

**PAGES**

**MISSING**

# THE O. A. C. REVIEW

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

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## *The Dominion Experimental Farms*

(A Review)

F. C. ODELL, '19

IN the year 1886 the Minister of Agriculture, Sir John Carling, provided by an act of Parliament, for the establishment of a Central Experimental Farm and four branch farms for the Dominion. The Central Farm at Ottawa comprising some five hundred acres of land served for Ontario and Quebec; the Branch Farm at Nappan, N. S. for the Maritime Provinces; for the West Brandon was chosen, and for British Columbia, Agassiz.

### GROWTH OF THE FARMS SYSTEM

Since the inception of the Dominion Experimental Farms System the call for extension has been strong throughout. Accordingly, in order to cope with the amount and scope of the work, it has been found necessary to add very materially to the number of stations and sub-stations. As a result every province has now been reached by farm, station, or sub-station in order to provide special facilities for the study of the agricultural problems which arise in the different Provinces under varying soil and climatic conditions. Growth has been particularly rapid during the past decade, and the farmers have given the work a decided impetus in their ready response to the efforts of the men in charge of the various branches of research.

No small factor in the expansion of the system other than the need of newly-settled districts for some such institu-

tion within easy reach, has been the multiplicity of problems which have arisen—problems peculiar to each section of country newly opened up. This has been due to a certain extent to the increased interest which has been aroused among farmers by the farms system itself. Such an instance is strikingly shown by the western farmer who is coming to realize that instead of robbing the soil of its fertility by continual cropping with wheat, it is imperative for him to practice crop rotation together with the keeping of live-stock, in order to maintain the crop-producing power of the land from year to year.

### PURPOSE OF FARMS SYSTEM

This subject comprises a comprehensive range in the different lines of re-search work. Some of the problems undertaken may be briefly stated as follows:

- (a) The value of different breeds of stock and their adaptability to varying soil and climatic conditions.
- (b) The study of milk, cheese and butter production.
- (c) The testing of hardiness, productiveness and adaptability of new varieties of wheat and cereals in general; of field crops, grasses and forage plants; fruits, vegetables and all other farm crops; and the distribution to growers of samples of seed which have given promising results.

(d) The analysis of and experimentation with fertilizers of various types in order to test their value for different crops.

(e) Factors entering into the composition and digestibility of foods for different classes of stock.

(f) Investigation with regard to the planting of trees for both timber and shelter purposes.

(g) Research work on the plant diseases and insect pests which ravage cultivated plants and trees, and the determination of the best preventatives for use in controlling same.

It may be readily seen from the above that the Experimental Farms are planned: (1) to cover in a thorough manner the most important operations of the modern farm, and (2) to offer a means of improvement in both quality and extent of production of agricultural produce.

#### THE CENTRAL FARM, OTTAWA

This farm, in addition to conducting re-search work on an extensive scale, serves as headquarters for the entire system, and it is from here that the work of the branch farms is guided and supervised. Each branch of work receives the attention of a separate staff of men. A brief outline of the scope of each division will follow.

#### AGRICULTURIST'S DIVISION

This department includes Field Husbandry, Live Stock and Dairy Husbandry. Its chief object is to obtain by experimentation from year to year, information regarding the seeding, cultivating and harvesting of farm crops; the breeding, feeding, and housing of live stock; and the manufacture and care of dairy products.

The live stock consists of four classes of animals, viz., horses, cattle, sheep and swine. The horses are kept essentially for work, and breeding has not as yet been carried on, experiments being

confined to the problems of feeding, housing and ventilating. The cattle barns contain animals which are typical of high-class dairy farms of Eastern Ontario and Quebec. Such breeds as the Holstein-Friesian, Ayrshire, Guernsey, Jersey and French Canadians are being constantly tested for milk and butter production.

The testing of various feeds and the problems of breeding and selection have constituted no small part of the Dairy work carried on in the division.

In addition to the above, extensive experiments are being conducted with beef cattle, sheep and swine. Yorkshires, Berkshires and Tamworths represent the breeds of swine kept; and Leicesters and Shropshires, the sheep. Investigations with beef cattle have, for the most part, taken the form of steer-feeding experiments.

In connection with dairy work, a small plant is maintained where the necessary appliances are installed for a herd of sixty or seventy cows, and where the butter and cheese are manufactured on the farm. In this department experiments in butter and cheese-making are conducted.

The Field Husbandry investigations deal mainly with the question of crop rotation. On the Central Experimental Farm thirteen different rotations are under test. This makes it possible to obtain definite results as to their relative values as (1) soil improvers, (2) suitability for different methods of farming. These results serve as a basis for the management of general farm crops.

#### THE HORTICULTURAL DIVISION

The area of land set aside for the use of this department approximates ninety-nine acres. Fruits and vegetables occupy about forty-six acres, one-half of which is devoted to apple-growing, the other half to various small fruits. The

remaining fifty-three acres comprises twenty-one acres of forest belt, thirty of ornamental grounds and two for the nursery and rose garden.

**Apples.**—The testing of apple varieties for their commercial value has been an important branch of the work. Outside of those originated at the Farm, over six hundred varieties are now being tested, and those found most suitable are recommended throughout the country. Seedling apples have received considerable attention. Cross-breeding with standard varieties is under way, the object being to obtain better hardy varieties. About nine hundred trees are under observation.

**Cover Crops.**—Cover crops in orchards provide an important field for investigation. Their purpose is, (1) to add humus to the soil, (2) the utilization of any plant food which the trees do not

require (this is returned to the soil the next spring) (3) to take up and transpire water in certain cases; thus lessening the amount available to the trees. This results in earlier ripening of the wood, and consequently lessens danger of winter injury. Among the best cover crops are red clover, summer vetch, rape, hairy vetch and crimson clover.

**Vegetables.**—Vegetables have been studied from the standpoints of earliness, yield and quality, and with a view toward the development of early and better varieties. Particular attention has been given to potatoes, peas and tomatoes.

**Spraying.**—Spraying methods are practised every year in order to check fungus diseases and insect pests.

#### CEREAL DIVISION

Investigations of this department comprise:



Cereal Plots C.E.F., Ottawa



(1) Testing of varieties.—These are tested in plots located on uniform soil. They are put in early, commencing on well-drained land about April 20th. Different dates of seeding produce, in this climate, a marked effect on yield, consequently each group of plots is sown on the same day if possible. Observations are made regarding length and strength of straw, time of ripening etc., and after threshing, yield and quality of grain.

(2) Selection.—Among the first varieties operated upon in selection work were Red Fife wheat, Mensury barley and banner oats. From these, several good strains have been developed. The method is to retain the seed from the best groups of plants, and sow it in small plots the following year, keeping each selected strain separate. Comparisons are then made and the inferior strains discarded.

(3) Cross-breeding.—Where it is desirable to obtain varieties of grain which are radically different from those already on hand, cross-breeding is the method employed. At Ottawa several new wheats have been originated in this way, the most noteworthy being the Marquis, which comes from a cross between Hard Red Calcutta and Red Fife. This early ripening wheat has been a remarkable success, particularly in Saskatchewan. Cross-breeding is also being carried on with the following crops: oats, barley, peas, flax and beans.

Seed distribution.—A definite branch of the work is the propagation and distribution to farmers of new and improved cereal seed. This is a practice which is followed by the Ontario Agricultural College, and also the Ontario Experimental Union, and one which is proving a boon to many who are desirous of making a start with high-grade seed.

#### THE DIVISION OF CHEMISTRY

The work here covers a very wide field, for many are the problems of Agricultural Chemistry.

Laboratory work must accompany practical field results. Soils must be studied with regard to the effect of rotation of crops, of the growing of leguminous plants; a valuation must be put upon the various farm manures; the value of mucks, marsh and river muds, and the effect of lime must be determined.

Other investigations include the chemistry of (1) butter and cheese-making, and (2) the many insecticides and fungicides which are now in such general use. Cereal work has been largely the testing out of wheats and flours for their bread-making value. A considerable amount of testing of soil samples has been done, and their composition and suitability for agricultural purposes determined. Similarly, thousands of water samples have been examined.

#### BOTANICAL DIVISION

The work of the division of Botany falls under two heads; (1) advisory, (2) experimental. There are many problems in agriculture and fruit-growing which require careful investigation. This department concerns itself with such problems as weed control and plant disease study. For convenience, the division has been separated into two branches, dealing with (a) Economic Botany, (b) Plant Pathology or Plant Diseases. The former is subdivided into three phases—(1) correspondence concerning weed control and poisonous plants, (2) experimental work, (3) the maintenance of the herbarium collection of plants and seeds.

Plant Pathology comprises the following; (a) correspondence re control methods for use in the combatting of

fungus diseases, (b) experimental work with the life history of various diseases and their effect upon the host plant, and (c) inspection (1) of potatoes (2) for White Pine Blister Rust.

The Department of Agriculture employs every year a staff of inspectors whose aim is the improvement of the potato industry in general with particular attention to the eradication of disease. A separate staff of inspectors is also maintained during the summer months to assist in the stamping out of White Pine Blister Rust, a disease which has developed in the Province to an alarming extent.

This policy of inspection is carried on under the direct supervision of the division of Botany at headquarters, and is the first of its kind to be inaugurated in the Dominion.

A somewhat recent addition to the scope of work is the preparation and distribution of legume cultures for inoculating the seed of various leguminous plants previous to sowing. This practice has found great favor among the farmers, with the result that a marked increase has been noticed in the number of cultures sent out.

The Botanic Gardens and Arboretum at the Central Farm are now under the supervision of this department. These contain an extensive collection of trees and shrubs, and are a source of attraction for many hundreds of people who would otherwise miss the opportunity of becoming familiar with some of our most beautiful native and foreign trees and shrubs.

#### POULTRY DIVISION

Shortly after the inception of the Experimental Farms, the growing need for an improvement in the poultry industry, was met in part, by the establishment of the Poultry Division. This, together with other institutions of like nature, has led to a marked im-

provement in the industry as a whole, and particularly in (1) the quality of stock kept on farms, (2) its management.

To summarize very briefly the work of this department I shall mention some conclusions which have been arrived at after many years of careful work:

(1) Variety in rations is necessary to successful egg production during winter.

(2) If such is provided, instances of egg-eating and feather-picking are rare.

(3) With proper treatment, the hens may be induced to moult in summer.

(4) The cotton front house is conducive to both health of the birds and greater egg production.

(5) Strong vigorous parent stock is an essential in successful poultry keeping.

(6) A strain of good layers can be obtained only by careful and persistent breeding from the most prolific egg producers.

(7) The hens and henhouses must be kept free from vermin.

(8) The poultry-house must be free from draughts, dry and well ventilated if good results are to be counted on.

(9) There should be no delay in treatment upon the first signs of cold in the birds.

(10) Both limewater and water-glass have proved to be very satisfactory media for preserving the eggs.

#### DIVISION OF BEES

The activities of the Apiculture division have been materially facilitated by the erection of a suitable building at Ottawa for administration purposes. This has enabled the men in charge to widen the scope of their work.

Many people quite erroneously regard bee-keeping as a hobby, and as a hobby solely. On the contrary, bee-keeping is an industry in itself, and a paying one besides.

*(Continued on page xxxiii.)*

## The French Woman and Her Bread

(MACDONALD HALL)

THE French people of the humbler classes have always depended very considerably upon bread as a staple food. Breakfast cereals and porridge are practically unknown to them. Potatoes merely take their turn with other vegetables, and are not an indispensable adjunct to a dinner. The first meal of the day consists of a bowl of coffee or milk with bread. Dinner may be of boiled meat or a "ragout" of beef or mutton with vegetables preceded by soup, or it may be soup only, but always a large quantity of bread is eaten. The hungry child who asks for a "gouter" in the afternoon, is given a thick slice of bread and an apple, or a little jam. Butter is seldom spread upon the bread; it is put into the soup, or the stew, or the omelette, or eggs "sur le plat," and used to baste the roast fowl on Sunday.

Peep into the farmhouse kitchen with its floor of red bricks and watch the good woman in her white cap and blue-checked apron as she prepares to serve the family dinner. A fire of wood burns on a flat-raised hearth, and covered earthen pots are embedded in the hot ashes at the front of it. Here the soup is simmering, and perhaps a dish of eggs is cooking, or a savoury cabbage which will be dressed with sour cream and eaten with much bread. As she opens the door of the carved oak "armoire," you can see the week's supply of large, round, flat loaves piled on a shelf.

At least this is what you could have seen before the war, in the happy, prosperous days when the men were working on the little farms, and there was always enough to eat, and the children were plump and rosy.

But now?

The men have all gone to fight, and the women and children have to do all the farm-work, to plough and harrow and get in the hay, to reap and to bind. Boys of 15 are doing their father's work in the fields and orchards, while girls are looking after the stock and the dairy and the vegetable garden, and taking butter, eggs and poultry to town on market day. And the men are coming back wounded, crippled, stricken with tuberculosis, needing care, nursing and good food. Where is the food to come from? It is not surprising that production has decreased during these last terrible years; in some cases less than half the usual amount of the crop has been raised, and there has been a very serious reduction in live stock also.

Under these circumstances is it fair to ask the Frenchwoman to reconstruct the habits of a lifetime in regard to her housekeeping methods? Is she the one who should have to devise substitutes, to go out of her way to introduce new food combinations?

She asks for bread. She cannot have it unless Canada sends it. Bread without butter, bread a week old, dry bread, sour bread—she will not complain!

Think of it, you who reject the top slice on the pile because the surface is a little dry; who cannot eat crust; who must have your toast fresh and hot! You who find your meals ready prepared for you, three times a day, with no stint and no deficiency!

Are you not willing to eat a little less that the Frenchwoman and her family may have what they so sorely need?

## Canada's Standard Flour

MISS M. A. PURDY, Demonstrator in Chemistry at O. A. C.

THE new standard flour is not dark and does not make a gray, coarse, soggy loaf of bread; on the contrary, if it gets anything like fair treatment at the hands of the baker, the result is quite otherwise. A rich, creamy, full-flavored loaf of good appearance has been the result over and over again. A loaf that most people pronounce an improvement on our loaves from the high patent flours.

The miller clears, conditions and mills the wheat just as he did before with this one difference. Instead of dividing the flour into a great number of grades such as Patent, Bakers, First and Second Clears, Low Grade, etc., and selling them under various fancy names that convey no special meaning, except by reputation, to the consumer, all the different possible separations are combined in one grade under "Standard Flour." This flour, by the Dominion Government's new ruling, must be 74% extraction. That is, one hundred pounds of wheat must produce seventy-four pounds of flour. In other words, 265 pounds of Spring wheat must produce a barrel of flour (196 pounds).

This measure was deemed advisable to secure uniform results through the whole Dominion. The larger mills have in most cases been making as long an extraction as the ruling required. Such, however, has not been the case in many of the smaller mills as for instance a correspondent reported to Professor Harcourt of the Department of Chemistry, of the Ontario Agricultural College that he took 1142 pounds of Spring wheat to a mill for grinding and received in return 435 pounds of flour and 685 pounds of feed. This wheat according to the Food Controller's

orders should have yielded 844 pounds of flour and allowing two pounds of waste per barrel of flour, 288 pounds of feed. The samples of feed in this case showed a very large amount of material, convertible into good flour. Such waste of human food should not be allowed at a time when famine stretches out her gaunt arms over a large portion of the world. One of the objects of the order was to correct such leaks as this and secure every available ounce of human food from our wheat. In addition most large and small mills were selling a larger or smaller percent of their Low Grade flour as cattle feed and another slightly higher than the so-called feed flour was being used by the foreign element and for export to countries other than the allied nations.

By standardizing, or requiring one grade of a similar extraction from our Canadian flour mills, a considerable saving of wheat will be effected. Transportation will also be conserved and simplified. For example, this will discourage shipping Montreal-made flour to Winnipeg where there are excellent flour-producing mills.

The contention may be made that a milling firm that has made its name famous by turning out superior flour in the past will lose its identity by milling standard flour. Such, however, will not be the case. Careful or careless milling is as easily traceable in Standard Flour as in complicated mill separations.

In addition to the use of Standard Flour we are requested to use as much whole wheat, Graham and cereal flour substitutes, such as barley, rye, buckwheat, corn, oats or any grain other than wheat, as is available. The Food Controller has not deemed it advisable

to make a compulsory ruling in regard to the use of the cereal substitutes at the present time. Because a careful survey of the grains in storage in Canada has shown that we have not a sufficient quantity in stock or available to warrant such a measure. It is, however, quite within the bounds of possibility that such a measure will come about should our coming harvest provide grains in sufficient quantity. Such substituting would not be a hardship in any sense, since the flour or meal from other grains used to replace some of the wheat flour, gives excellent results in breads, muffins, cakes, etc.

The "Gray" or War Flour of Europe is a much longer extraction than that required in Canada and in addition they are required to use a certain percent of substitutes in the form of flour from other grains. The result is not as appetizing as our standard flour.

The "Victory" bread of our neighbors

to the south, is made up of 80% of the same kind of flour as our standard flour with the addition of 20% of flour or meal from other cereals. All their biscuits, cakes, and pastry must contain 33 $\frac{1}{3}$ % of flour substitutes. With every purchase the householder makes of wheat flour an equal weight of such substitutes must be bought.

It will be seen then that under present conditions our ruling regarding bread stuffs demands less sacrifice of us than that of America, the Mother Country or any of the Allied Nations. Should ours be an attitude of self-congratulation that so little is required of us in the way of personal sacrifice to help where the need is so great? If the truth be known in the minds of most true-hearted Canadians there is something of shame and regret that we civilians, safe and far from the danger zone, are not helping to the extent that we feel it just a little more keenly.

#### ANNOUNCEMENT

Believing that the agriculture of Canada has very great possibilities of development, and that increase in food production—so greatly needed at the present time—can be brought about by a wider knowledge of improved methods of soil tillage and fertility management, the Canadian fertilizer manufacturers have established a bureau to be known as the SOIL AND CROP IMPROVEMENT BUREAU of the CANADIAN FERTILIZER ASSN.

The object of this bureau is to collect and disseminate reliable information which will lead to the increase of Canada's crop yields and the improvement of the quality of farm products; and to encourage Canadian farmers to give greater attention to soil drainage, rotation of crops, use of lime, selection of seed, conservation and wise use

of stock manure, and the judicious use of fertilizers.

The work is under the direction of Henry G. Bell, who six years ago established and has since successfully conducted a similar campaign in the United States. Mr. Bell was formerly Professor of Agronomy at the University of Maine, and Assistant Professor of Farm Crops at Iowa State College. He is a native of Ontario and a graduate of Ontario Agricultural College. His wide experience in all matters pertaining to soil management and crop production, in connection with the lines of work mentioned above, equip him to interpret Ontario conditions so that the bureau may render the greatest amount of assistance to Canadian farmers.

The headquarters of the bureau are 1111 Temple Building, Toronto.



## Plugging the Leaks

C. F. MACKENZIE, '19

(This timely article should be of value to all who depend on pastures even as a partial solution to the problem of summer feeding of dairy cows.—Ed. Note.)

**D**RIVING along the country roads during the months of July and August, one cannot help but be forcibly impressed by the great difference to be seen in the pastures of the various farms.

On the one hand a herd of dairy cows is lying contentedly chewing their cuds in the shade, quite oblivious to the rays of the scorching sun. The grass in this

keep the cattle satisfied. Consequently, production of milk has fallen away to such an extent that he has become disgusted with the business.

The latter condition is altogether too prevalent in many rural sections. This is due to lack of forethought on the part of many farmers. Dairy cows that are allowed to fail in their milk flow cannot be brought back to normal, except at a great expense to the owner.

One farmer solved the pasture prob-



PEACE AND PLENTY

pasture is green and abundant, showing that care has been taken in order to guard against the usual falling off in production, which so often happens.

Across the road another herd of cows is to be seen wandering to and fro, tormented by flies and the burning sun, vainly looking for a mouthful of grass to satisfy their ever-increasing hunger. This pasture is cropped off as close as it is possible for cows to browse it, showing that in all probability the owner had his herd out on pasture before the grass had attained sufficient start to

lem in a very simple, satisfactory way. Having only a limited amount of land under pasture he decided to test out the animal pasture mixture as recommended by the Department of Agriculture viz.:

1 bushel of oats, 1 bushel of barley,  
1 bushel of wheat, 7 pounds red clover.

He also ran a fence through his regular pasture in order that he might allow one-half to grow while the other was being pastured. This protected the one-half and greatly increased the capacity of the field. The mixture was

sown when the regular Spring crops were being planted.

The cattle were not allowed to run on the regular pasture until it had considerable top. Thus, the cows were amply supplied, being alternately changed from one-half to the other till the annual pasture was ready about seven or eight weeks after sowing.

Each forenoon, after the dew was off this pasture, the cattle were allowed to feed for a couple of hours. They were then taken out till four o'clock in the afternoon, when they were again turned in for a feed. This manner of handling did not allow of the mixture being trampled down by the stock after they were satisfied. During the heat of the day the herd could be found resting peacefully, manufacturing milk. This was their duty after they were filled with green succulent food.

During the entire summer the owner experienced very little difficulty in keeping the production of milk at a maximum level. The cows were in better condition and on the whole this man found out that a little careful planning

and forethought in the Spring was really all that was necessary to overcome one of his greatest difficulties.

In order that we may make the most out of our pastures the following suggestions are well worth considering.

1. Keep the stock in until the pasture has attained considerable top.
2. Divide the pasture so that it will not become eaten off too closely.
3. Do not allow stock on pasture immediately after a heavy rain.
4. Do not pasture too late in the Fall. A good growth for winter must be secured.
5. Try three or four acres of annual pasture mixture.

These suggestions may help to overcome the usual diminished production during the real hot weather providing that the animals have an adequate supply of water and shade.

**Dairy cows that are forced to engage in a cross-country race looking for feed, whose only shade is a fence-post and who are compelled to drink water out of a frog pond, can never be expected to produce a paying quantity of milk.**



## The Conservation of Soil Fertility

BY R. ALEX. BRINK, '19

"WESTWARD the course of Empire takes its way." The tide of human migration has penetrated to the last best West. When roving man crossed the virgin plains of America, climbed her western slopes and set foot upon the shores of the Pacific, he paused and realized that he had traversed the whole of the primeval earth and that beyond that mighty ocean, which bathes the shores of the New World and the Old, lay the Ancient East, from whence in the dim past, began that steady movement Westward which has crept to the farthest ends of the earth and terminated where the sun sets to rise again in the Orient. When all the land of agricultural value has been occupied, and a growing world population requires sustenance, the only possibility of increasing the total product necessary for the subsistence is by cultivating the land more intensively and preserving with all possible care, the wealth within that thin blanket of soil enveloping the earth. This wealth truly consists not in the extent of the land but in the constituents of the soil that serve for the nutrition of plants.

Agriculture being an extractive industry it is the first business of every farmer to reduce the fertility of the soil by removing from it the largest crops of which the land is capable. But of equal moment is it his duty to provide for the restoration and maintenance

of the soil's productiveness. We seek in tillage to extract in large measure that which life demands in a way that is compatible with permanent agriculture. We endeavor to obtain, to employ and to return again without depreciation and without waste.

Probably the greatest and most apparent need of agricultural land today is proper drainage. It has been estimated that the value of three-fourths of the total occupied land surface could be enhanced in this way. Proper drainage is the foundation of

good soil management. Its necessity and value can be more easily comprehended after a summary of its effects on the factors that determine crop growth. An open, friable and granular soil structure is obtained. The withdrawal of the excess water from the inter-spaces permits the admission of air improving the ventilation, allowing the roots to penetrate

deeper into the soil where they come in contact with a larger amount of moisture and plant food. Consequent upon drainage the soil maintains a higher average temperature and warms up earlier in the Spring. The improved aeration and higher temperature promote the activity of soil micro-organisms making available a larger amount of mineral food. The accumulation of toxic material is obviated. Other advantages that accrue are the reduction of heaving and the lessening of erosion. A large increase in yield and

*This speech delivered in Massey Hall, O. A. C., on March 15th, 1918, by R. Alex. Brink, '19, is one of the most comprehensive and complete discourses on the vital problem of soil fertility ever heard at this institution.—Ed.*

quality results from the adequate disposal of excess soil water. The basic importance of ample drainage is indicated by the fundamental nature of the changes outlined.

Even under the best systems of farming there frequently arise conditions in the chemical nature of soils that diminish or even inhibit the growth of certain of our staple crops. An acid or sour condition frequently occurs caused by the absence of sufficient basic material to neutralize the products of certain soil reactions attending the presence of a large amount of organic material. This condition while not injurious to all plants is likely to depress the yields of most of our important crops. In general calcium carbonate is the most economical form in which bases can be applied to neutralize this acidity.

Other advantages also attend the existence in the soil of an abundance of lime. The physical condition of both clays and sands is improved, facilitating desirable bacterial activity in the former and improving the water holding capacity of the latter. No soil can reach its maximum utility nor can any farming system attain its greatest efficiency unless the soil contains an adequate supply of lime.

Considerable plant food is lost annually from the soils in humid sections through leaching. Large amounts of nitrogen and lime and sometimes magnesium and potassium pass off in the drainage water. It is impossible under any system of farming to totally prevent this loss of plant food especially nitrogen. The most effective and practical method of reducing this waste, however, is to use growing crops to absorb the soluble plant food as soon as it is made. These may be returned to the soil as organic matter which, on decaying, render the plant

food again available. Rape or rye seeded in the fall, to be plowed down in the spring, on land that would otherwise lie bare during the autumn, winter and early spring, would conserve much plant food that would otherwise be lost by leaching.

I come now to a point, the importance of which, to fertility is extremely great—I refer to the maintenance of soil humus. The productiveness of all soils is more closely related to their supply of organic matter than to any other single factor. Its beneficial effects are numerous. The better tilth induced facilitates drainage and aeration. It enhances the water holding power of soils. Energy is furnished to the bacterial life and the slow but continuous evolution of carbon dioxide raises the solvent capacity of the soil water, increasing the supply of available mineral elements. And when we consider that the bulk of the soil nitrogen is held in the humus we must conclude that the general effect of its presence is very considerable. The plowing-under of such crops as peas, beans, vetches or clovers is the most desirable method of supplying this material. In employing legumes for this purpose, advantage is taken of the unique property of these plants' ability to appropriate the atmospheric nitrogen,—a factor of great significance. "Of all farm crops, legumes alone enrich rather than impoverish the soil." The incorporation into the soil then of clovers and related crops, is in accordance with the best soil management. An American authority has said "Any system of agriculture that tends to permanently lower the organic matter of the soil, is impracticable and improvident, as well as unscientific."

The brief space of time that is yet at my disposal, will allow me to dis-

cuss but two more factors in soil conservation, farm manures and crop rotation. From the standpoint of soil fertility, barnyard manure is the most valuable by-product of the farm, as it affords a means whereby the residues of the finished farm produce and waste parts of crops can be returned to the soil. Its preservation and utilization then is an important factor in farm operations. Tremendous losses annually are occasioned when large amounts of nitrogen and potash, present in a soluble condition, are removed in the drainage water, if exposed to rainfall. Organic matter is lost by aerobic fermentation. Moistening and compacting, and protecting from rain will do much to minimize these losses. It is now contended, however, that due to the manures susceptibility to the loss of valuable ingredients by leaching and fermentation, that hauling immediately to the field, is the best practice. It is very apparent to all that, by the proper care of farm manures, vast amounts of fertility would be annually saved.

A systematic crop rotation adapted carefully to the capacities and limitations of a soil may be made to increase the fertility and give the land greater productive power. Locality and other circumstantial factors will influence the choice of the system, so I will but lay down a few of the general benefits attending the practice. A good rotation will make liberal use of legume crops with their consequent advantages. Weeds may be destroyed and some insect pests, as wire worm and white grub, controlled, and various fungus diseases of crops, and other conditions inimical to plant growth repressed. Not only is the land clean-

ed, but its physical condition can be improved. And as plants vary greatly in their ability to reach and appropriate plant food, the rotation can be so arranged that the crops grown will mutually assist each other in procuring a livelihood.

The acme of agricultural science will have been reached when we learn "to use the land without abusing it." Columella, a Roman of the first century, said: "No one gifted with common sense, will ever permit himself to be persuaded that our earth has grown old as men grow old. The sterility of our fields is to be imputed to our doings, because we hand over the cultivation to the unreasoning management of ignorant and unskillful slaves." And so it will ever be unless we establish on our land, permanent systems of agriculture and waste not the fertility of the soil. How often yet do we see and hear of depleted and abandoned farms, mute but manifest examples of "unreasoning management." On this western continent, soils have been impoverished in this century, just as were the fields of Campania when the Romans ruled the world. Research, and the application of scientific principles to agriculture is doing much in our day to maintain and restore our lands.

The God-given sunshine, we will ever have. The rains will come down and the earth will be watered: Seed time and harvest shall not fail. It is our duty to posterity to preserve, with the greatest care, the fertility of the soil, that primal source of our existence, that man in future ages, may continue in his march "on and forever on."



## Some Feathered Friends

BY R. E. BARBER, '21

OUR bird population may be divided into four classes, viz.: **residents, Winter residents, migrants and Summer residents.** The residents remain throughout the year and are represented by Black-capped Chickadee and Downy Woodpecker. The Winter residents are those who spend their summers in the far North and come this far south in Winter; Snowflakes and Grosbeaks belong to this class. The migrants, such as Waterfowl and some Warblers, pay us a brief visit while passing in Spring and Fall. Those birds which remain with us during the Summer, and nest in our trees interest us most. They are our Summer residents.

We have ample opportunity of getting acquainted with birds of this class.

Of more than three hundred different kinds of birds found in Ontario it is safe to say that the average individual would have difficulty in naming twenty-five of them. One does not need to go far afield in search of the more uncommon species, indeed if we know the birds we meet with about the farm, the garden or the roadside we have gone a long way in enlarging our knowledge of our feathered friends. The brief descriptions below might introduce a few of our common birds.

A common Summer resident which is distributed throughout the greater part of Ontario is the Catbird, so called on account of the cat-like calls and mews which it introduces at various intervals of its song. It is a rather dark grey or slate-colored bird with a black cap and a chestnut blotch underneath the tail coverts. It arrives from the South about May the tenth and leaves again about September the twenty-fifth. Almost any bright morning during the latter part of May or June we may

hear the male bird singing, generally from the top of a bush or sapling. Their favorite haunts are swamps, scrubby pastures, gardens or the borders of woods. The nests may be placed in hedges, thickets or low, bushy evergreens. The picture here reproduced was skilfully hidden in a clump of marsh marigolds—a most unusual place. It was composed of strips of bark, twigs and grass, and was lined with fine, black roots. The four pale, greenish blue eggs resting on the dark back-



Nest and Eggs of Catbird

ground formed a delightful contrast with the bright yellow flowers and green leaves of the marigolds.

A fairly common bird about the orchards or woodlands is the Woodpecker. Like most of the fly-catchers, they are usually seen perched on the dead branches of trees where they can command a good view. From here they play havoc with any passing insects. They dart into the air catching their prey on the wing, returning again to the perch to swallow the morsel. In color the upper parts are olive-brown, the head somewhat darker, the breast and sides washed with grey and the underparts white, tinged with yellow. It

can readily be recognized from its cousin, the Phoebe, by its clear, plaintively-whistled "pee-a-wee." They generally arrive in this latitude about May fifteenth and leave about September tenth.



Nest and Eggs of the Wood Pewee

The nest of the Wood-pewee is one of the most exquisite of bird creations, composed of small rootlets, grasses, plant fibres or pieces of bark, neatly matted together with the outside ornamented with greenish and grayish-colored lichens. The nest here shown was placed on one of the lower limbs of an apple tree about twelve feet off the ground. The eggs are creamy in appearance and speckled with brown and black spots, chiefly at the larger end. The position of the nest necessitated the use of a step-ladder, and the assistance of a small boy, before a picture could be secured. Unfortunately disaster overtook this happy family when the young were about a week old. A roving band of Black-birds was suspected. What remained of the nest was scattered about the ground beneath the tree, but no trace of the young could be found.

Anyone who has visited the marshes is familiar with the Red-winged Black-bird. The male bird is particularly conspicuous being covered with a lus-

trous black plumage, with a deep scarlet patch, bordered with a creamy buff edge at the bend of the wing. The female is less prominent, and considerably smaller than her mate, having a black feathering on the back with rusty and buff edges giving rather a streaked appearance, the under parts are blackish and heavily streaked with dull white, while the throat and bend of the wings are more or less tinged with salmon. Like most of their relatives the Red wings are gregarious, generally being found in colonies. If one will visit their nesting sites, it is well to be provided with hip boots as the nature of the marshes generally does not permit of easy going. The accompanying photograph was only secured after such materials as pieces of wood and boards were placed on the soggy ground. The marsh bottom did not permit of standing with any certainty in one place while the operations of setting up the



Nest and Eggs of Redwing Blackbird

camera and making the exposure were going on. This nest was neatly constructed of woven grasses and rushes suspended at the rims by the assistance of cat-tails about twelve inches from the water. The eggs, three in number, were bluish white, scrawled chiefly over the large end with blackish markings.

# Modern Oleomargarine Technology

(An Outline of Its History and Manufacture)

By E. H. PARFITT, '18

THE introduction of new and extensively used food products is often associated with periods of great wars. Thus condensed milk was first used in large quantities by the northern armies in the Civil War in 1856, and soja beans and bean oil were developed as the result of the Russo-Japanese War when the Japanese soldiers found soja beans a good war food. Oleomargarine is a war product, having its birth in the Franco-Prussian war, and finding its place as a universal article of diet in the present great struggle.

Oleomargarine manufacture is really a present day success with what looks to be a prosperous future ahead. It is cheap, made from quite pure materials having good food value, and resembles very closely the second grades of butter. The former prejudices against its use are breaking down and many new works are being established, pointing to keen competition after the war.

On April 12th, 1872 the Paris Health Council announced the sale of a new edible fat known as Oleomargarine, and at the same time made provision that it should be sold on its own merits and not as butter. The inventor of this fat was a French chemist named Mege Mouries. He reasoned that in animal metabolism, the carbohydrates are converted into fat which in turn changes into butter fat by the process of pepsin digestion. This led him to try and effect artificially a similar change in animal fats. Fresh beef fat usually from the kidney or intestines and free from tissue, was digested in an aqueous solution of sodium carbonate in the presence of pigs' or sheep's stomachs. As a

result of the pepsin action the fat was completely separated from the remaining tissue, skimmed off, and warmed with a two percent solution of common salt to prevent rancidity. On standing, a yellow fat separated which was cooled to about 22° C. This semi-solid mass possessed a butter-like odor, and when pressed between warm plates, the more fluid constituent was obtained. This fat when cooled had a butter-like consistency and was termed Oleomargarine.

Since the time of Mege Mouries, the manufacture of "Oleo" has steadily progressed. Numerous oils have been introduced, and up-to-date methods and machinery brought into vogue. The fat is no longer digested artificially, the flavor of butter being stimulated by the use of milk and butter. Also margarines from vegetable oils and fats have steadily displaced the former purely animal products.

## PRESENT-DAY METHOD OF MANUFACTURE OF OLEOMARGARINE

There are many conditions to be observed in the manufacture of oleomargarine, but the most important are the use of only the freshest and purest materials and the utmost cleanliness in all manufacturing operations.

Margarine, oleomargarine or oleo are the American terms for margarine, other names being butterine and Dutch butter, the latter two being suppressed by law, consists of a mixture of animal fats, vegetable oils, and fats churned with milk to a butter-like emulsion and colored yellow (unless forbidden by law as in Canada) with annatto-seed or methyl-orange.

The rough fat is removed from the

slaughtered animal as quickly as possible and brought to the sorting-board. The kidney and bowel fats are selected and washed thoroughly and carefully in warm water. The cleansed fat is then immersed into ice water resulting in a rapid cooling and hardening. The hardened fat is then shredded to destroy the tissue and put into jacketed melting kettles and kept at a temperature of 42° C. At this temperature a portion of the tallow contained in the tissue separates on the top and is skimmed off. The melted portion is then run off into wooden vats in which it stays for three or four days at a temperature suitable for the crystallization of stearin. The whole is then stirred up into a homogeneous pulpy mass and pressed. The oil which runs from the press forms the chief constituent of oleomargarine and is termed "oleo oil."

In the large American packing houses, where some of the best grades of oleomargarine are prepared, large numbers of hogs are killed daily. Immediately after slaughter the hog is cut up and the leaf is taken out, freed from flesh and skin, and cut into small lumps, then washed thoroughly in ice water. It is claimed that by chilling, the so-called animal flavor is removed. The chilled mass is put into a jacketed rendering vessel and heated to a temperature of 45° C. The lard so obtained is known as neutral lard and is the second ingredient of oleomargarine.

The third ingredient is the vegetable oils which consist chiefly of cotton-seed oil and cotton-seed stearin. According to the intended quality of the margarine the quality of the cotton-seed oil varies. In any case the cotton-seed oil must be practically free from free fatty acids and as free as possible from the peculiar flavor characteristic of the oil. The best brand of cotton-seed oil used in

the manufacture of margarine is known as butter oil.

The quality of the margarine depends to a great extent upon the quality of the milk used, and on its treatment previous to its mixture with the fats. The milk is pasteurized and pure lactic acid culture added and the ripening or souring controlled.

The butter used must be of the finest creamery and according to law contain no artificial coloring matter. Because of this many of the large manufacturers have their own creameries so as to have complete control over the quality of the butter.

The oils and milk flow into what is termed a churn which consists of a double-jacketed vessel which may be heated by steam or cooled by water and provided with stirrers, i. e., two sets of revolving baffle-plates. Efficient stirring at a suitable temperature is maintained until emulsification is satisfactory. The emulsion is then released through a valve at the bottom of the churn and flows onto a slanting chute, where it is immediately met with a spray of ice water striking upon it with such a force as not only to cause instant solidification, but also to break up the mass into yellow granules. These so-called "crystals" float down the chute and collect in the wooden trough beneath, which permits complete drainage of the absorbed water.

The solidified "oleo" is taken from the draining troughs and put on a large kneading machine which resembles the old butter-workers used previous to the combined churn. On this the material is thoroughly worked and excess moisture squeezed out so that a homogeneous mass results. It is then salted to taste, usually about 2% to 3% salt used, the lower grades containing more salt than the higher grades. The mass is again

*(Continued on page xxiii)*

## A Natural Water Garden

BY W. R. OLIVER, '19

AT this season of the year when nature in her Spring garb is beginning to assert herself, one's thoughts naturally turn to the garden and how it should be planted. Much time and energy have probably been spent on the lawn, the perennial border and the shrubbery. All of these assets have made the view from the road more interesting. But what of the little stream which runs past so many farm homes? Has it been given the proper attention to make it one of the most beautiful features of the planting?

This article is to point out the way in which a small stream or pond may be turned into an attractive water garden of the natural style which will be in perfect harmony with its surroundings.

If no pond is present a rough dam of stones picked up in the surrounding field may be thrown across the stream at the desired point. This dam should not be in the form of a set wall, but merely a number of stones placed naturally to hold back the water. To add to the natural appearance, a few stones should be placed around the banks if they are not already in evidence.

Behind the dam a shallow excavation should be made to broaden the stream and afford quiet backwaters for the pond lillies. This excavation should be of rather irregular shape, and if the water can be made to enter by a small cascade the appearance is much improved. Any vegetation which is present should be left undisturbed, except that which is dead or foreign to the region. These trees and shrubs should be made the nucleus, about which the garden should be planned. The object of the planter should be to

bring out the beauty of these native trees, rather than detract from it by hiding them with other species. In all the planting care should be taken to leave open spaces or vistas through which the pond may be seen from different angles. The material to be planted may conveniently be divided into five classes:

### (1) Trees and shrubs—

Cut leaf Birch (*Betula pendula lacineata*).

River Birch (*Betula nigra*).

Dogwood (*Cornus siberica*).

Dogwood (*Cornus alternatifolia*).

Alder (*Alnus incana*).

Juneberry (*Amelanchier canadensis*).

Witch Hazel (*Corylus americana*).

High Bush Cranberry (*Viburnum opulus*).

Red Cedar (*Juniperus virginiana*).

Hemlock (*Tsuga canadensis*).

Tamarack (*Larix americana*, etc.).

These species should not all be planted nor are they the only suitable ones. The planter should choose those native of the region, and plant them in groups as they occur in nature. These remarks apply to all classes:

### (2) Creepers—

Virginia creeper (*Ampelopsis hirsuta*).

Virgin's bower (*Climatis verticillaris*).

Perriwinkle (*Vinca minor*, etc.)

*Verticillaris* is not the only *Clematis* which may be used, but the more beautiful ones are often tender and care should be taken in choosing them.

These creepers should be planted near  
(Continued on page xxiv)



# QUERY

## HORTICULTURE

### Trimming Cedar Hedge.

#### QUESTION:

I have a cedar hedge that needs trimming. What is the best time of the year to do this?

#### ANSWER:

The pruning may be done almost any time without serious consequences, but the best time is before growth starts in early summer. A hedge trimmed at the time mentioned may require going over very lightly again after the growth for the season is finished, but it would be better to clip only once a year, and that in advance of new growth.—J. W. C.

### Filling Cavities in Fruit Trees.

#### QUESTION:

I have a pear and an apple tree that are affected with a dry rot. I have scraped out the rotten wood and desire to fill the cavities. Could you explain to me a satisfactory method of doing so.

#### ANSWER:

The important part of the treatment is to keep out moisture, thereby preventing decay. All rotten wood should be thoroughly cleaned out and drainage should be made by boring a hole if necessary, so that the water finding its way into the cavity will drain away. The best material for filling such a cavity, is asphalt or a mixture of sawdust and asphalt, but this may be difficult for you to obtain. Cement filling will crack if it is subjected to any stress through the swaying of the trees. If, however, the

cavities are of such nature that cement filling can be used without danger of serious cracking, and if the openings at the top of the cavity can be tightly closed so that the moisture will not enter the cement filling would be satisfactory. The cracking of cement can be reduced considerably or stopped altogether by placing it in layers three or four inches thick, with a sheet of tar paper dividing each layer from the next one. The surface of each layer should be given slope, so as to facilitate the draining away of any free water which may find its way in.—J. W. C.

### Asparagus.

#### QUESTION:

Please give me the following information regarding asparagus. On what soil does it grow best? What kind of roots are best to plant and when should they be planted, and at what depth and distance apart?

#### ANSWER:

The best type of soil for asparagus is sandy loam, well drained, but containing sufficient moisture for good growth, with a south or south-eastern slope. The young plants are set as early in the spring as it is possible to get the ground ready, in rows five feet apart and plants eighteen inches apart in the rows, with the crowns at least four inches under the surface. One year old plants are the best and where one has a choice, it is well to take those that have a smaller number of buds, but larger in size as these will give larger stalks later. Our plan is to sow the seed in the field in the

spring, mixing it half and half with radish seed, in rows about two feet apart. Radish seed will come up and mark the row so we can cultivate and is out of the way before the asparagus comes through as it does not appear until three or four weeks after seeding. When the asparagus plants are about four inches high, they are thinned out to one or two inches apart and allowed to grow. Care should be taken to keep them free from bugs until fall, when the tops are cut off and burned. The young plants are taken up, tied in bundles and placed in moist sand in a cold cellar overwinter, or buried in the ground out of doors.—A. H. M.

#### Coal Ashes as a Fertilizer.

##### QUESTION:

Is there any fertilizing quality in sifted wood ashes? I have a small garden and the whole of it has been covered with sand and clay taken from the cellar, and I do not want to put the ashes on it unless it will be of value to it. I dug around some currant bushes and worked in coal ashes and got good results, but have not tried it on vegetables.

##### ANSWER:

Coal ashes have no fertilizing value whatever. They do contain lime in considerable quantity, which is beneficial on many soils. Besides this, they are useful in loosening up a heavy clay and make it more friable and easily worked. The good results you have secured from the use of coal ashes around currant bushes can probably be laid to their effect in rendering the soil more friable. The lime contained in coal ashes would be injurious to currants rather than beneficial. Perhaps the safest thing for you to do is to work in moderate quantities from time to time, and note the effect, but

I would avoid working in any large quantity at any one time.—J. W. C.

#### Rhubarb.

##### QUESTION:

What are the best varieties of rhubarb for clay soil. Give method of cultivation and care.

##### ANSWER:

The two common varieties of rhubarb now in use are Victoria and Linnalus, although these are replaced to some extent by Sutton's Seedless. At the present time it is very difficult to get plants of this variety as few of the seedsmen list it.

Rhubarb is best transplanted in the spring. The old roots are dug up, split into sections, in most cases one bud to a section. These are planted in trenches, putting the bud one inch under the soil, and are then allowed to grow for two years before any of the crop is pulled.—J. W. C.

#### Problem in Orchard Management.

##### QUESTION:

I have an orchard covering 25 or 30 acres. It has been in about 3½ years, containing apples, pears and plums. I have cultivated the land in this orchard every year, either with corn, oats or barley. It has arrived at the state now that I do not desire to cultivate it any more. It is in good shape to grow a nice sod. My farmer desires now to plant it with Timothy and fall wheat. I am in doubt about this, and it is my desire, as above, to create a nice sod, so that I will not be under the expense and trouble every year of plowing and harrowing. It has been well manured, and the growth of weeds is considerable, and as I said above, I would like from now on to put it in sod, so that there will be nothing to do but cut it about twice a year. At present the orchard is plowed

disced and harrowed. I would appreciate very much a suggestion from you as to what to do. Cultivating it every year is quite an expense, and also the question of help is serious. I have about two acres more to plant this Fall, and I would like to know if German prunes and quinces will grow successfully on my land.—W. L. D.

ANSWER:

I should strongly advise against putting this young orchard down entirely to sod. If you could leave a strip for cultivation on each side of the rows of trees, you could put the balance down in sod without danger of serious injury to the trees. This strip should not be less than five or six feet on each side of the tree, making ten or twelve feet in all.

I am, of course, taking it for granted that this land is well drained, and never likely to be seriously wet. I do not think you could put this orchard down in sod, and expect a satisfactory result, in so far as the health and growth of the trees is concerned. If you want this orchard to do its best, it should certainly be tilled annually, although tillage should not be overdone nor continued too late in the season. I expect you should be able to fall plough this orchard in the latter part of September, or in October, and to cultivate thoroughly from early spring until July first. At about this date, it should be seeded with a cover crop which may be ploughed down at the regular fall ploughing, or left until spring.

You could continue to inter-crop these trees for several years yet, and with my limited knowledge of the situation, I would venture this statement—that you would get better satisfaction by two or three years more of inter-cropping, with crops like early potatoes, early corn, or something which does not require late cultivation, than

you would by putting the whole or any part down in sod.

German prunes and quinces should grow satisfactorily on your land.—J. W. C.

## BACTERIOLOGY

### Tubercular Test.

QUESTION:

I have six cow and six heifers and a pure-bred Shorthorn bull, "Star Chief," and as some do not thrive as well as expected, wish to have the tuberculin test tried on them. Does the Department furnish a professional man to do this or can I perform it myself? What does the serum cost? Who furnishes it? I live two miles from town. What should my Vet's fee be if I employed him to do it, 13 heads?

ANSWER:

The tuberculin necessary for the test may be obtained free of cost from the Veterinary Director General at Ottawa, when applied for by the veterinary surgeon who is to make the test. The Department does not furnish a professional man to conduct the test. You should notify you veterinary of the number of cattle you want tested and he will apply to the Veterinary Director General for the tuberculin and then make the test when convenient to you. The tuberculin is not supplied to anyone but a veterinarian. The veterinarian will charge according to the time he spends on the job; there is no set fee.—D. H. J.

## CHEMISTRY

### Wood Ashes as a Fertilizer.

QUESTION:

I have about 600 lbs. of dry wood-ashes (Pine, Poplar and Birch). What part would they form as fertilizer for potatoes, instead of potash?—J. M. M.

ANSWER:

600 lbs of unleached wood ashes  
(Continued on page xxi.)

## THE AWAKENING

I slept and woke, I ate and laughed, I joined in sport and dance,  
 I did not heed the tales they told of wounds and death in France.  
 What did I care for children starved, for purity defiled,  
 For old folks turned adrift to die, for towns in ruins piled?  
 For mothers' tears, for infants' cries, for warm life turned to clay?  
 No pleasant food for thought! And all so very far away!  
 I did not check one greedy whim, one selfish want deny,—  
 I would not sew **one little hour** for men about to die!

\* \* \* \*

I slept,—and on my ear there fell the sound of marching feet,  
 Of voices loud, and laughter rude, that checked my pulse's beat,  
 And nearer, nearer came the tramp, and higher rose the din,  
 As women shrieked, "The Germans! Oh, the Germans breaking in!"  
 And now with deep resounding blows they battle at the door,  
 And splintered wood and broken glass fall crashing on the floor.  
 In streams the wild, tumultuous flood, a throng that grows apace,—  
 No pity in the lustful eye or in the gloating face!  
 I feel their brutal hands, I feel their pestilential breath!  
 A hundred helpless maids are facing horror worse than death!  
 Scream upon scream goes up in vain towards the unanswering sky,—  
 "Help, brothers! Help, the foe is here! A wild despairing cry!

\* \* \* \*

A sudden mist blots out the scene, — a hidden silence falls,  
 Then weird and chill, as from the grave, a hollow chorus calls.  
 "For you we fought—we fight no more! You would not do your part!  
 'You would not make one sacrifice to cheer our failing heart!  
 "We could not carry on because you would not spare us food,  
 "We bled the more because you would not help to stanch the blood!  
 "You wore the wool we should have had to clothe our marching feet,  
 "You stood aloof and brought on us the anguish of defeat!"

\* \* \* \*

Which is the truth, and which the dream? Lord rouse me wide awake!  
 When men such fearful burdens bear, let me my burden take!  
 Teach me endurance, self-control, love and humility,  
 And let me gladly, proudly serve those who are saving me!

—"*Une Veuve*", '19  
*Macdonald Hall,*  
*April, 1918.*

# THE O. A. C. REVIEW

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## EDITORIAL

### AU REVOIR

Gone are the college days: Only six months ago we gazed into the future and desried this closing week. On entering these old halls last fall we found the signs and tokens of preceding years. On one side of the hall the wainscott bore delineations made in bygone days.—“E. H. '03”, “P. R. T. '97,” “W. J. J. '18”, and “W. H. S. '20” were all there, with the initials and years of intermediate graduating classes generously distributed along walls of “Upper Pantón” and the “Hunts.” Today we find a new year has added its mark. “'21” is now in evidence on many walls, showing that freshmen classes are the same today as when the green lads came from the rural parts years ago. Thus it will ever be.

The college days are gone, but what sweet recollections remain. Even in

these days of turmoil and suspense the college spirit has remained true to its traditions. We still bear good-will toward our fellow students, and fair play is yet the watch-word in athletics. Good fellowship has been the rule in the workings of all college societies and our agricultural ideal has been “better farming” as in other days. For these things, we are proud of our college.

To some we bid “adieu.” Although you leave us you are still a part of this old Institution and its environs. Every pleasant nook and corner, every tree and shrub on the campus, and every plot in the Experimental field bring up pleasant recollections. We will always remember the rambles on a Sunday afternoon, the Botany lecture from Professor Howitt, the trip with Professor Crow, and the paternal exhortation from Doctor Zavitz as he



beheld the fruits of his labours in the nodding heads of grain. These recollections will comfort us.

Then why repine? A great future is before us and we are prepared for the work at hand. We will not be forgotten and we will not forget. Every day some member of the faculty will be brought to mind. Not a cicada will disturb the silence of an August afternoon, but we will recall the venerable face of Doctor Bethune who led us through the Mysteries of entomology. The dairy cow, smiling at us through the pasture fence will call forth the love that Professor Dean taught us to bear toward every member of the cow family. Each measure of meal we serve to the grunting swine or the lowing ox, will throw on memory's screen a picture of Professor George E. Day, with a volume of "Feeds and Feeding" on his desk. In the woodpile we will see the raw material for a series of lectures by Professor Evans, and the heat from the glowing fireplace suggests a whole year's research under the guiding mind of Professor W. H. Day. The chemistry of the soil will be our constant care when we return to the farm. In every operation we will be putting the principles of Professor Harcourt's teaching to the test. The stagnant pool, over-populated with *B. coli*, *mycoides*, prodigious and other reptiles, will set the machinery of the mind in motion because of the teachings Professor Jones has instilled into us. We can't forget these men when our tasks will daily bring out their teachings and all our practical work will involve the application of the principles inculcated at the college.

Though the college year is over, the days are just opening up for the real application of the knowledge you have gained. You have left a good record

at the College, now it's your duty to leave a good record at the farm. Do not depend on the future for the big things. Vacation will be too short even though every minute is profitably utilized, and September will come just as quickly as April has stolen in upon us. Strive to be prepared when college reopens, and in the meantime endeavor to make your impression in the community you serve, not by chalking your initials and year on the wall or the old barn door, but by the imprint of your personality and culture on the minds of your companions and acquaintances . . . . . Au revoir.



WADE TOOLE, B.S.A.

Mr. Wade Toole, B.S.A. '11; will succeed Prof. G. E. Day, as professor of Animal Husbandry, at O.A.C. His duties will commence May 1st, 1918.

This announcement will meet with general approval for we know the man, and we know the stimulus his energies will give to the department he is entering.

While a student at O.A.C., Mr Toole showed his ability in College leadership, and in Agricultural work. Not

only was he a clever student and an able writer, but he was a practical man. In his fourth year, he was a member of the judging team that represented the College at the International Live Stock Show in Chicago, 1910.

Having filled the position of Editor of "The Farmers' Advocate" for six years, Mr. Toole has been closely connected with the farm problems of our country. He knows the difficulties in every branch of agriculture and in the capacity of Professor of Animal Husbandry can prescribe remedies for our present conditions. Thus the O.A.C. is adding to her staff, a scholar, a practical farmer and a true gentleman.

we look to him to do big things in educating Canadian growers. He is even better qualified to conduct this work in Canada than in the United States, because he is a native of Ontario, and is thoroughly conversant with the agricultural problems of our Dominion. After graduating from O. A.C. in 1903, Mr. Bell was assistant to Dr. C. A. Zavitz on the College staff. Subsequently he was appointed Assistant Professor of Farm crops at the Iowa State College of Agriculture, and later was Professor of Agronomy at the University of Maine. We are glad to have Professor Bell in Canada again and we wish him success in the new campaign he is conducting.



HENRY G. BELL, B.S.A.

It is of interest to readers of the Review to learn that Henry G. Bell is now in charge of the Soil and Crop Improvement Bureau of the Canadian Fertilizer Association. Six years ago, Mr. Bell established and conducted a campaign of a similar nature, in the United States, with great success, and

#### THE PROBLEM OF THE HOUR

Seeding time is here again. One hundred thousand men have left our farms for France, and never before was there such a necessity for large crops.

To put every available man, who is experienced and physically fit, to work on the land is the first necessity. Right here the trouble begins. Who are available men? Imported and unproven Chinamen? We sincerely hope not. Men employed in non-essential industries? Yes, to a limited extent; but it has been the experience in other countries that nearly all industries are essential.

There is left the method the manufacturer uses to increase production without increasing labor. He uses machinery scientifically designed and perfectly built. If by this means a manufacturer can separate a sticky, oily mass of iron, steel, brass, and lead cuttings, why cannot a farmer separate wheat from barley, or perform many other operations with machinery? The need is evident enough. Right now with Europe on the verge of starvation,

car after car of good seed or flour wheat is fed to pigs because of barley being mixed with it. Here is the answer. The manufacturer is a capitalist, his business is large enough to afford a definite, organized, and scientific mechanical department. But it is not so with the farmer. He is a small business man. This is where the government should follow its precedent of developing improved seed by developing improved machinery.

The Liberty truck is an example of what can be done in a mechanical way. Let us get the present crop as best we can, but let the government start in, at once, to develop machinery for Agriculture, as it has done for manufacturing and war. This can and should be done.

—E. W. WESTON, '18.

#### PRODUCTION REGARDLESS OF PROFIT?

We have grown so accustomed to reading headlines after the following style: "Food Will Win the War," that the real significance of such a statement is not fully appreciated by the general public. But we must realize the actual value of such a truth. The cry is for food. Farmers, as a class, are doing all they can with the help available. While the value of the man behind the plow is being appreciated, perhaps more than ever before, yet there are men who apparently deem the increased effort on the part of the farmers as one stimulated by lucrative motives rather than in answer to the country's call. Only recently at a meeting of farmers held in Ontario,

with the object of discussing the means by which increased production in 1918 may be brought about, the chairman declared it the duty of every Canadian farmer to increase his production regardless of profit. That this man is no giant of knowledge of matters pertaining to economics is obvious. Farmers as a class are not getting rich, are not drawing undeserved profits on food, and are not hoarding or wasting to raise prices. The recently published findings of the Caledon Survey bear out these facts.

Production with no profit would not stimulate effort. The only means the farmer has of making a living is by producing at some profit. It must be borne in mind that farm labor is more scarce now than ever before, and, as a consequence, the cost of production has increased in proportion. The prices of agricultural products have not, in all cases, advanced in keeping with the increased price of other products and feed. To curtail the meagre profit made by the farmer in the past would be harmful, but to ask him to produce at a loss would be disastrous.

Encouragement is an important factor in the achieving of an accomplishment. Our aim for the present is the greater production of foodstuffs, and any measure which would tend to handicap this must be avoided. Fair profits for all will keep a reasonable percentage on the farms, and it is to those that the Allies look for the food with which to carry the world war to a successful termination.

—B. W. MAXWELL '18

*Nothing useless is, or low;  
Each thing in its place is best;  
And what seems but idle show  
Strengthens and supports the rest.*

—Longfellow.



The following letter of interest was received by Mrs. (Dr.) G. C. Creelman, from Frank B. Cotsworth of 55th Battery (formerly of 56th) C. F. A. B. E. F. France.

France, 2, 2, 17.

Dear Mrs. Creelman,—

Two weeks ago Major Kent handed me a cheque for half the amount of money which you so very kindly sent to him to distribute among the O.A.C. men of the old 56th Battery, and as I have now made the distribution to all of the men in the 55th Battery with the exception of Andy Fulton, who is now in hospital, I am writing to tell you that your gift was very much appreciated by all of us, and through me they all wish to send their very hearty thanks to you for your kindness in remembering them over here. The gift of actual money was I believe, a better choice than the customary parcels, as it came at a time when the boys were a little short of cash and parcels were plentiful. It certainly makes things brighter over here to have parcels and mail for after all they are about the only things we do get outside the ordinary routine of life to cheer things along. It would surprise everyone at home, I think, to know how much the news from home is looked forward to, and if nothing arrives in a Canadian mail how disappointed one gets. I

suppose, too, that the same feeling exists with regard to our letters.

With the exception of Andy Fulton, I think that all the O.A.C. men are quite well and have been so far, with the exception of minor ailments. Andy, however, is at a Convalescent home over here suffering from shell shock and is still far from well. I doubt very much if he will ever get over it to come close to the line again, and he probably will obtain sedentary work in the rear so that with the exception of Winslow, McLennan and Fulton, we are still intact. It seems peculiar that the two men that have been killed should have been O.A.C. men, and the loss of men in that way is felt much more keenly when you have been to college with them for a number of years, and therefore know them much more intimately than other men in your unit. I read George Spencer's letter in the Review, and one can understand his feelings when one has stood by the grave of men with whom one has been very intimate and has known their value and worth; but they have done their duty and the old school has just cause to be proud of them. Considering that all the Canadians are all in the same area, except those out on rest, it is surprising how few O.A.C. men of the large number out here I have met. I ran across Foyston '14,

and Chesley was at our wagon line about the same time with Cunningham from Victoria. One whose name is not on the list of men published in the Review came down to see us about a month ago, namely, R. J. C. Walker '16, from B. C. He and P. H. Ferguson, one of the few remaining men of the P.P.C.L.I. draft, came down and saw us one evening. Lieut. Freeborne has also been down two or three times and "Carver Doone" alias Rawson, '17 or '18, is just behind us in charge of an A.S.C. dump. Before Paschendale Jim, Skelton, White, Martin and Tawse were just three quarters of a mile away and we interchanged visits quite often. Jim was looking very well indeed and seemed to be quite at home when last I saw him with a couple of tins of pork and beans and half a loaf of bread, though where he got it I don't know.

Just at present, things are very quiet, but if this excellent weather continues it will not be long before some one makes a move. I do not remember ever seeing at this time of the year, such glorious weather as we have had during the past three weeks. We have not had enough rain to give one a wetting through, and every day the sun has been out, making things bright, and even starting the grass to grow in sheltered spots. In view of a possible move by "Henry", we are taking advantage of the good weather, and piling material on our Rts. to make them 5.9 proof, and are now nearly completed so that with a dug-out 45 feet below the surface right in rear of our battery we feel comparatively safe. Of course, the dug-out is one built by Henry, as burrowing underground to that depth is not a very frequent happening among the Canadians. They would sooner build a little shack about 6 feet down and let

things go with a few sandbags on top, trusting to luck that they won't get a direct hit. Consequently it is a luxury, and saves work to run across a position with Henry dug-outs very handy. Just at present we are living in the cellars of a row of houses about 25 yards from the guns, just keeping enough men in the control dug-out to look after the guns in case of a hurried call for assistance. With bunks made from wire netting usually, or even with beds "salvaged" from the houses near by we are able to make ourselves quite comfortable, while a spring cushioned bench from a schoolhouse nearby, reminds us of deep davenportsof former days. Just around the corner is a Y.M.C.A. with a reading room,—not very fancy it is true—and a canteen, and it is surprising what a tremendous business they do. Without the canteen I don't know what we should do, for the nearest village that is inhabited is two and a half miles away, and being civilian stores, of course things are very dear, and I fear some of them have special Canadian prices. In the Y's however, we buy the Canadian chocolate at the same price as we pay for it at home, and quite often we are able to decorate our table with shredded wheat, cream, peaches, etc., so that we are able to live quite well and I think that over 75% of the pay of men who are at the guns goes to the Y.M.C.A. The Y.M.C.A., therefore, is doing a great work along this line, and every one here appreciates it, I think.

Bill and Harry have just come up from the wagon lines and both are very well and thriving. Bill contemplates going to the Flying Corps, and should be going quite soon. It also seems quite possible that others will be recommended for Commissions, and then I suppose the break up will com-

mence. It seems a pity perhaps because we have all had such a good time together, and know one another so well, that the prospects of separating and making new acquaintances does not look very inviting. Our great regret, of course, is the breaking up of the old 56th, for there we had an "esprit de corps" that I doubt could be found anywhere else. However, I suppose change is the natural order of things.

Before closing, I would like to say how much we all look forward to the Review and when it arrives the lone copy is very much in demand, and would it be too much to ask if some of the students would send over their copies after they have finished with them, they would be greatly appreciated here.

I trust that you are all keeping in the best of health, even though we write so rarely, we often think of you all, and talk of the past days in your ever open home.

Will you again accept our united thanks for your kindness, and with very kind regards to all, believe me,

Yours sincerely

FRANK B. COTSWORTH,  
No. 324864, 55th Battery, C.F.A.  
B.E.F., France

The following is a partial list of the personnel of Year '17. We have not included in this list the boys overseas, as we hope to publish a complete list of the O.A.C. boys under the initial of their respective years, just as soon as our lists are complete.

We again appeal to our readers to help us complete these lists, by sending us any information you may know of our boys overseas.

#### Year '17 Alumni Association.

R. M. Aiton, O.A.C., Guelph, Botany Department.

N. S. Anderson, O.A.C., Guelph, 3rd year.

R. E. Begg, O.A.C., Guelph, 3rd year.

Hugo, W. Clark, O.A.C., Guelph, discharged from 64th Battery. Now with Farm Dept. O.A.C.

H. L. Davis, 69 Forbes Ave., Guelph, 4th year.

R. C. Elder, O.A.C., Guelph, 4th year.

Dave Elliott, Box 107, St Catharines, Dist. Rep.

O. C. Evans, Box 477, Chilliwack, B.C., Farming.

H. W. Graham, O.A.C., Guelph, 4th year.

A. Harding, Lougheed, Alta., Farming.

W. Hawley, O.A.C., Guelph, 4th year.

Eric Hearle, O.A.C., Guelph, Dean of Residence.

V. R. Hunter, Cavan, Ont., Farming.

E. V. Lawson, Goderich, R.R. No 3, Farming.

C. F. Luckham, O.A.C., Guelph, Discharged from 64th Battery. Now with Farm Dept. O.A.C.

A. J. Mann, O.A.C., Guelph, 4th year.

W. G. Marritt, 7 Market St. Hamilton. Dist. Rep.

F. K. Merkle, Iowa State College, Ames, Iowa. Associate Prof. of Cheese-making.

E. A. McCook, Campbellford, Ont. Farming.

S. B. McCready, College Heights, Guelph. Organization of Resources Committee.

J. B. McCurry, O.A.C., Guelph, 4th year.

L. W. McKillican, Maxville, Ont. Farming.

J. C. Neale, O.A.C., Guelph. Farm Dept.



H. W. Neff, Newmarket, Ont. Asst. Rep.

E. J. Quail, O.A.C., Guelph, 3rd year.

W. Robinson, O.A.C., Guelph, 4th year.

H. H. Selwyn, O.A.C. Guelph, 4th year.

J. N. Timms, O.A.C., Guelph, 4th year.

J. M. Waterman, O.A.C., Guelph, 4th year.

R. W. Zavitz, O.A.C., Guelph.

Orval V. Zavitz, 22 House Ave., Brantford. With Brant Creamery.

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#### CAPT. J. E. LATTIMER HEARD FROM.

Capt. J. E. Lattimer, '14, who has been a prisoner of war in Germany, has been transferred from Heidelberg to Meitten, Switzerland, along with twenty other officers,—three of whom are Canadians. They are enjoying the change of scene and having as good a time as possible under the circumstances. A little dance is held once a week in the hotel, but Lattimer says they do not come up to the dances held at Mac. Hall. There is a bob run, over two miles long, which is very popular, and has an advantage over the College hill, in that a small train hauls one up to the starting point again. Ski-ing is indulged in, and there is a rink also, though for obvious reasons, less enjoyed than the old O.A.C. one. They are well supplied with good periodicals from England. They also found the most of of the German Camps well supplied with books. During the holiday season, many people come from Geneva, Berne, and other places for the winter sports, and the place has been quite enjoyable, but soon it will be very quiet again.

#### MEN OF '18 HEARD FROM

Several members of the Senior year have had letters from their former classmates now in France, including: Bill Kay, Long, Flemming, Boucher, Hoard, Dodding, "Blondy" Brown, Maybee, and Clarence Shaw. All have interesting things to tell.

One special note came from Dan McArthur, who in the first two years of '18's history was a general favorite because of his popular cartoons and witty writings. Modesty bade him write, "On your honor, don't let the Review have this!" Else it would appear in full. In his own, interesting way he tells how a bunch of twenty of them enjoyed festivities on Christmas eve. They were in a dugout and "Steve" of '18, the mouth-organist and general gloom dispeller was there. They had a big fire place burning cheerily in one end of the dugout; a long table ran the length of the place and "real" chairs were around it; candles and holly added to the reality of the scene. Dave Laird and McAdam were in charge of the culinary arrangements and provided an excellent menu, while "Colonel" White and Gus Edwards superintended the mixing and issuing of liquid refreshments in a most efficient manner. Under the circumstances we fancy that they must have had a right good feed and a jolly time. In the course of his remarks, he makes reference to Clare, Flemming, the two Shaws A. L. Watt, M. A. Watt, Charlie Riley, MacAdam, Bill Brown, Edwards, Chesley, Smedley Macklin, Leggatt, Hoard, Erb and Fidler, all of whom are in good health.

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Mr. H. H. Le Drew recently received a letter from H. W. Neff, '17, (Asst. District Rep. for York County) in which he tells of having received a letter

from Gnr. Charles Meek '17, dated Jan. 20th, 1918, Somewhere in France.

Gnr. Meek states that he and O. McConkey, '18, had travelled together from the time they left Canada, until a couple months of date of writing, at which time they were separated.

O. McConkey is now with the 6th Canadian Siege Battery and Gnr. Meek is with the 1st Can. Seige Battery. In the course of his letter he states that, J. Creelman, B. Skelton, A. White and I. B. Martin, are all in different units, and that W. J. Lawse had been seriously wounded.

Mr. Neff also stated he had received a letter from W. J. Austin '17, and that "Will" was enjoying the Western life of the mountains in B. C.

"Will" is stationed at Kelowna, and has charge of the Agricultural work in the High Schools at Kelowna, Vernon, and Rutland. He also has charge of the nature study and agriculture taught in the public schools of that district.

The Editor is in receipt of a letter from W. H. Gunn, B.S.A. of the University of British Columbia.

Mr. Gunn was a graduate of O.A.C. in the year 1903. He took a keen interest in College life, while attending College here, and it is pleasing to know he is still interested in his Alma Mater.

He writes favorably of all O.A.C. men out there. He pays tribute to Professors R. C. Treherne '09, and F. M. Clement '11, for the excellent work they are doing for Agriculture in that Province.

We are very pleased to hear from Mr. Gunn, and to learn of the success of our O.A.C. men. The Review extends its heartiest wishes for added success in the future.

844 Cambrie Street, Vancouver, B.C.  
March 6th, 1918

Alumni Editor

O.A.C. Review.

Dear Sir:

Many, many years ago, the writer was a student at the O.A.C. When I came to Vancouver in 1907, I met a number of ex-students out here, so we formed an Ex-Students' Association and as I was made Secretary, I have kept in pretty close touch with the old boys and the many fellows who have come out here since. I enclose an interesting account of a short course being given by the University here for the benefit of the citizens who plan growing next winter's supply of fruits and vegetables in their back yards. Treherne is a graduate since my time. Since coming here I have got to know him quite well and he is a mighty valuable man for this Province. I could give you an account of quite a list of the ex-students in B. C. I am pleased to say all are doing well. My old room-mate, L. S. Klink is now Dean of the Faculty of Agriculture of the University here. You may have met him when he was East in January. As I write I have been looking at some groups of the 1903 class relay teams, and am grieved to know that some of those good fellows have gone down in this war. By the way, our year won the relay race every year throughout our course, and I wonder if any one year has done so since. The fellows on the teams were as follows:

**1st Year**—Dryden, Alf. Atkinson, J. P. Cleal, T. H. Sharp, .

**2nd Year**—Geo. Dick, Jack Weir, Weeks, W. H. Gunn.

**3rd Year**—Alf. Atkinson, L. H. Newman, D. H. Galbraith, W. H. Gunn.

**4th Year**—Joe. P. Cleal, W. H. Gunn, D. H. Galbraith, L. H. Newman.

If I remember right, the above was the order in which they ran. The competition each year became keener. If you know the now portly figure of L. H. Newman, of the Seed Branch at Ottawa, you would be surprised to know of his record breaking burst of speed in that last lap of our last race.

I must congratulate you and the others on the Review Staff, for keeping the Review not only equal to, but improving on former years.

The enclosed poem about Treherne I thought good enough to put in the Review.

With best wishes.

Yours sincerely,

W. H. GUNN.

Terror reigns among the insects,  
Garden bugs are pale with fright,  
Onion maggots shake and tremble,  
Cutworms burrow out of sight.  
All the pests which prey on produce  
For a distant refuge yearn  
Now the burgesses are taking  
Hints on poisons from Treherne.

He has filled the garden toilers  
With the formulae of dope,  
Arsenate of lead and 'baccy,  
Kerosine and whale oil soap.  
And we burst to air our knowledge  
(We have data now to burn),  
For we mean to spend our summer  
Slaying insects with Treherne.

—Ronald Kenyvyn.

A large audience greeted the lecturers at the University of British Columbia last night in their educational addresses on gardening and most interesting talks were given by Professors R. C. Treherne and F. M. Clement. Garden insects are in for a bad time this year, for Mr. Treherne supplied his hearers with formulas whereby they can manufacture "dope"

which will put the garden pests out of business. Copious notes were taken, and the various insects which bring despair to the city farmer by spoiling the crops on his thirty-three-foot lot are in for a bad summer. Prof. Clement dealt with suitable crops for small areas and gave hints as to the best methods of planting and the most suitable varieties to raise.

Taken from D. P. of B. C.

The following letter from Pte. R. R. Penhale '20, was received by Mr. Stanley White:

The letter is interesting in that it tells how our boys may spend a furlough apart from the war zone, and gives us a glimpse of the more pleasant circumstances of our boys.

France,

Jan. 26, '18

Mr. Stanley White,  
O.A.C., Guelph,  
Ont.

Dear Stanley:

I received your Christmas card the other day, and many thanks for same. I do not know when the mail came because I was touring Southern France for a change.

I have just returned from fourteen days leave. I have had one grand time in the Maritime Alps, and I am just wondering where I'll go on my next leave—I guess I'll go to the same old place.

As luck would have it I was at the R. A. P. when I was told I was going on leave. Gee, was I glad, well I wonder! Next day I left for Paris and had to spend a day there to make train connections. We did not see much of Paris cause it was too cold and we met a couple of fellows we knew, so we had a pretty good time. We left Paris at nine p.m. and arrived in Marseilles

about six p.m. We got supper here and put up at an hotel till four-thirty a.m. next morning. We left Marseilles and arrived in Cannes at five p.m. We put up at the Hotel De Lyon and got fixed up for a good time. We had a good supper and went to bed quite early because we were tired. Next morning we went around Cannes, went for a stroll along the promenade on the sea-shore. It is a very pretty place—a nice line of palm trees, right around the bay. The buildings are cream coloured with red tile roofs. In the back-ground are the Maritime Alps. We met several English and Canadian ladies on the promenade and they invited us to lunch in the afternoon at the Soldiers' Club. We went with them and had a dandy time.

Next morning we pulled out early for "Nice" and as luck happened we met three Canadian Sisters going through "Nice" to "Menton". It took us a very short time to find out where they were from, and I soon found out that one of the ladies was from London, Ont., where I had enlisted. We had a very nice time while it lasted, and we didn't forget it for some time. Our French is very limited and we certainly enjoyed a good chat with some Canadians.

When we got to "Nice," we put up at the Hotel O'Connor. We had breakfast and got cleaned up and then proceeded to go down on the Promenade Des Anglais. Here we met a Sergt. and Pte. we met on the train; and then a big time started which didn't finish until we left Paris on our homeward journey.

"Nice" was our headquarters and from here we went to Monaco, Monte-Carlo, Menton and over the border to Italy.

Monte-Carlo is a very pretty place. We went through the famous gambling house, and that is sure one house of beauty. Talk about architecture and art—I never saw such a place in all my life. We went through the building before ten and we had to get out at ten. We had some lunch and then proceeded towards the border. We were with a bunch of American Ambulance drivers which were attached to the French Army, and they were some sports too. They took some pictures and promised to send us some. I suppose it will take a couple of weeks before they arrive. When we got to Menton we had dinner and then went over the border to Italy. Here we got some post cards and sent them home. We went back early and visited Monte-Carlo again. We got back in "Nice" about six-thirty, just having time enough to wash and get cleaned up for dinner. We certainly enjoyed the meals at the hotel—it really was jake to have such grand meals once more—no tin mess tins down there. Well time went quickly and it wasn't long before we were on our way to Marseilles again. We had to stay there about five hours and then we went to Paris for another day. As we were waiting for our train in the "Y" Canteen, a Tommy played "This is the end of a Perfect Day." I thought so too.

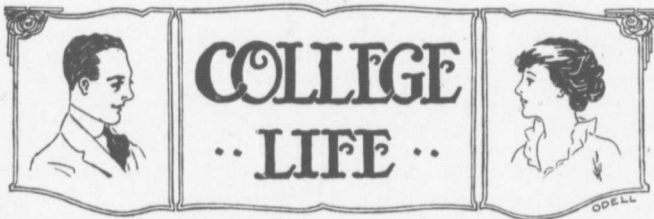
Well, Stanley, write when you can.  
From an old College Chum,

PENHALE.

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#### BORN

At Truro, N.S., on March 15th, to Mr. and Mrs. J. G. Archibald, a daughter—Jean Marie.



#### PUBLIC SPEAKING CONTEST

The Seventeenth Annual Public Speaking Contest was held on Friday evening, March 15th, in Massey Hall. This contest has always been one of the most successful events conducted at the College, and the Union Literary executive can be justly proud of the programme furnished on Friday evening.

All the speakers were in unusual trim and upheld the grand traditions of former years both in high grade matter and excellent delivery. We all feel proud to think that they did so, in order that we might be free from the taunts of those who think that the high class tone of former years is not being upheld by present day students.

The judges of the Contest were Messrs. W. T. Wilgress, Toronto, A. M. Overholt, Sarnia, and G. H. Unwin, B.S.A., from the College. Their task was a most difficult one—choosing between oratory and everyday practical talks, where the latter won out. The results were as follows:

Mr. G. J. Arnold, Senior Year, Winner of Creelman Class Prize. Subject—"Better Farm Machinery."

Mr. L. E. O'Neill, Senior Year. Subject—"The Sheep Raising Industry."

Mr. T. H. Jones, Junior Year. Subject—"The Western Market for Ontario Fruit."

Mr. G. E. Delong, and Mr. R. A. Brink, also took part in the Contest. Although they did not qualify for a

prize, their speeches were excellent. The former spoke on "Agriculture and the War" and did justice to his subject with his ideal matter. The latter gave a most excellent talk on "The Conservation of Soil Fertility" as well as handling his subject in a scientific manner.

Another feature of the programme was the presentation of the Governor General's Medal for general proficiency in 1st and 2nd Years, and the "Industrial Canada Awards", which was ably done by Dr. Creelman, who, before doing so, gave us a talk in his usual entertaining style. The Governor General's Medal was won by Mr. Shales, for which he is to be congratulated; having merited it by his consistent, conscientious work. The same party received first award in the Industrial Canada Scholarship, the second award going to Mr. Thos. Cooper.

The music aided much in giving variety to the programme. The College Orchestra rendered several choice selections, while the singing of Miss Totten was of the usual high order, as was that of the mixed Quartette, consisting of Misses Aitken and Totten, and Messrs. Hopper and Higgins. The Misses Muriel and Sybil Boyce gave a most beautiful instrumental Duet—"Melody Maids," while the reading—"The Victim"—given by Mrs M. B. Smith, was delivered in such a manner as to hold the attention of her audience.

D. J. M.

## UNION LITERARY MEETING

On Saturday evening, February 23rd, the Union Literary Society met in Massey Hall, with president G. R. Wilson as chairman. Miss Grace Totten, assisted by Miss Hattie English as violinist, and Miss Annie Gow as pianist, rendered a solo in her usual "Queenly" style. The number was loudly applauded, and the encore, so generously offered, much appreciated.

The debate was the next feature of the programme, and read as follows: "Resolved that under the present crisis, conscription for farm labor in Canada, would promote greater National efficiency." The affirmative was argued by Messrs N. James and L. E. O'Neill, of the Senior Year; and the negative by Messrs. J. J. E. McCague and C. C. Eidt, of the Freshman Year.

Mr. James, as leader of the affirmative, in his usual convincing, concise, matter-of-fact manner, proved by numerous figures and quotations that, "There is a crisis" in the food situation of Canada, and the whole world. As the most efficient remedy for such a serious state of affairs, he advocated Conscription for farm labour, and endeavored to justify such.

Mr. McCague, leader for the negative, proved himself to be a pleasant, fluent, unassuming speaker, as he questioned the feasibility of the measure; pointed out the dissatisfaction which it would cause among farmers; and voiced the opinion that conscripted labor was entirely unsatisfactory in accomplishing much work, by citing student labor at the O.A.C. as an example.

Mr. O'Neill, second speaker of the affirmative, in his customary, emphatic, clear, convincing oratorical style, and pointed remarks, emphasized that this is a business war, and hence we should use business-like methods to win it,

by adopting the proposed measure. He advocated that wages be one dollar and ten cents per day; that the Government take over all land, divide it into areas of one thousand acres to be supervised by one competent farmer; that present owners of the land be remunerated to the extent of six per cent on their investment; and that the land be given to the owner after the war is concluded.

Mr. Eidt, ably upheld the negative by his cool, logical thought and composure of delivery. His principal arguments were that, as no nation had tested such a scheme, we Canadians should not; and that, considering the time required to put the measure into operation, we would profit by continuing our present efforts.

Miss Estella Fallis, of Guelph, then kindly favored the audience with a reading, which was so well rendered by her, and so much enjoyed by those present, that an encore was indispensable if the applause was to be satisfied—which was the case—thanks to Miss Fallis.

The College quartette, consisting of Messrs. W. L. Iveson, C. F. MacKenzie, J. R. Higgins, and W. C. Hopper, was heartily encored on account of its generosity as regards quantity and usual melodious quality of music rendered.

Rev. E. A. Pearson, of Norfolk St. Methodist Church, as judge and critic, brought the audience to tears—of laughter—by suggesting how he would utilize such talent in his church. His brief criticism proved to be instructive and helpful to everyone, but especially comforting to the members of the affirmative, when he said "The affirmative has won the debate."

The meeting closed by singing the National Anthem, with Miss Annie Gow presiding at the piano. T. H. J.



## ALPHA LITERARY SOCIETY

The winter meeting of the Alpha Literary Society, held in Massey Hall, on Saturday evening, March 2nd, proved to be one of exceptional merit. The programme was considerably more extensive than usual, and full of interest at all times.

The meeting opened with a selection by the Macdonald Hall quartette, composed of the Misses Aitken, Watts, Totten, and Jackson. In response to the encore, the girls gave a short, comical little sketch. The second number was a reading by Mrs. C. F. MacKenzie, who was heartily encored. To satisfy the desire of her audience, Mrs. MacKenzie then gave a very amusing little sketch, entitled "The Courtship of Larry O'Dee."

The reading was followed by the debate: "Resolved—that three years' High School education should be compulsory for all Ontario children." The exponents of the affirmative were Mr. J. R. Sweeney, and Miss G. Totten; of the negative, Miss J. Flatt, and Mr. G. R. Wilson.

The fourth number on the program consisted of a violin solo by Mrs. W. L. Iveson. Mrs. Iveson has always been indulgent with O.A.C. audiences; her listeners are slow to forget, and it was not until she had given three charming encores, that she was allowed to take her seat. Mrs. Fuller played the accompaniment.

The next number, a duet by W. L. Iveson, M.A., and C. F. MacKenzie, was heartily encored, but to no avail. Following the duet, a vocal solo was rendered by E. C. Stillwell. Mr. Stillwell is gifted with a voice which is deep and full, and the song which he chose was admirably appropriate. When applauded, our popular friend sang again, to the delight of his audience.

The concluding number consisted of the judges' decision of the debate, and the remarks of the critic. The judges, Professor Crow, B.S.A., Miss J. Rogers, and Mr. J. P. Sackville, B.S.A., decided in favour of the negative. Professor Crow, who was critic, based the decision of the judges on the point that the affirmative did not establish their case on grounds solid enough.—This was their failure. He maintained that the affirmative speakers on any debate must firmly establish their case and then prove it—unless they do so, they have failed. The critic complimented the debators upon their ease of manner on the platform, and their fluency. He remarked that the latter quality was particularly evinced throughout the debate, and that the speakers therefore deserved special mention.

The singing of the National Anthem concluded the meeting.

Mention must be made of the excellent programme which was offered on this occasion. The executive of the Alpha Literary Society secured the services of some of the best local and outside talent, and all put forth their best efforts to make the meeting the success which it was. A name not appearing on the programme is that of Miss Gow, who, with her usual good will, contributed very largely to the evening, by playing several of the accompaniments.

F. ODELL '19.

## FRESHMEN SKATING PARTY

In accordance with the customs of the College Year '21, gave a skating party on Feb. 26. The season, up to that time had been rather crowded with social events, which had been a tax on both time and finances, so that the usual hearty support of the College

was lacking. Nevertheless, what was deficient in attendance was more than accounted for by the splendid ice. The Year '21 executive were fortunate in acquiring the services of a very capable caterer and thus that important item of the evening was well supplied.

The band began their music about 8 o'clock, and the first six numbers were run off in lively style. Refreshments were then served and continued to be served until after the last band. A number of town friends were noticed and helped to swell the rather slim ranks of the College people.

All present voted the event a complete success, and numerous were the congratulations received by the freshmen for the splendid manner in which they had arranged the evening.

H. R. C.

#### ILLUSTRATED LECTURE ON PLANT BREEDING

The Hort. Club on Feb. 29th, was addressed by Mr. J. W. Moore, Superintendent of Queen Victoria Park, Niagara. Mr. Moore spoke of plant breeding and pointed out some of the present fields of labour in that line of work. One of these is the desirability for the production of scented begonia in order to greatly improve the utility of that plant. Another present requirement is that of a red primula for the Xmas trade, a white variety for Easter and a yellow primula for general trade.

Mr. Moore explained that plant breeding does not aim at increasing the number of species, but rather in improving those already existing, along such lines as richer colour, shorter stems, greater adaptability to greenhouse conditions, etc. He urged some form of legislation which would allow

the registration of improved plants so that the originator may derive just rewards for his labours.

The speaker interested those present by his explanations and illustrations of the details and intricacies of plant breeding. The Kew Gardens of London, Eng., have the distinction of turning out graduates who are among the most practical and expert of horticulturists and Mr. Moore has proved himself to be no exception.

#### THE LITERARY SOCIETY

The College term has ended, and with its close another year of activities becomes past history. During the term it has been the purpose and pleasure of the Union Literary Executive to adhere to the Society constitution in the development of the literary, musical and social talent of the students. In our endeavours, we have had our trials; we have had our successes and our failures, but with the work as a whole, we have no misgivings. Whatever success we have had in the fulfilment of our duties we can attribute to the support of the student body, to the hearty co-operation of the faculty, the Macdonald Hall Society, and the other major societies of the College. In union there is strength. To us it appears that the ideal function of College societies is the working in unison and harmony, for the common good of all. We have endeavoured to fulfil our role in the accomplishment of that ideal. Those of you who have contributed to the success of our efforts in any way we request that you will accept this acknowledgment of our sincere appreciation of your efforts. We trust that in the future the society will receive the full-fledged support which has been ours.

G. R. WILSON.

# ATHLETICS

ODELL

## RECORDS BROKEN

One of the most successful indoor meets in the history of the College was that held on March 6th, in the O.A.C. gymnasium. Four records were broken, viz., the 440 yard dash by E. C. Stillwell, '19; the 15 yard dash by R. D. Allan, '19; high dive by A. J. D. Williamson, '20, and the rope climb by W. A. Young, '21.

The meet was won by the Third Year, their total score being 107 points. The First Year followed with 27 points and the Second Year came third with 17 points. The relay race was won by the Third Year.

The success of the meet was largely due to the wonderful showing made by several of the men, W. R. Gunn, '19, being grand champion with a total of 26 points to his credit. J. Ian Way, '19, ran him a close second with a total of 20 points. The First Year also should be proud of their athletes, especially of G. J. I. Lindala, '21.

Although the attendance of O.A.C. is greatly reduced, athletics are by no means retrogressing. Great credit is due Mr. Matheson, president of the Athletic Association, and his executive, for the able manner in which the meet was carried through.

## BASKETBALL

### O.A.C. vs. LONDON

The O.A.C. entered a team in the Intermediate O.A.B.A. this winter and was drawn to play Western University of London, in the semi-finals.

The first game was played in the O.A.C. gymnasium on Saturday afternoon, March 9th. The game was featured by Art Smith's deadly shooting and Bill Michael's hard work and general utility. Western won the game 23-15.

Their forward were big and heavy and surpassed their checks by about a foot in aggregate height, which gave them a tremendous advantage. The half-time score was 8-8.

Lightfoot of London, handled the whistle.

Western U.	O.A.C.
Wortman.....	Centre Michael
Pritchette.....	R. F. Odell
Smith.....	L.F. Matheson
McGeoch.....	R. G. Grant
Simpson.....	L. G. Musgrave
Withick.....	subs Smallfield, Pegg, Weston.

### O.A.C. vs. LONDON

Thursday, March 14, the O.A.C. Basketball team journeyed to London to play the return game with Western University.

Both teams put up a much better game than in the first contest at Guelph but the Westerners knew their own floor, and outscored their visitors by 42-23.

After the game, Dr. Neville, of London, was heard to remark that he felt better now than he had since the disastrous Saturday afternoon in the fall, when the Western U. rugby team went down to defeat before the O.A.C. stalwarts by 41-3.

There was a short informal dance after the game, to which the O.A.C. men were made welcome.

The teams lined up the same as in the first game.

### HOCKEY

Monday, March 11, Juniors and Freshmen met to decide finally which year had the better hockey team. Great enthusiasm prevailed. The supporters of both teams were supremely confident in the ability of their favorites to pull through with a victory and backed their opinions copiously with chocolate bars. Even those who had no particular interest in the result of the game, were attracted by evenness of play shown in the three previous games, and the good spirit evinced by the players of both teams.

The Freshmen won the toss and took the north goal, also electing to play three 20-minute periods. The first period was marked by close, hard checking and was in favor of the freshmen. They had the better of the play and scored the only goal of the period on a shot from Shoemaker. Long and loud the first year rooters cheered, but the Juniors were not disheartened. They went on the ice again and in a few moments Higgins batted one past Rice. It was the Juniors' turn to cheer, but when a few minutes after the third period started, Alexander scored on a mixup in front of the 3rd Year's nets, the uproar was deafening. The Interyear Championship appeared to have settled upon the Freshmen. However, a minute or two later, Higgins took a pass from Shales and beat Rice fairly, again tying the score. The first year men appeared to tire somewhat and Shales scored again. Soon after this the same player banged another one into the nets, making the score 4-2.

Then Higgins was drawn back and the three-man defence played it safe. The two forwards, however, continued to press, and came near to scoring again on several occasions. Both teams played excellent hockey, only one penalty being imposed. The goal keepers were particularly brilliant and both had plenty of work. "Cap" Gondier, B.S.A., was referee and gave entire satisfaction.

#### FIRST YEAR

Goal—Rice.  
Defence—Alexander, Clemens  
Centre—Shoemaker.  
R. Wing—Sirrs.  
L. Wing—Taylor.

#### THIRD YEAR

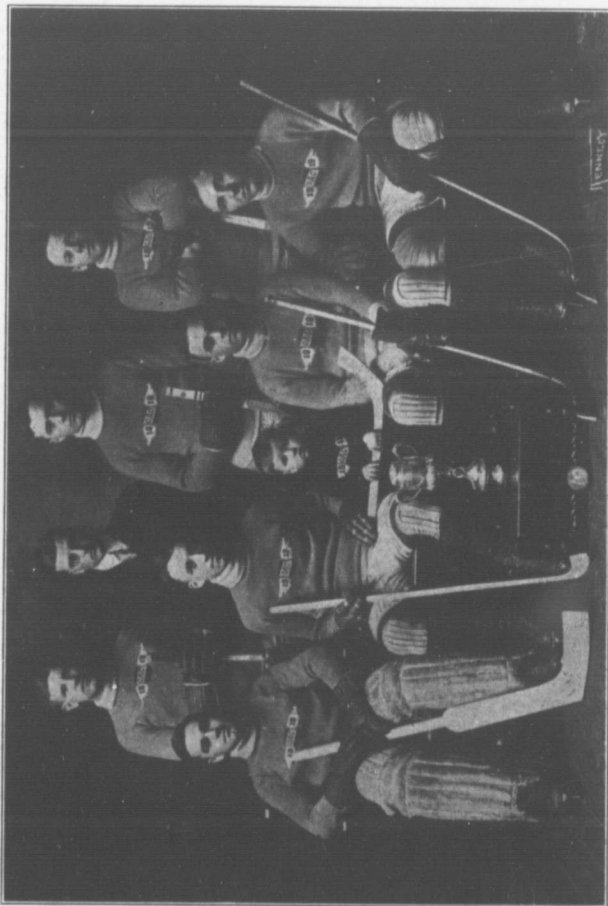
Goal—Allan.  
Defence—Begg, Musgrave.  
Centre—Higgins.  
R. Wing—Shales.  
L. Wing—Stjllwell.

### ATHLETICS

The College year has once more drawn to a close. The various forms of sport have waxed and waned. Fortune and misfortune, success and failure, victory and defeat, have attended our efforts in varying proportion.

In the Fall term, we had a good rugby team. Owing to lack of experience we were twice beaten by St. Jerome's of Kitchener, but we improved with each reverse and after defeating London by a small score on their own grounds, we ran up a "basketball" score on them in Guelph, and held them to three points. This is the first time in several years that a rugby team from O.A.C. has taken two games from Western University in one season.

On Field Day we had some of the most closely contested events ever seen on this campus. There was a

*Interyear Hockey Champions**Season 1917-18*

R. E. BEGG	R. ALEX. BRINK	J. M. SHALES	A. M. STEWART
R. D. ALLAN	E. C. STILLWELL	DONNIE MacKENZIE	J. R. HIGGINS
		Mascot	A. H. MUSGRAVE

large entry list and much enthusiasm was displayed.

Basketball and hockey were taken up in the winter term and though the basketball team failed to make a showing in the league standing, yet the boys got the benefit of the strict and strenuous training which they underwent, and always gave the best they had every time they went on the floor. The hockey team had a wonderfully successful season. Except for the game with the Page-Hersey factory team, which was lost by one point, we were undefeated. Two games were played with McMaster University of Toronto, and one each with Toronto Dental College, holders of the Jennings Cup, and Toronto Medical College, runners-up for the trophy. The team in all their games, showed that spirit of sportsmanship which takes defeat and victory alike, does its best, and accepts without complaint, whatever result may come. Only four penalties were imposed on the O.A.C. hockey team during the whole season.

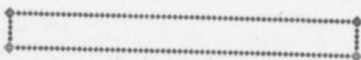
The Gymnasium team did not have a fair chance to develop this winter, as the Athletic Concert was staged three weeks earlier than usual. How-

ever, they were faithful in their practice and attentive to instruction and when the big night came they acquitted themselves well. They also did some work at the Concert put on at the Military Hospital by the I.O.D.E. This was characterized as "superb."

The Indoor Meet this winter was one of the most successful ever held in the O.A.C. gymnasium. Four records were broken, and a fifth was in deadly peril for some time. All the events had a large entry list and all the contestants worked their hardest.

Interyear basketball and baseball were omitted this year on account of lack of heat in the gymnasium, but the interyear hockey series was exceptionally interesting. Though the race was extremely close, yet nothing of an unpleasant nature occurred and the spirit of all the competing teams was one of good-nature give-and-take rivalry without bitterness.

Taken altogether, our athletics this year have been a success, not only with regard to the games we have won and the records we have hung up, but also on account of the clean, wholesome spirit of fair play that has been displayed by all those who participated.



*Self-reverence, self-knowledge, self-control,  
These three alone lead life to sovereign power;  
Yet not for power (power of herself  
Would come uncalled for) but to live by law,  
Acting the law we live by without fear;  
And, because right is right, to follow right  
Were wisdom in the scorn of consequence.*

—Tennyson.



# MACDONALD



MR. KIRBY

Mr. Kirby never poses for a picture. In fact it's almost impossible to get a snap of him for he's always moving. This is our good old friend as he is best known to us at the Hall. The grass does not grow under his feet, nor does the snow remain long under ours. He's on the job in summer and winter.

## THE JUNIOR DANCE

"Well, this has been the best yet!" Such was the heartfelt, satisfied exclamation which came from a tired but happy senior as he wended his

way across the campus after the Junior Dance.

It was a happy crowd of young people who assembled in the halls and gymnasium of Macdonald Hall on March the eighth, to enjoy to the full the evening's fun, and few were disappointed, although unfortunately (or fortunately from our standpoint) there were rather more boys than girls. Full honour was done to St. Patrick—with green festoons overhead, shamrocks and plug hats on the walls, real shamrocks on the platform, and fresh green lettuce peeping out from many of the delicious sandwiches which were served.

The orchestra played many generous encores which were fully appreciated, as was evidenced by the vigorous applause which greeted each one. The hockey team of the Toronto Medical Students came over in a body, and to all appearances seemed to think it worth while to have a trimming on the ice—if, this was the reward.

But why attempt to describe such a success in prosaic language! "It can't be did!" and the only thing left to do is to join with the unknown (?) Senior in declaring it to be the best yet.

D. C. M.

The Macdonald Hall Basket-Ball Team have played three interesting games with the Guelph Collegiate team, and were the winners of two of these. As we had only been playing girls' rules at the Hall, Mr. Musgrave and Mr. Odell undertook to coach the team, so that we might use boys' rules

The Juniors at the Hall challenged the Seniors to a game of hockey. As the two teams participating were so evenly matched, the game proved very exciting. At the finish the Juniors were in the lead 3 to 2.

Besides our regular hockey practices we have lately played a game with fourth year, and also one with first year. There was some dispute about the score in the game with fourth year, so we will not say what it was. Everyone who saw it was of the opinion that "those fourth year men did look handsome with those 1860 model hats on," which by the way, was the handicap given them, in addition to playing with their left hand. We fully expected having another game with the graduating year, but the weather would not permit.

The game with first year had to be left until such a late date, that it turned out to be almost a swimming contest instead of a hockey match, but when the boys promised not "to splash or trip" we agreed to play and won by a score of 1 to 0. This made the fifth game played with the boys' teams this year, and I am sure I am safe in saying, these were enjoyed immensely by our team, and we all are sorry our hockey is over.

E. G. C.

Here is another palatable little article on soldier food, from our overseas correspondent:—

#### MORE RABBIT STEW

Can Thomas Atkins, somewhere in France find a finer rabbit stew than his mess cook makes from the ration issue of English Wild Rabbits? Yes, and surely the tame hutch fattened rabbits to be had from the peasantry in France or Flanders will make a rabbit stew that's a dish for — well, any epicure who, under winter weather

conditions is now devoting his spare time to putting the raw edge of No Man's Land into sandbags.

Stuffed with sausage-meat, thyme and parsley and baked—but that is a memory of a wet night in Poperinghe.

Curried with rice and with salsify and celery stewed in butter on the side—but that is a memory of the Miller of Polincove and his fair daughters, and the end of a weary trek to a promised land called Rest.

How fed we wondered, but well hung and served to us fried, we thought it game, and the Hotel Paon D'Or, Bethune, maintained its sporting reputation.

In August '16, before taking a hand in the Battle of the Somme, an excursion to Calais was indulged in. The chef of the Hotel Continental introduced us to "little bunny en casserole." We are not sure he called it that, but that's what he meant, a something in the line of hot undermeats in a little brown dish that added the savor of a Savannah chicken fry and a brown beef gravy to something just a little more palatable than ever a rabbit was before.

Verily, in the months about to come and on the days when bully-beef and biscuit was our only portion, did we not remember the arts and graces pertaining to the chef of the Hotel Continental, Calais' 'Twas then we should have remembered, but would not, the evening when Madam of the little Amiens hostelry assured us it was "jugged rabbit" and "tres bon", "jugged" it may have been, at any rate it had been maltreated in some way. "Tres bon," it certainly was not. Probably it had been a family rabbit and like King Charles II., taken too many years to die. We could not argue with Madam. We could only remember that we had no passes, be quiet

keep one eye out for the A.P.M., the other on the lookout for a little stray jollity to wind up a stolen evening in a very fine old town of ancient Picardy.

If the porridge-pot is an institution north of Berwick and the Tweed, the vegetable stew-pot is as persistent a feature of domestic economy in rural Flanders and Northern France. The ordinary Flemish cooking-stove burns soft coal and faggoted hedge twigs, and is in the nature of a fuel economiser. Ash pit with firebox above, hour-glass fashion, support one end of a flat top three or four feet long, and one pot hole wide which enters the brick or cut limestone chimney by a short neck of flue. A rectangular oven, double walled of light cast iron and sheet metal, usually detachable, is suspended below the table-like top. Damper arrangements enables the heat when required for baking purposes to be diverted around the oven through its double walls on its passage to the chimney. Where the flue enters the chimney sits the vegetable stew pot.

Into this wonderful pot go peas and beans, as greens in summer, or as grain from store in winter, along with pot barley, the leaves thinned from young sugar beets, celery root, parsley, carrots, turnips, onions, cabbage and potatoes. Beets add sweetness when wanted in the fall, parsnips are used in the spring. The vegetable stew is enriched with stock from bones, giblets, or any fresh meat scraps available. There is no thought in Madam's mind, of boiling meat anywhere except in the vegetable stewpot. Nowadays, fresh meat stocks are much depleted and North America has helped France and Belgium to feed her hungry people while her fighting farmers are in the firing line. So now, on week days, to add strength and savor, the pot contains a piece of fat pork,

the kind we used to be acquainted with on Canadian exploratory survey work, the real old rattlesnake brand, Chicago chicken, "le bon gros lard" of the vegetable stew pot.

Now, whatever may be the alteration in the political status of the Church in France, the peasantry of the north and their Belgian brethren across the border are Catholic still. Sundays and Feast Days find their best clothes on their backs, and in the pot, even the poorest may have a rabbit.

If your culinary acquaintance with rabbit has been confined to the English Wild Rabbit, or his long-eared, long-legged American cousin, you have no good idea what a savory edible is a hutch fattened rabbit of the large or early maturing medium types that are fed for white-fleshed, tender-meated carcasses by the Belgians and French.

When feed is plentiful, the young rabbits are allowed a long growing and fattening period, and may furnish quite a sized carcass. Their usual marketing weights are at least twice the average of English Wild Rabbits.

When feed is scarce, the young rabbits find their way to the stew pot as soon as weaning and subsequent moulting permit proper fleshing.

Nothing is waste from the garden when rabbits are fed.

For the prevention of waste, and the most economical utilization of animal by-products the patronage of the public abattoirs is compulsory when livestock are slaughtered for market or home consumption. Rabbits are of course excepted. But a wary eye on the giblets in a rabbit and vegetable stew would suggest that waste in this line has in some instances, been reduced to an uncomfortable minimum . . . . . Curious the influences on the evening

reveries of that rabbit and vegetable stew tonight?—Bunny's early growth was made on cabbage leaves and stalks of Brussels sprouts. Bunny was fattened on boiled small potatoes and coarse meal. Bunny was very fond of chicory greens, and what an appetite the chicory gave. He nibbled and munched later even than his natural habit.—Madam is a good plain cook, a very plain cook for a French estaminet. Tonight, Madam has served us cabbage, sprouts, potatoes, coarse brown bread, and bunny, followed by bowls of a strong, black decoction of chicory, that Madam persists in calling coffee.

It can't be the after-dinner coffee that keeps us so wakeful, restless, and imaginative as we are tonight, for it wasn't coffee.—What effect would a diet of stewed rabbit food and rabbit, have on a naturally weak-minded individual?—Would he—  
**are we becoming rabbit brained from too much Rabbit Stew?**

Fads '15

#### MACDONALD LOCALS

A Westerner driving through the country in Ontario was heard to enquire,—“How long is a mile here?”

Associate:—“Is Miss Reid not coming to breakfast this morning?”

Home maker:—“No! I think she has caught cold.”

Normal:—“Oh, I don't think that is possible.”

Homemaker:—“Why not?”

Normal:—“Oh, those junior house-keepers are all so slow that they couldn't catch anything.”

Miss Rogers, in Home Economics class,—“What is one method of economizing?”

G. R.—“Reduce the waste.”

#### AN ADDITION TO THE CURR CULUM

After receiving several left handed compliments, one of the Mac girls suggested that a course in the Gentle Art of Flattery be added to the O.A.C. studies. The students would practice on one another and try their practical exam on the young ladies of Macdonald Hall, who would be competent judges. What say you?

FOUND—Somewhere on the Campus “Waterman's Ideal”—No it isn't a fountain pen! Apply?

Al-c,—“Why, I have not been out for a walk after chapel, this term.” Interested party—“Now, Al, just how do you make that out?”

Al-c,—“I mean, really walking—with a man.”

Now just what does the word “walking” mean?

#### A NIGHTMARE

One morning, when the Frost was White as snow, over the Moor, a Hunter was seen passing by with his Gunn. Over his shoulder he carried a case of Brown Hyde, within were a Stock of Staples, Graham wafers, etc., in case he should get lost during the Day. After wandering for many miles hoping to come across a Flock of Quail, he came to the Brink of the sea. By way of a change, he thought he would fish. They were attracted by the bright Nichol or Tinney appearance of the hook and many were caught. He caught one Sole of unusual size with large Scales on it.

From the sea he turned to the West and crosses a Smallfield and then up the Hill. After a time he became careless and lost his Way, having to Wade through bogs with dense clusters of Reeds growing here and there.

(Continued on page xxxi)



### DON'T LET THE COW KICK THE BUCKET

#### Use the new Kant Kick Hobble

From a hygienic as well as from an economic viewpoint, the kicking habit in dairy cattle is a detrimental feature in any bred.

My new hobble, the result of years of experiment, is guaranteed to cure the highest kicker in your stable.

Simplicity in construction and ease of application are the features of this hired man's friend.

When not in use in the stable it can be readily converted into a swing for the children.

Only a few remaining at the exceptionally low price of FIVE DOLLARS. Order now!

Accompanying each hobble, and free of all charge, will be sent a copy of that touching narrative "Why the Boy Left the Farm."

The E. W. Weston Co.,

Mfrs of Thingamijigs,

Room 112, O.A.C.

#### IN THE INCUBATOR ROOM

Jones, who has been having trouble with his lamp.

—"Rusty", "Will you come and look at my flame?"

Rusty Z—"Yes—Who-o-o-o—is she?"

#### AFTER THE GAME

Visiting hockeyist to freshman (whom he meets in hallway):—"Can you show me the way to the Baths?"

Freshman—"Why, I-I-really don't know—you see, I live at the end of Upper Hunt."

Which manual training student buys all his hardware at Penfolds? Go down Tomorrow and enquire.

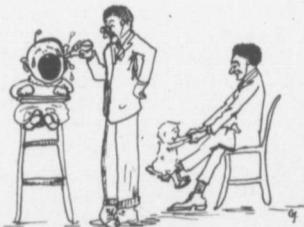
Who is the present member of Year '19 who, during his first two years at College

- 1 Never missed a lecture,
- 2 Only missed one breakfast,
- 3 Was absent from only two roll-calls,
- 4 With two exceptions, went to Church every Sunday morning.

—He deserves to have some letters either before or after his name, so we call him "Doc."

Aylesworth is sorry winter is over. He very much prefers the long evenings with the short "Day."

#### MAC'S (LO-DE) PARTY



THE SUPPER DANCE. -