Woodstock, Ontario.

O. A. C. Students Co-operative Supply Store

A Full Line of

Agricultural Text Books

BOTANICAL SUPPLIES

Plant Mounts,
Labels,
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Insect Pins,
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DRAINAGE SUPPLIES

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Transportation Charges paid
on orders of \$5.00 and over.

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Standard Steel Tube Posts

For the Up-to-date Farmer!

The Steel Tube Post outlasts the wooden posts five to one. Dampness won't rot it, insects can't weaken it, and it takes one-third the labor to erect.

Standard Posts and Standard Woven Wire Fencing make a combination that ensures the farmer using them the best job possible in fence erection.

There's an agent in your vicinity. If you don't know him, write to us and we will send you full particulars.

STANDARD TUBE AND FENCE CO.

Limited.

WOODSTOCK - - - ONTARIO

Makers of Standard Woven Wire Fencing, Farm Gates and Steel Tube
Fence Posts.

DON'T FUSS WITH STREET CARS
WHEN YOU STOP AT

Hotel Waverley

Any Verral Taxi will drive YOU
:: from Depot or Wharf—FREE. ::

When you arrive at Depot or Wharf, simply ask the Verral Taxi Agent for a Verral Taxi to Hotel Waverley. This is part of the service offered to our guests, our aim being to make it comfortable from the time you reach Toronto until you are ready to leave.

While our rooms are considered the best in Toronto—our rates are most reasonable. In our Restaurant and Grill we serve Club Breakfasts, Lunches and Dinners, as well as the a la Carte Service, at popular prices. If rooms are desired at a certain figure—write, wire, or telephone us, reserving same.

Rooms with private baths, \$1.50 up.
Rooms with running water, \$1.00 up.
Suites with bath, \$3.00 up.
(Telephone in every room.)

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SPADINA AVENUE
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"Unescorted ladies will appreciate the refined atmosphere characteristic of Hotel Waverley."

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SAVES YOU

\$40 to \$60

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Made in Canada

With three exceptions every
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Says:—

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Billy hits the nail squarely on the head. Nothing tends to produce quietness and confidence like a life or endowment policy, especially if in a good, strong company with Assets of nearly twenty-five millions and Surplus of nearly four millions, such as

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OF CANADA
WATERLOO, ONTARIO

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STONE'S FERTILIZERS

Do you realize that there will be a largely increased demand for Food Stuffs this year? Are you preparing for the higher prices by increasing your production?

STONE'S FERTILIZERS

will help you to get the most out of your land. They will pay you a large dividend on their cost.

BIGGER YIELDS.

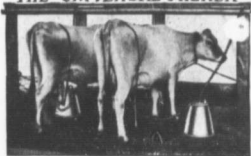
BETTER QUALITY

Brands for every crop. Write for particulars.

William Stone Sons, Ltd

Head Office: Woodstock.
Branches: Ingersoll & Stratford.
Live Agents wanted.

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THE UNIVERSAL MILKER



"MADE IN CANADA"

Is being used in OFFICIAL TEST WORK, both SEVEN DAY and YEARLY PERFORMANCE, in many parts of Ontario, with GRAND RESULTS.

Price \$50.00 per unit.

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Sole Manufacturers for Canada
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MELVIN GAYMAN

LIMITED

**INVESTMENT
BROKERS**

St. Catharines, Canada



We have over Three Hundred Fruit and Grain Farms on our lists for sale

It will pay you to get in touch with us before buying

CATALOGUE FREE ON REQUEST

**Day Old Chicks Eggs for Hatching
STOCK**

Nothing But O. A. C. Bred to Lay Strains.

1,000 Barred Plymouth Rocks.
1,000 Single Comb White Leghorns.
100 Single Comb Rhode Island Reds.



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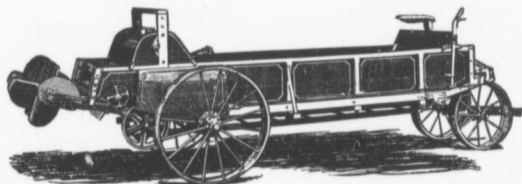
Pekin Ducks.
Bronze Turkeys.



Shade and Spring Water.

Eggs \$1.50 per 15; \$6.00 per 100; \$50.00 per 1,000; Duck Eggs \$1.00 per 11; \$7.00 per 100. Day-old Chicks 15 and 20 cents each. Turkey eggs, 30 cents each. Ducklings, 25 cents each. Write

E. F. MONTGOMERY, ST. WILLIAMS, NORFOLK COUNTY, ONT.



Loads High, Hauls Easy, Spreads Wide

This picture shows the "Nisco" spreader. It's twin, the "New Idea," has the same general construction except that the wheels track. The "New Idea" is built for use by dairymen and in hilly countries.

The machines are full capacity because they can be loaded 12 inches above the sides. The wide wheels and double cylinder perfect pulverizing mechanism insure light draft and our patented steel distributor spreads 7 feet wide, covering two rows at once and affording a big saving in time, labor, horses and machinery. The

**EASY
TO
LOAD**

NISCO

**EASY
TO
EMPTY**

The New Idea

are the acknowledged leaders of spreader construction. Built low down for easy loading. Thorough bracing prevents cramping of bearings. Simple and durable. Two levers and a foot latch give six changes of feed or throw the spreader mechanism entirely out of gear.

ACCEPT NO SUBSTITUTES

"Nisco" and "New Idea" Features Are Protected by Patents and Can Be Found on No Other Spreader.

Axle Feed.—Rear axle turns with wheels when going forward and remains stationary when the spreader is backed. One end of axle has large sprocket for driving cylinder and the other end operates the feed.

Steel Distributor.—Another exclusive feature. Spreads 7 ft., covering two corn rows absolutely even. No other spreader has this distributor.

AGENTS WANTED

Make money. Now is your opportunity. War conditions require intensive farming. This means more spreaders will be sold than ever before. Our big Canadian factory will make prompt shipments. Line up for profit now.

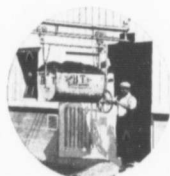
Or if you want a spreader for your own use only, send us the name of your regular agent.

NEW IDEA SPREADER CO., Spreader Specialists,

175 Suffolk St., Guelph, Ontario.



Loading BT Litter Carrier at Prison Farm, Guelph.



Running out BT Litter Carrier at O. A. C., Guelph.

BT Equipment Gives Better Service

Ask the stable men at the Prison Farm Barn or at the O. A. C. Barn how they like the BT Equipment. They'll tell you it's the best value for the money. See for yourself. See how big and strong and handy the Litter Carrier is. See how much better the BT Outfit does the work than others. Note that in the O. A. C. barn the stalls are galvanized—tubing, clamps, bolts and all—all BT Stalls are galvanized without extra charge. They last longer and look better than painted stalls.

Get our books on building and remodelling. Drop a card for Stall Book No. 21, Litter Carrier Book and book "How to Build a Dairy Barn. They are free.

Beatty Bros., Limited, Fergus, Ontario

BT



DE LAVAL SEPARATORS

Save in 7 Ways

QUANTITY of cream that no other separator will recover completely, particularly under the harder conditions of every day use.

QUALITY of cream as evidenced by De Laval butter always scoring highest in every important contest.

LABOR in every way over any gravity system, and also over any other separator, by turning easier, being simpler, easier to clean and requiring no adjustment.

TIME by hours over any gravity system, and over any other separator as well by reason of greater capacity and for the same reasons that they save labor.

COST since while a De Laval cream separator may cost a little more than a poor one to begin with, it will last from ten to twenty years, while other separators wear out and require to be replaced in from one to five years.

PROFIT in more and better cream, with less labor and effort, every time milk is put through the machine, twice a day, or 730 times a year for every year the separator lasts.

SATISFACTION which is no small consideration, and can only come from knowing you have the best separator, and being sure you are at all times accomplishing the best possible results.

EASY TO PROVE THESE SAYINGS

These are all facts every De Laval local agent is glad of the opportunity to prove to any prospective buyer. If you don't know the nearest De Laval agency simply write the nearest main office, as below.

DeLaval Dairy Supply Co., Limited

MONTREAL PETERBORO WINNIPEG VANCOUVER

50,000 Branches and Local Agencies the World Over

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