

PAGES

MISSING

THE O. A. C. REVIEW

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

VOL. XXXI

NOVEMBER, 1918

No. 3

The Belgian Horse

BY WADE TOOLE, Professor of Animal Husbandry, O. A. C.

IN ORDER that the student in Animal Husbandry may become a reasonably good judge of live stock he must first, through actual contact with the various classes, types and breeds, become familiar with the desired characteristics of each. Reading is valuable and no student ever does too much of it, but practice is better and no one gets too much of this.

The Belgian horse, as all readers know, belongs to the draft group and so must conform to the type which we look for in draft horses intended for heavy work. Draft horses should be built for the draft business. Hence we must look for size and weight—massiveness. The heavier the horse is the better, provided he has quality with his great size and here is where the fine points of breeding come in. The real trick is to get that combination of size and quality desired. Overlarge horses are very often rough and ungainly while those of highest quality generally lack substance. However, the value of a heavy drafter, particularly of such a breed as the Belgian is placed very largely according to the size and massiveness of the animal. Weight, properly carried, means power and power is the draft horse's only reason for existence. Look for size in the Belgian.

The typical Belgian is a very massive animal. He is fairly short and extremely compact. Every good horse is short on top. Horsemen like to see close-coupled

drafters with heavy muscling apparent throughout. The Belgian of the best type is a short-topped, thick, closely coupled horse with heavy muscling apparent on all corners of his thick-set body. While weight and thickness count most, quality must not be overlooked. Of recent years Belgian breeders have been paying a little more attention to this point. Smooth, flat, clean bone is desired and plenty of it. The light-boned horse rarely carries sufficient weight and draft power. Very coarse joints are objectionable and the hair should be fine in quality.

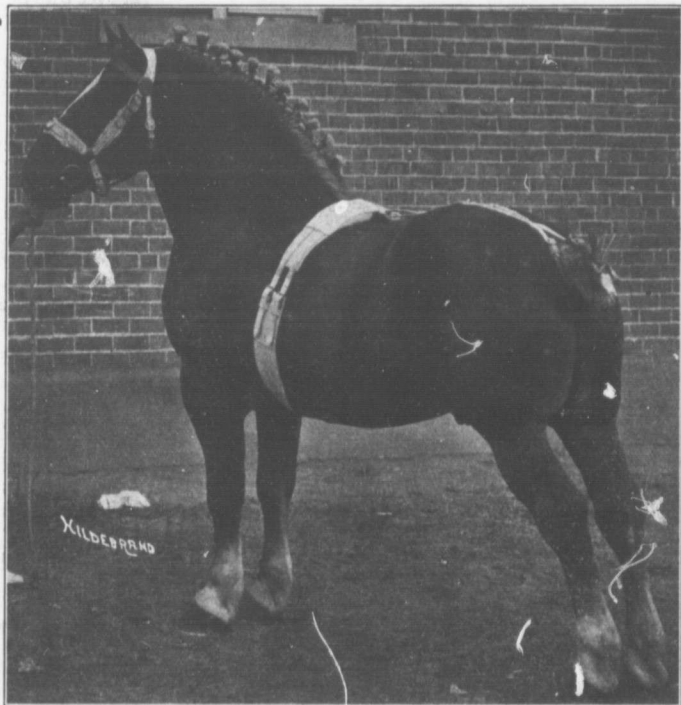
In action a bold, free movement is looked for in all draft horses. At the walk or trot the horse should go straight and true lifting his feet well off the ground, showing the sole of the foot while in the air, and placing it down squarely and without a stilty or stubbing movement. The knee should be well thrown forward and the hock neatly picked up and flexed well under the body. Action counts considerably in all draft breeds but the student will notice a certain lack of snap in that of many Belgians as compared with our best Clydesdales, for instance. The Belgian is slightly inclined to be sluggish in movement in keeping with his extremely massive body and his great weight. No other breed carries so much weight in as small a space.

Belgian horses have comparatively

short, clean-cut heads with fine, short ears. The neck is generally rather short and full, though symmetrical, and horses of no other breed show broader breasts and greater chest capacity. The Belgian will girth more than any other breed of the same size. They are very heavy hors-

and strongly muscled. The croup of the Belgian is often faulty. Although it is usually quite broad

and strongly muscled it is often short and rather steep, the tail being set quite low. This tends to make the horse appear plain behind and over heavy in front. Of course a long, level croup is desirable and the best individuals show this, but the breed has been faulted for short, steep rumps.



GRAND CHAMPION BELGIAN STALLION—CHICAGO INTERNATIONAL, 1917.

es in front, broad of breast and deep and full of chest. As is always the case with animals showing great girth they have exceedingly well-sprung ribs and should show no tendency to flatness in this particular point.

A great deal of the compact appear-

and strongly muscled it is often short and rather steep, the tail being set quite low. This tends to make the horse appear plain behind and over heavy in front. Of course a long, level croup is desirable and the best individuals show this, but the breed has been faulted for short, steep rumps.

The thighs are generally full and heavily muscled.

Where a breed like the Clydesdale is common as it is in Canada we get the habit of looking for quality, quality all the time. Flatness and flintiness of bone with a fine silky feather are indications of quality. The legs of the Belgian are free from long hair and are noticeably

should be looked for by the student judge. The flatness of bone common to the Clydesdale is not so emphasized in the Belgian, although clean, strong bone is desirable.

Some horsemen say, "No foot no horse." The foot of the Belgian is often a weakness. The draft horse should have a large foot with strong hoof heads



GRAND CHAMPION BELGIAN MARE—CHICAGO INTERNATIONAL, 1917.

short. The Belgian drafter is close to the ground, but his legs are often objectionable particularly to a Clydesdale breeder or fancier. The bone is not always as flat as we like to see it and sometimes shows a tendency to roundness. Occasionally a very massive horse is set up on legs just a trifle light to bear his great weight. Light bone is a fault which

and should not stand high at the heel. Some Belgians show a tendency toward a rather small hoof in circumference show no well-marked strength at the hoof heads and are high and narrow of heel. These are objections and the judge must look carefully to these points. Length and obliquity of pasterns is not so pro-

nounced in this breed as in the Clydesdale, for instance.

In keeping with the massive, low-set heavy build of the horse and with the rather upright pasterns and the faulty feet in action he often shows rather slow and sluggish. He does not pick himself up and stride away with the boldness and freeness one would like and yet the writer has seen some remarkably snappy, free movers at the Chicago International. However they are the exception, not the rule. The judge must not expect quite the quality of bone and action he is accustomed to seeing in the Clydesdale and yet where he finds it coupled with size and substance he has a winning Belgian.

Chestnut is the most popular color of the breed, although bays and roans and a mixture of bay and brown are common.

A good horse was never a bad color but gray is not desirable in a Belgian.

The best specimens of the breed stand from 15¼ to 17 hands high and stallions weigh well over the ton.

In judging Belgians look for size and substance first, with as much quality as possible; a short, clean-cut head; a short neck, a fairly oblique shoulder; a deep full chest; a heavily muscled arm and fore arm; a broad, strong knee, a short strong cannon, a fairly oblique, smooth pastern, a large, wide foot; a short top with well arched ribs and a heavily muscled back and loin; a wide croup, with as much length and levelness as possible; a strongly muscled thigh; a strong, deep clean hock; a fairly oblique hind pastern; a large hind foot; and straight, true, bold snappy action.



JUDGING PAVILION, O. A. C.

Reviewing the Food Situation

HENRY G. BELL, B. S. A.

AS a rule statistics are dry and uninteresting, but when statistics have to do with the success of a great undertaking in which the civilized world is now engaged—when they indicate the possibility of actual existence of no inconsiderable part of the race—they take on an added interest. In some sections there is developing a feeling of anxiety and restlessness with regard to the disposal of the present and prospective stock of food crops. Some people are inclined to doubt the necessity of urging greater crops and conservation of present supplies

to the point of depriving ourselves of some of the customary articles of diet. To one who takes time to collect the statistics available and balances production against consumption, plus necessary carry-over, the situation looks vastly different.

Since the beginning of the war, the Allied cause has attracted to its banners a population totalling nearly four hundred and twenty-five million, exclusive of India. Natural populations total over forty-eight million. Allowing 4 1-2 bushels of wheat per person per annum

this aggregate has a food requirement of approximately 2,102,000,000 bushels of wheat. Latest figures published by Allied Governments show a total production of approximately 2,144,000,000

bushels in both allied and neutral countries, this again exclusive of 380 million bushels recorded for India. Such figures would seem to show that the need is amply provided for, and a reserve stock of over 42 million bushels is probably available. But such an analysis of the situation loses sight of the great seed requirements for next year's wheat

crop. It is safe to figure that at least one-tenth of production is necessary for re-seeding. This estimate is altogether too high for those countries practicing intensive wheat production, but is probably low for the great average. Such a seed requirement in itself amounts to 214 million bushels. This wheat cannot be eaten, but must be reserved for coming crops. In face of these additional requirements the excess of 42 million bushels over probable consumption, immediately becomes a deficit of over 172 million bushels if



HENRY G. BELL

food requirements and re-seeding are to be maintained.

In face of such statistics which are accumulated from such sources as the International Institute of Agriculture, the Daily Trade Bulletin, and the Agricultural Gazette, there seems to be no likelihood of a surplus of wheat. Valuable and necessary work is being done to urge substitution of other cereals in our diet. More potatoes should be raised, more barley, oats and corn should be used. Other articles of diet must substitute wherever possible if best food conditions are to be maintained. But this is looking at the subject from our own standpoint alone. There is a wider viewpoint.

India with her production of 380 million bushels of wheat, has to feed over 315 million of a population. Nothing is said of the 400 million Chinese. Recent press notices call attention to the dire condition of the 200 million Russians who used to be such large exporters of wheat. These advices claim that 14% of Russian population—14% who were formerly the moneyed and business class are actually facing starvation. Humanity cannot disregard their plight. We must plan to get such aid to the starving millions as will tide them over their period of governmental chaos.

Canada's opportunity is still with us, with greatly diminished labor, she has done marvellous work in food production in the last two or three years. In view of the statistical prospects there is monumental work for her to do next year. Present indications are that the fall wheat seeding of the Dominion will not exceed if it equals that of last autumn. Weather conditions have been fairly favorable and conditions are good for the crop to be in good shape by winter. The problem of increasing wheat and other food products rests largely on

possible fall work and next spring's actions.

From our travels in various parts of the country, it would appear that Canadian farmers are wisely doing as much fall plowing as possible, so that next spring's seedbed may be prepared with a minimum of labor. "Farm less acres and farm them well," is an old adage. Part of the adage may have a considerable bearing on the success of next spring's crops. It sometimes seems trite to go over the list of points essential to increase of crop production. Nevertheless, the truth remains, that better tillage of the soil, more attention to drainage, liming where necessary, most careful application of manure if obtainable, supplementing it with a suitable supply of fertilizers properly applied, in addition to high grade seed properly sown, and control of plant diseases and insect pests, measures largely what is possible toward increasing food production. We shall not fill space with methods. Let it suffice to record a few actual gains that have been obtained.

With regard to drainage, U.S.D.A. Farmer's bulletin No. 524 says, "It is not uncommon for lands too wet for cultivation to produce, when drained, 60 to 70 bushels of corn and oats or from one bale to 1½ bales of cotton per acre. On a great deal of the land the increase in yield is often 25% to 100%. By increasing the yield and increasing the cost of cultivation, the profits and the value of the land are often doubled."

Actual tests of lime, where needed, show an increase of over 4 bushels per acre in wheat yields both on the unfertilized wheat and on the fertilized. Especially is this result evident on heavy clay soils which are naturally too compact for best circulation of air.

In the use of farm manure, indica-

tions are that manure spread out thinly and more frequent applications over a field, rather than one heavy application, gives best results. Ohio Experiment Station quotes the following figures: "Land treated with 4 tons of manure on wheat in a three year rotation with potatoes and clover, this year returned 45.58 bushels to the acre, or 10.92 bushels more per acre than wheat on unmanured land. An 8 ton per acre application of manure to the wheat in the same rotation returned an increase of 16.13 bushels per acre. This shows that 100% more manure per acre increased the gain in wheat only 48%." Supplementing the manure with acid phosphate which supplies the plantfood in which manure is notably weak, materially increases its value. Twenty years' tests at Ohio Experimental Station, show that by the addition of 320 pounds of acid phosphate to the acre where 8 tons of stall manure were applied, increased the yield of corn 15.7 bushels per acre, and increased wheat 6.75 bushels per acre, while reports from Purdue University, issued last February, show an increase of 12.8 bushels per acre from acid phosphate when added to manure and 3.8 bushels per acre increase of wheat. This acid phosphate is either scattered on the manure in the stalls or is applied broadcast or drilled in as the seedbed is being prepared.

Supplementing the plantfood of the farm obtainable in manure, by the addition of fertilizers has given exceedingly good results in several long-time tests. The summary of Ohio Experiment Station comprising tests of 20 years shows a gain of over 15 bushels of corn per acre, and 13 bushels of wheat from the judicious application of fertilizers. Indiana Station quotes a similar gain for corn and a gain of 8 bushels per acre of wheat, while Missouri Experiment

Station, in a recent report, claims that it is safe to figure on a minimum increase of not less than 10 bushels of wheat per acre as a very conservative estimate.

All of these tests have been made under careful experimental conditions, and have been confirmed by numerous actual farm tests. Results obtained this past summer in Ontario by scores of farmers whom we have visited, indicate fully as large increases in wheat as those cited.

The value of high quality seed for all farm crops, has been extensively and effectively urged throughout the Dominion. So general is the practice of using good seed that advice on this line seems superfluous. It may be of interest to know that the gains obtained by Canadian Experimental Stations have been duplicated at Ohio, Indiana, Illinois, and other leading American Experiment Stations.

The importance of insect and plant-disease control is enormous. Careful attention to clean tillage, which just now is comprised of careful fall plowing and turning under of all crop residues, to a very large extent assists in both the control of destructive plant diseases and insects. If for no other reasons than this control-service fall plowing pays enormous interest on operation costs.

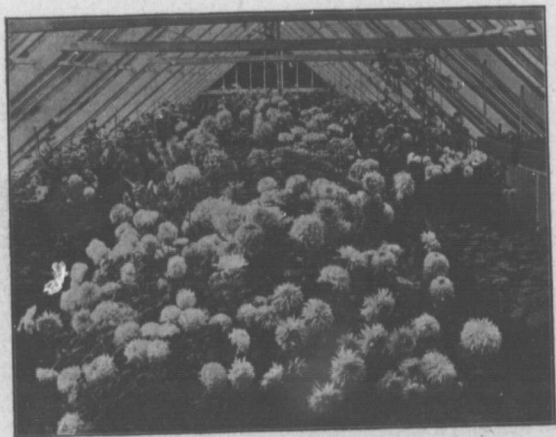
The foregoing illustrates the composite nature of most productive and most profitable farming. The sum total may seem an order of considerable magnitude to the man who is patiently endeavoring to increase his farm returns. Nevertheless, the suggestions recorded are borne out by experiences of most successful farmers. The one redeeming feature is that most of the work involved is not essentially different from what farmers are now doing, but simply requires added attention. Each means of increase re-

solves itself in the last analysis to a question of dollars and cents. If it pays, it is a good investment. If it is a good investment, every effort should be made to put it into practice.

One observation essentially worthy of careful thought is that while each of the suggestions above are widely accepted as steps to greater production, they are not wholly independent in their operation, but are largely inter-active. For instance, best results cannot be obtained from the use of high grade seed, unless the land is sufficiently drained, thoroughly tilled, and plantfood is abundant. Fertilizers

will not take the place of good seed, good tillage, or good drainage, but will return largest profits when other essential conditions are at their best.

There is great need. Present war conditions are exceedingly encouraging, but we must not lose sight of the imperative necessity of an abundance of food if our armies are to have proper backing. Moreover we cannot rest heedless of the perilous condition in which other nations who have chosen unwisely, or have had the enemy's choice forced upon them, find themselves. Canadian farmers have an opportunity for world-wide patriotic service.



CHRYSANTHEMUMS AT O. A. C.

The Crucible of War

BY SUBALTERN

JIM, once the flabby effeminate young shop-boy, arrives in the firing-line, green at the game, full of his own importance and curiosity, but awed not at all. He starts by racing off to see the damage done by each big shell that bursts in his vicinity. His older and more seasoned comrades watch him with amusement but make no attempt to interfere because they remember their own actions on their first trip; and the idea that war is a lark and lots of fun will one day be exploded for ever. When that day comes that particular boy will settle down to the "game of killing" with a stiffer lip and a steadier nerve. Two days later this happens. An eight inch shell bursts in one of the gun pits and disturbs the equilibrium of that particular gun and its crew once for all.

Jim, as usual, arrives on the spot to see the "sights," but this time he sees more than he expects; the sight of torn and bleeding humanity which confronts him makes him feel sick and giddy. The sight is too much for him. Shamefaced he crawls back to his post; sheepishly he peers around and a huge sigh escapes him. All his comrades are too busy cleaning up the mess to notice him or the way his first taste of war—as waged by the Hun—has affected him. Later when he has recovered himself slightly, he hears a

word of encouragement from one of the old-timers which gives him an extraordinary feeling of comfort and self-confidence.

Dimly in a far-off way he understands then that the men who winked behind his back when he ran "to look at the sights" would die sooner than be caught smiling at his "initiation." Respect for his comrades grows almost into hero-worship because of the deep understanding and friendship which they bear towards him, thus the first thread is woven of that indescribable tie which binds the men at the front so closely. It is this indescribable tie and close fellowship which acts as an "Invisible Wall" separating the Hun from his much-vaunted world domination. The men concerned are hardly conscious of it yet, nevertheless, it is there.

What is this tie? It is the mighty comradeship of discomfort endured together, of unaccustomed filth and vermin, of pain agony and sights beyond description—always endured together, cheerfully and uncomplainingly. It is the feeling that there will always be a helping hand no matter how great the danger or sacrifice. It is the memory of thousands of small wooden crosses on acres and acres of land which binds the men together and makes them hurl defiance at the Hun!

Making Milk Safe

Time and Temperature are the most Essential Factors in Pasteurization

ELLIOTT H. PARFITT, B. S. A.

THERE exists, even to-day, much prejudice against pasteurization of milk for human consumption. Investigators, who work only under laboratory conditions, find and insist that pernicious types of bacteria will develop so quickly in pasteurized milk that milk so treated is unwholesome. Again others insisted that injurious chemical changes occurred in milk during pasteurization. But investigations made under commercial conditions by capable bacteriologists have disproved all the important allegations against pasturized milk. Claims of chemical changes have been long re-

jected, but it is only recently that it has been shown that pasteurized milk differs but little from raw milk, either in types of bacteria that remain in it or types of bacteria that develop in it.

"High Grade of Raw Milk" used to be the slogan of those opposed to pasteurization. "Give us," said these men, "a grade of milk that will not need to be pasteurized. This, it has been proved, must be worked by gradual development and meanwhile only the medium grade of milk is obtainable in large quantities. Such milk does not come from tubercular tested cattle, and

is not always low in bacterial content.

These problems of the practical man—to make the best of things as they are and gradually do away with un-

reasonable prejudice—have made the pasteurization of milk, cream butter and creamery bi-products a prevalent practice. Cities generally encourage pasteurization, many having laws compelling pasteurization of certain grades of milk. Many sanitarians are now going so far as to advocate pasteurization of certified milk. It has been found that herds producing high grade special milks are not always free

from tuberculosis despite inspection by veterinarians. There comes now the fact that even the best of raw milk may be improved by pasteurization.

Nowadays the problem is not "Shall milk be pasteurized?" but "How shall it be pasteurized?" The old way of pasteurization is the "flash" method. The name implies that the process is instantaneous, but it is not, as the time required is at least one half minute, more often one minute, and some times more. A better name for this process is the "continuous," implying that the milk never ceases to flow through the



ELLIOTT H. PARFITT, B. S. A.

pasteurizer or heating cylinder until the feed tank runs dry. The temperature to which the milk is heated in this process ranges from 160-135 degrees Fahrenheit. The lower temperatures—160-165 degrees—are used for market milk and the higher for cream for butter making and creamery bi-products.

Why Some Bacteria Survive

The efficiency of pasteurization—that is the number of bacteria killed—depends upon several factors. First, the degree of heat, naturally the higher the temperature the greater the mortality of the organisms. Second, the length of time exposed to heat of a certain degree, as some bacteria may live through short periods of exposure to heat of a certain degree, whereas the lengthening of the period of exposure would kill them. Third, the number and kind of bacteria have an influence on the efficiency of pasteurization. Some bacteria succumb to heat much more rapidly than others. Bacteria in the growing stage are killed easier than those in the spore stage. Certain bacteria, such as the hay bacillus, may survive because their spores, which constitute the resting stage, are not at all sensitive to such degrees of heat. Two lots of milk pasteurized at the same time, under the same conditions, may exhibit widely varying bacterial contents. In one there may have been bacteria of low-heat-resisting power and only a few spores; in the other there may have been bacteria of greater heat endurance along with many spores.

Pasteurization is likely to be much more effective when applied to clean milk of high bacterial content—that is, milk produced clean, but held at a temperature favorable for bacterial growth—than dirty milk which has a low bacterial content. The reason

for this being that the bacteria in the first case are in the vegetative state and are readily killed, while in the second case they are in the spore or resting stage.

How near does the flash pasteurizer come to satisfying the requirements for efficient pasteurization? The cream line is easily lost to the vision whereupon a cry arises from the consumer who has been taught to judge the richness of milk by visual impressions. Cream lines and pasteurization efficiency are incompatible, where one is secured the other is lost. This is why the flash system of pasteurizing milk for city trade is becoming obsolete.

165 degrees Fahrenheit is the temperature limit under the flash system at which a cream line can be obtained. In a small flash pasteurizer the milk is exposed to heat for a minimum of 60 seconds, which is not sufficient to properly pasteurize milk.

The Holding System

The milk distributor, though perhaps not acquainted with the thermal death points of the bacteria in the milk which he handles, knows the heavy loss from milk when it is improperly pasteurized. Because of such results secured by carelessness many milkmen have abandoned the flash or continuous method of pasteurization, and it now stands reposed by scientific and practical men.

It was in order to escape the shortcomings of the flash system that the modern "holding" method came into vogue. In this method the milk is held at a definite temperature for a definite period of time. To hold milk at a desired temperature vats containing heating coils may be employed, the vat being emptied at the end of the period of pasteurization. In other instance the milk passes through a continuous pasteurizer into vats, which

automatically discharge their contents at the end of the holding period. Automatic thermo regulators control the temperature, and self-recording charts may be used to make record of the degree of heat.

The health department of New York State and New York City specify that no milk shall be considered pasteurized unless it has been subject to a temperature averaging 145 degrees Fahrenheit for not less than 30 minutes. Chicago requirements are 140 degrees Fahrenheit for 20 minutes exposure. It is agreed that milk so pasteurized is free from tuberculosis, typhoid, diphtheria and dysentery bacilli, or other disease organisms in a state capable of conveying infection.

The distributor was well pleased with the cream line which the holding method gave when a temperature of 140 degrees Fahrenheit for 20 minutes was employed. Unfortunately for their peace of mind, however, the authorities who established the temperature and time limits have forgotten why the old flash method of pasteurization was displaced in scientific favor by the holding method.

No one questions that milk heated to a sufficiently high temperature in the flash pasteurizer will be efficiently pasteurized, but it will not have the same cream line. It has now been thought necessary to allow a margin of safety for pasteurizing of milk by the holding system under commercial conditions. This explains why New York

demands milk to be pasteurized at 145 degrees Fahrenheit for 30 minutes.

In talking this matter over with a milk dealer in New York, he informed me that it is impossible to hold milk at this temperature for that time, and still maintain the same commercial value because of the destruction of the cream line. Since it is not likely that lower temperatures and time limits will be established, the public must learn to judge milk by other standards than the cream line.

A small percentage of milk sold is pasteurized in the bottle. This method, by many, is considered ideal, but the cost of operation is greater. In other systems the milk may be contaminated after pasteurization during the cooling, bottling and capping process. The amount of contamination will depend upon the cleanliness of the apparatus.

Pasteurizing in the bottle is generally done by immersing the filled and capped bottles in hot water or sprinkling hot water over them. After being heated the bottle is cooled by immersion in cold water or sprinkling with cold water.

Government investigators have tried out, experimentally, bottling hot pasteurized milk. It is thought to eliminate the necessity of a milk cooler or placing bottles in cold water, the cooling process being carried out by a cold blast. It is claimed that no bacterial increase will occur during cooling in properly pasteurized milk.



Potato Improvement in Ontario

BY CECIL TICE, '19

MANY phases of agriculture have been discussed at conferences and through the public press during the past four years, with the idea of increasing production. The potato industry is one which is now undoubtedly receiving more attention.

Those of us who are acquainted with the potato situation in Ontario have noticed that the yield has greatly decreased during the past two or three years. Statistics for the last ten years—1908-1917 inclusive—published at Ottawa, show that higher yields are obtained along the Atlantic and Pacific sea borders. British Columbia leads with an average of 206.5 bushels per acre; New Brunswick second, with an average of 192.25 bushels per acre, closely followed by the other Maritime Provinces. As we get farther inland the yield decreases considerably, Alberta and Saskatchewan yielding 152.25 and 161 bushels per acre, respectively, and Ontario last of all with a yield of only 123.25 bushels per acre.

From investigations which have been made quite recently, to ascertain the cause of this low yield in Ontario, many explanations have been forwarded, of which the most outstanding is the existence of so-called "physiological diseases." Under this head are included three diseases, namely Leaf Roll, Mosaic and Curly Dwarf. Although the causes of these diseases are so far unknown, yet it is known that they reduce the yield materially, this being particularly noticeable in the case of Leaf Roll, where the yield is reduced fully two-thirds. As these dis-

eases do not affect the tubers they can only be diagnosed while the crop is growing and in the green condition. Therefore it is necessary to make a field inspection.

Investigations made in a few potato fields last year showed that fully 60% of the crop was affected with Leaf Roll alone, and this year some fields ran as high as 90% Leaf Roll, together with a large amount of Mosaic and some fungus diseases.

From experiments which have been carried on at Guelph for a number of years and also from results obtained by growing seed from three different sources, namely, New Brunswick, Old Ontario and Northern Ontario, in different parts of the Province, it has been proven that the immature seed of Northern Ontario will give a higher yield per acre than even our own home-grown seed or New Brunswick seed.

Although Leaf Roll is found to some extent in Northern Ontario, there are certain districts where little or no disease is to be found. For this reason the government has deemed it advisable to introduce seed potatoes yearly from a disease-free area in Northern Ontario, with a view to increasing the yield of potatoes in Old Ontario.

The seed is inspected three times a year, once when the plants are in the green condition in the field, and twice after the tubers have been dug. If at the end of the third inspection the seed is still found free of disease a certificate is issued to the grower and a government tag given him for every bag of potatoes he has for sale. In this

way buyers in Old Ontario can be sure of receiving government inspected seed. These potatoes will be shipped to districts in Old Ontario where the seed has been found to be very much affected with Leaf Roll.

From present indications it would seem advisable for a farmer here to obtain new seed every year for best results, as experiments have proven that disease-free seed brought into Old Ontario will accumulate a large percentage of disease each year it is grown here.

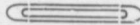
Last summer the Dominion Department of Agriculture made a thorough survey of the Province in order to ascertain the exact prevalence of the diseases. For this purpose inspectors were appointed and allotted certain counties to make a complete record of the diseases present in all the fields inspected by them.

The following gives a brief outline of the system adopted for a complete inspection. One week was spent in each county examining fields in as many districts as possible, more especially potato districts where Old Ontario seed had been grown for a number of years. The first thing to do on arriving at a field to be inspected is to find out the variety and source of seed. The inspector then walks down the field and across it, making sure it is

all planted to one variety. 50 plants are then picked out in four different sections of the field at equal distances from each other. Each time a diseased plant is found it is carefully examined and the disease noted by marking a cross in the column provided for it opposite the respective disease named on the inspection pad. After four sections have been examined one is able to determine the percentage of each disease present quite readily. Final notes are made on the general condition of the crop and any other remarks which may seem necessary.

From the results obtained it was found that Leaf Roll was present to some extent in every county and in nearly every field in the county. Possibly some varieties were more susceptible to the disease than others. In one section visited where a "Green Mountain Association" was in operation it was especially obvious that the potato fields in that district were almost free of disease. Possibly this was due to the careful selection of seed each year.

Farmers as a whole were very enthusiastic in regard to the new system which is being adopted for the improvement of the potato industry and most of them expressed their desire to obtain northern grown seed if the price was reasonable.



The Practical Features of the Course of Study at the Macdonald Consolidated School, Guelph

BY J. A. MACDONALD

"GIVE us a write-up for the 'Review' on the practical side of the Macdonald Consolidated School," was the terse way in which the editor put the matter before the writer, in a brief interview a few days ago.

The editor, being a practical man, does not believe in long introductions. He aims at coming to the point at once, and no doubt expects his contributors to do likewise.

Today, the practical in education is being emphasized as never before. If, therefore, the Macdonald Consolidated School, Guelph, cannot justify its existence on the ground of its practical effi-

ciency, it had better not have been. This school was built by Sir Wm. Macdonald in the summer and fall of 1904. The purpose of the founder was to illustrate what might be done in the way of establishing a better rural graded school—one that would give the rural boy and girl an education as efficient as that available to the boy and girl of the town or city.

To that end the course of study was enriched and broadened by the introduction of the so-called practical studies—Nature Study, School Gardening, Agriculture, Manual Training and Domestic Science.

The most modern equipment was installed for the carrying on of this work. It is not part of my duty to enter into the history of the school further than to say that the fact that it was not located in the centre of the schools consolidated, made the cost of transportation excessive. Mainly for this reason, at the end of the three years of the experiment, three of the five schools withdrew to their



J. A. MACDONALD

individual sections, and since January 1, 1908, the school has been conducted as a two-school consolidation.

It is but fair to state in this connection, that "when the vote to decide the fate of the school was taken, every ratepayer, with one exception, who had children attending the school, voted for its continuance, at the additional expense, but an adverse vote was given

by those ratepayers who had no children attending." (Inspector Leake).

Can the existence of the school, then, be justified on the grounds of its practical efficiency? In attempting to answer this question, let us consider some factors that must be taken into account, in measuring the efficiency of any school.

Consider first its *Drawing Power*, that is, the proportion of the pupils of school age in the community who are enrolled on the registers of the school. The returns for 1917 are before me, which can be taken as fairly typical. The total number of children in the two sections consolidated, 6 1-2 and 7, Guelph Township, between the ages of 5 and 16, were 179, and the total school enrolment for the year, 149.

As many do not start to school until six or seven years of age, and the majority pass the Entrance at 14 or 15 years of age—this means that practically the whole population of school age was enrolled. Further, the number of non-resident pupils attracted to the school has always been large, larger in fact than that of No. 6 1-2. Two years ago a fee of 50c per month was imposed on each non-resident, but the extra expense was willingly met, and car fare as well, in order to get what the parents of these children evidently regarded as superior school advantages.

Instead of the imposition of a fee causing the children to go back to their own school, the curious fact is that the number of non-residents has increased since this regulation was made. The school holds the pupils in all but very exceptional cases, to the end of Entrance work, and most of these take at least a year or two in the Collegiate or Commercial class.

The *Type of Education* is a se-

cond standard by which a school's efficiency may be measured. The Consolidated School, Guelph, in accord with the purpose of its founder, has always stressed the practical subjects, viz., School Gardening, Agriculture, Manual Training and Domestic Science — and at the same time has sought to vitalize the formal or cultural subjects, such as Literature, Grammar and Arithmetic, by treating them in such a way as to eliminate the useless, and emphasize what naturally grows out of the child's own experience, and the mastery of which would fit him for life duties.

What is meant by vitalizing the old subjects on the course of study can best be explained by taking a concrete example. On page 214 of the Public School Arithmetic this problem occurs: "Pure milk is worth 7c a quart. If two quarts of water be mixed with every three gallons of milk, what will a quart of the mixture be worth?"

As no honest milk vendor or sensible house-keeper ever finds it necessary to put water into milk, we must put this down as a very useless question, because it does not, or at least should not, grow out of the actual experience of any pupil.

Suppose, on the other hand, the 4th class in Agriculture have had a series of lessons on the Care and Composition of Milk, and have found for themselves by the Babcock test, the percentage of butter-fat in a number of samples of milk, a problem like the following would be a very real one for them:

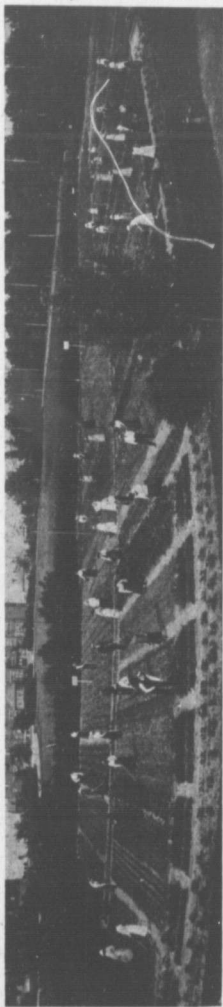
A sent 480 lbs. milk, testing 3.5%, to a factory.

B sent 600 lbs. milk, testing 3.4%, to a factory.

C sent 720 lbs. milk, testing 3.6%, to a factory.

Out of this milk 170 lbs. cheese, worth 18c a lb., was made. Find (a)

the number of lbs. of milk required to make a lb. of cheese; (b) each man's share of money received for cheese, if



"GARDENS AT MACDONALD CONSOLIDATED SCHOOL, GUELPH—SUMMER SCHOOL TEACHERS RECEIVING PRACTICAL INSTRUCTION"

paid (1) according to the milk sent; (2) according to the butter-fat test.

The school garden, again, is the best kind of out-door text-book, from which concrete problems are assigned to the pupils in Arithmetic, Composition and Drawing, as well as in Nature Study, Manual Training and Domestic Science. The school has three *live* Clubs, "Poultry Club," "Bluebird Club" and the "Literary Club"—the activities arising out of each give the pupils training of a very practical kind.

I am not unaware of the fact that the phases of practical work touched on above, are carried out in many ungraded rural schools—the point aimed at here is, that for obvious reasons, a Consolidated School offers special advantages for such work.

The *Hold a School Has Upon the Community it Serves*, is a third means by which its efficiency may be measured. Any person who has any doubts on this score can soon have them removed by consulting any of the patrons of the school. It goes without saying that they are proud of their school. The loyalty with which they support its Christmas Entertainments, and June picnics has become proverbial.

The Parents' and Teachers' Association is a *live* organization which has been in existence for many years, and meets monthly. It brings the home and school into a heart to heart relationship, and helps both parent and teacher to perform their duties to the child. A beginning in Dental and Medical Inspection in the school has been made. The donation of a Victor Lantern is another of the many good things for which the school is indebted to this organization.

And lastly, a test of a school's efficiency is the Inspector's Annual Reports to the Trustee Board. These invariably commend the practical nature of the work done.

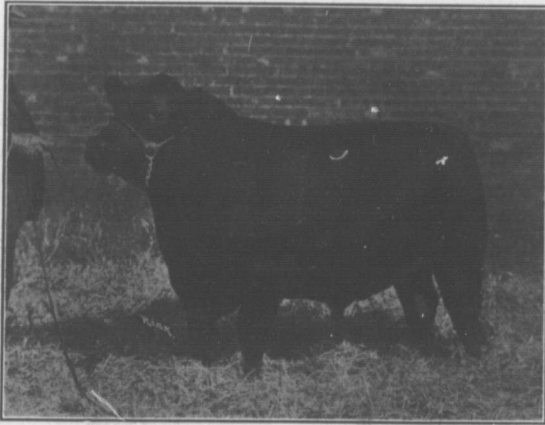
The Aberdeen-Angus in Wartime America

By F. H. HIGGINS, Assistant Secretary American Aberdeen-Angus Breeders' Association.

LIKE the kilted fighting men who spring from the same heather-covered fields of Scotland, the Aberdeen-Angus have advanced farthest where the competition has been keenest. The history of the "Doddie" breed in America is crowded into the last forty years. The first pure-bred

in America until the later dates mentioned.

The Aberdeen-Angus is the beef breed supreme, and breeders in this country make no claim to dual, or dairy, qualities for their favorites, in spite of the fact that there are many excellent milkers to be found among



A GRAND CHAMPION ABERDEEN-ANGUS

herd in the United States was imported to Illinois by Findlay & Anderson, in 1878, though Prof. Brown, Director of the Experimental Farm at Guelph, brought over a bull and two heifers two years earlier. The cow Duchess was imported to the United States as early as 1850, and in 1873, George Grant, of Victoria, Kansas, imported three bulls for use on the range herds of the West; but the breeding of pure-bred Aberdeen-Angus was not started

them. In Australia a milking strain of high class has been developed. Even as late as 1892 the champion at the show of the British Dairy Farmers' Association, held in London, was an Aberdeen-Angus, and Chicago was only a few years ago supplied with milk from an Aberdeen-Angus herd whose milk tested from 4.5 to 5% for the season. Prof. Brown, of Ontario Station, in specific gravity tests, found the Aberdeen-Angus milk highest.

American breeders have recognized the outstanding facts that there are four strictly dairy breeds for strictly dairy purposes with a limited field for "jack-of-all-trades" cattle in this day of specialization, and further that any development towards dairying must be made at the expense of their supremacy in beef making. So why tear down generations of beef building to compete with special breeds developed for generations for dairy only?

The real development of the breed in America has come in the last half of these forty years in their new homes, or to be more exact, since the International Live Stock Exposition at Chi-

ago began in 1900 and brought annual inter-breed competition on a practical and comprehensive basis.

There, you have the table on which the Aberdeen-Angus is willing to rest its case before the farmers and feeders of America. At these shows, the greatest fat cattle shows in the world, the agricultural colleges and practical breeders and feeders have met to bring out the best that science and practice can evolve. The carcass classes are especially noteworthy, for here the practical butcher judges place the animals on the foot and then on the block after slaughter. The camouflage of hide is stripped off to show dressing percentage, waste fat, coarse meat,

Year	Single-Steer	Steer Herd	Carload	Carcass
1900	Aberdeen-Angus	*	Aberdeen-Angus	Shorthorn
1901	Hereford	*	Hereford	Aberdeen-Angus
1902	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1903	Hereford-Angus	Hereford	Hereford	Aberdeen-Angus
1904	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1905	Aberdeen-Angus	Ab.-Angus-S'horn-Gallow.	Aberdeen-Angus	Aberdeen-Angus
1906	Hereford	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1907	Shorthorn	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1908	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1909	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1910	Aberdeen-Angus	Aberdeen-Angus	Shorthorn	Aberdeen-Angus
1911	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1912	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1913	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1916	Hereford - Shorthorn	Aberdeen-Angus	Aberdeen-Angus	Aberdeen-Angus
1917	Shorthorn	Shorthorn	Aberdeen-Angus	Aberdeen-Angus

ago began in 1900 and brought annual inter-breed competition on a practical and comprehensive basis. Sixteen shows have been held since then with four inter-breed competitions at each show that have given the Aberdeen-Angus such a commanding lead in grand championships that the lesson is conclusive to the open-minded cattle breeder and feeder. Here is a table of these winnings over all breeds, grades and crosses in these four classes. Foot-and-mouth quarantines prevented shows in 1914 and 1915, and the class for "steer herds" was not inaugurated

coarse bone and the marbling of the fat and lean.

Besides this International show placing of the various breeds as to their comparative values as beef makers, we have such an authority as John Gosling, Kansas City butcher and lecturer of butchering and meat cuts at the annual winter short courses at Ontario and Iowa agricultural colleges, making the following statement:

The Slaughter Test Tells

Reasonable people must and will concede that Angus cattle

have more flesh, or inner muscle, on an average, than any other beef breed. I've been acquainted with these facts since the early sixties. When on a visit to the Scottish border during that time, in Newcastle-upon-Tyne market, I found these Doddies, or Kyloes, by far the favorites among fleshers (as buchers are termed there).

Since the earliest American Fat Stock Shows—the first just forty years ago—I have watched with both eyes and felt with my hands for what give certain results. The thing is plain to all intelligent cattle growers. Why? It is not the size of the eye of beef in loin and rib alone, but flesh in abundance permeates the whole carcass, so the plates and brisket cuts are treated with equal regard by the respective purchasers.

It is so easy to make general statements about breeds, statements that the general public may accept without investigation, but which the breeder and feeder of experience demands facts to back up, that I hope the reader will pardon too many statistics and quotations in this short article. Yet in the United States Department of Agriculture Farmers' Bulletin 612, "Breeds of Beef Cattle," is an unprejudiced description of the breed as compared with the other two beef breeds. Here are some extracts from the chapter on Aberdeen-Angus:

Aberdeen-Angus

The breed is extremely valuable for grading up native cattle. This breed is very early maturing, and has a tendency to fatten well at any age; hence, their popularity for producing baby beef. In general form they are different from

the Shorthorn and Hereford. The body is more cylindrical in shape, and they are smoother throughout than either of the breeds named. The Angus responds quickly to good treatment, and because of their readiness to fatten, early maturity, exceptional vigor, high quality, general smoothness and uniformity, and the high percentage of valuable meat produced, it is the most popular of all beef breeds among cattle feeders. They usually dress out a higher percentage of marketable meat than any other breed, and their merit has been shown by repeated winnings they have made in the show ring and on the block. They stand either heat or cold, and are popular in the South as well as in the corn belt. Because of their reputation for finishing smoothly and filling out well they are very popular in the corn belt and neighboring states where much feeding is done.

The quality of the animal is unsurpassed, as shown by the soft, pliable, mellow skin, and fine hair. The meat is fine-grained and of the highest quality. The constitution and vigor of this breed as indicated by well-developed chest and good heart girth are worthy of mention. For grading up native stock and for crossing, they hold an enviable record.

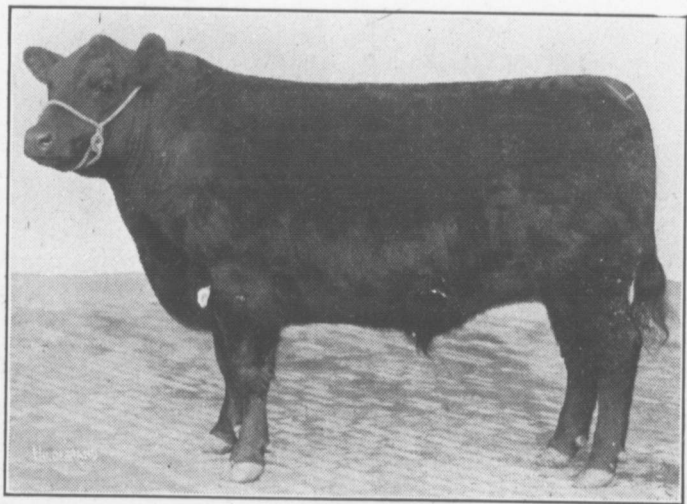
War conditions certainly give a breed the acid test for its ability to prove its claims to a place in the farming scheme. Let me merely submit a list of Aberdeen-Angus "over-all" winnings in the past year to show that the "Doddie" has been making good under all conditions of feed and climate on this side of the Atlantic. Beginning with November, 1917, and including

only the first week of October, 1918, the Aberdeen-Angus have won grand championship honors over all breeds over a great area that has for its outposts such far-flung points as Edmonton, Alberta; Ft Worth, Texas; Syracuse, New York and Honolulu, Hawaii.

Taking the list according to their order, Calgary, Alberta, and the Chicago International lead off with calf club and single steer grand champion-

Aberdeen-Angus—the greatest sweep of the carlot classes ever made at the International by even the "Doddies."

Coming into 1918, both the Ft. Worth Fat Stock Show and the Brandon Winter Fair made Aberdeen-Angus steers grand champions, and they further agreed by naming the same kind for their Boys' and Girls' Calf Club champions. A little later, the Edmonton Spring Show duplicated this double



A CANADIAN CHAMPION AT CHICAGO

ships at the Canadian show and carcass and carlot grand championships at the world's greatest steer show. Not only did the fat steer carlot grand championship go to the "Blackskins," but the reserve grand championship and the reserve to the reserve grand championship—the three greatest carloads of the year—were all Aberdeen-Angus. Further, the feeder carlot grand championship and the short-fed carlot grand championship were also

Black Victory, making the Calf Feeding victory even stronger by placing three calves sired by Angus bulls at the top of the greatest class ever seen in Canada.

The first Territorial Fair of Hawaii, gave the Aberdeen-Angus another double victory out in the middle of the Pacific when "Best beef breed" and carcass championships both went to Angus in spite of the comparative strength of the Whitefaces on the is-

lands. Though few of the state fairs have interbreed competition any more, the "over-all" victories of the Angus around the circuit the past summer and fall is a source of surprise and gratification to backers of the "Doddies." Beginning at the Illinois Centennial State fair, the black steers celebrated a century of statehood fittingly by winning both grade steer herd and pure-bred steer herd grand championships as well as single steer grand championship.

The following week, at Des Moines, Iowa, a grade Angus calf stood at the top of a Boys' and Girls' Calf class of 107, these being the pick of over 700 entered in the Iowa Boys' and Girls' Calf Club contest. As Iowa is the leading pure-bred live stock state of the entire 48, this victory is auspicious. Nebraska State and Kansas Free State fairs at Lincoln and Topeka brought out another Aberdeen-Angus grand champion steer. The Oklahoma State fair brought out still another Angus single steer grand championship.

In the midst of these southwestern fair dates, the East electrified the "Doddie" world by finding an Aberdeen-Angus grand champion at the New York State fair, this being the first year for such competition at Syracuse. This steer was shown by the Pennsylvania State College, which also showed steers of both the other breeds.

Also on dates contemporaneous with some of the shows already mentioned, the South demonstrated that the Aberdeen-Angus was more than holding its

own by winnings over all breeds at the Kentucky and Tennessee State fairs, best six head of steers at Louisville and "best group of pure-bred live stock of any kind or breed" at Nashville going to Aberdeen-Angus. The latter victory was a singular one, as not only all breeds of beef cattle, but dairy herds, hogs, sheep, horses, or combinations of these were eligible. A similar class at the Chattanooga district fair gave another victory to the Aberdeen-Angus.

In the Northwestern States, two more victories must be chalked up to the Aberdeen-Angus as this is written, though the number in these states are so small that to the average native Aberdeen-Angus are a curiosity. Both the Oregon and Washington State Fairs gave Aberdeen-Angus grand champions.

Just a word about the wonderful work of the colleges and experiment stations in helping to demonstrate to the world the supremacy of the Aberdeen-Angus for beef production. This era of college demonstration opened with the International show, and has done more than anything else to break down prejudice and show the live stock men the colleges are sending out to lead the new agriculture the qualities of a breed handicapped by numbers and age. In new sections the colleges have been pioneers. The University of California, Washington State College and Idaho State University are examples of the work such institutions can do where a breed is unknown.



Poultry Exhibit at Winter Fair

By J. C. McBEATH, B. S. A.

THE Ontario Provincial Winter Fair as held annually at Guelph, is one of the best shows held in America, and the most unique department of the fair is that devoted to poultry. The question may be asked and rightly so, as to why this department should bear such a reputation. This is easily answered by saying that the poultry show is complete in that it consists of live and dressed poultry, demonstrations in handling and care of eggs as well as egg-laying contest.

The poultry show at the Winter Fair is one of the largest held in America, if number of entries is any indication. Practically every breed of poultry known to English speaking America is exhibited here, and this in itself authorizes such a statement. Even the fancy breeds are represented by such extreme novelties as Silkies and Sultans.

It is not widely known that the dressed poultry exhibit is the largest and best show of its kind held in Canada or United States, and furthermore it is the only show where such an exhibit has been held for the last twenty years in succession. The benefits derived by the visiting public cannot be estimated in dollars and cents because they are sure to embrace new ideas, as demonstrated by putting fowl up in a more attractive and pleasing manner for market.

That Canada enjoys an enviable reputation for market poultry is indicated by the fact that on several occasions experts have come from all parts of the United States in order to be-

come more familiar with our methods and ways of producing and handling this class of poultry. We realize that the quantity of poultry marketed in the United States is many times greater than in this country, but the very fact that these men coming all the way to Guelph to get information on "quality" is an indication as to "who's who" in the dressed poultry business. All those who are interested in this branch of the business should investigate and become more familiar with the advantages of doing things in the proper way.

Associated with the dressed carcasses display, is the egg exhibit, and this alone is worth noticing as many people have more to do with eggs in their daily diet. Everyone will admit that a neat attractively put up carton of unsoiled eggs of uniform color and size is more pleasing to the eye than a basket containing a large and small, clean and dirty, white and brown, assortment. Anything that will add to the appearance of an article is sure to catch the eye of the consuming public. They are willing to pay a good price for something that pleases the eye. The big trouble with the general public is that they do not know how a thing should appear when it is properly prepared for market. A visit to the dressed poultry exhibit will educate and convince the reader.

Those who are directly concerned in the production of poultry products should take special note of the egg laying contest. This contest does not aim to demonstrate the superiority of

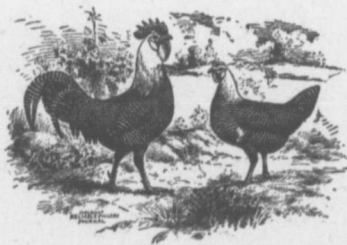
any one breed of chickens, but is more to awaken interest among breeders and get them together for mutual benefit through poultry discussion. Another purpose that may be credited to this competition is that it shows how such contests should be carried on. The poultry exhibited in most instances are exhibition strains. When the birds of the laying contest are compared with the birds on show, some remarkable differences are noted. This is one excellent and efficient method of teaching the difference between the exhibition and bred-to-lay strains of the same breed. Last year the winning pen laid 75 per cent. of the possible number, and when change of environment is considered this is a wonderful record.

A glance at the prize list will show that quite a percentage of prize money is allotted to fancy breeds, such as pigeons, bantams, pheasants and other kind of fowl. On the surface this may not seem just, but when the proposition is thoroughly considered, several good reasons are found for such arrangement. It is obvious that at such an exhibition we have a large attendance with varied tastes. A man may be interested in sheep and not in poultry and vice-versa. They all have their fancies and they must be catered to.

The average visitor cannot see anything in an exhibition barred-rock chicken, because it is nothing but a mass of spots, but show him some Houdans with their top-knots; some Silkies with their fancy feathers and dark skin; or the Pouter or Fan-tail pigeon, and he is at once attracted. They appeal to him; and also to the children, who in future years may be active poultry exhibitors.

Another reason for including fancy stock in the prize list is to show what progress the fancier has made in improving the breeds, particularly in connection with the bantams. It is evident to all that a wonderful amount of work of improvement has been done to produce the breeds and varieties represented at the Winter Fair. Due to the breeding of the fancy poultry the world has gained many important laws regarding the application of genetics to this science. Consequently people should not be hypercritical about the large display of pet stock.

Judging by the number of returned soldiers who are entering this field it is likely to become very popular with them. Practically speaking, the initial outlay is not very great, the work is light, and the returns are prompt, and what more could a person desire.



QUERY

FLORICULTURE

QUESTION:

I have some very fine single and double flowering Petunias in my garden that have not been touched badly by frost. Can I dig up the plants and keep them over winter? Can plants be raised from slips from these plants?

T. J. M.

ANSWER:

By cutting off the top growth of the plants to within six or eight inches of the main stem, and digging and potting the plant carefully in good soil, nice plants can be had that will flower in the window during February or March. By making slips or cutting about two or three inches in length of the tops of the young growth towards spring, and starting them in clean gritty sand, young plants may be obtained for planting out in the borders next summer.

W. H.

QUESTION:

Will Pansies keep in the ground out of doors during winter and flower next season?

ANSWER:

By protecting the plants by placing some flower stems, old raspberry canes, or light brushwood over the plants early in November, and then putting a light covering of leaves or strawy manure on these, Pansies will usually winter over and give flowers early the following spring.

W. H.

HORTICULTURE

QUESTION:

Will you kindly give me the benefit of your opinion on the merits of the new spray guns compared with the ordinary rods and nozzles?

ANSWER:

The spray gun is a great boon to fruit growers and makes the work of spraying much easier and more pleasant; in fact one man can do as much work with it as two men with the old system of rods and nozzles, and can do it better without using any more material. Unfortunately, spray guns require high pressure—not less than 175 lbs. and preferably 200 lbs. or even a little higher—hence they cannot be used satisfactorily with hand outfits but only with power outfits.

There are many makes of spray guns, some much better than others, so that one should be careful to buy none but a good make. As a rule the guns are about twenty inches long, and one inch thick, with a nozzle at one end and a handle of some kind at the other to regulate the width and the force of the spray sent out. At this handle end they are attached directly to the hose so that no rod is necessary. A very attractive feature about the guns is that a person can stand beside a tall tree and send the spray either right over the top or straight through the branches to the other side; something that could not be done with the old system of spray rod and nozzles. This

means that no tower is necessary even in old apple orchards. It also means that the operator need not drench himself or anybody else, and that if a 40 foot hose is used the waggon and team can be kept free from the mixture. In some cases it is possible to spray at right angles to the wind but usually it is better to take full advantage of the wind. Of course the spray gun does not make spraying fool-proof, but requires care and thoughtfulness if one is going to do a good job with it.

J. W. C.

QUESTION:

Had last winter's sever and prolonged cold weather any effect upon the San José Scale?

ANSWER:

Yes, the winter had a very great effect upon the scale. There was less scale this year in almost all the infested districts than there has been for years. In some districts that were on the border line of where the scale can thrive, for example in Oxford County, the winter seems to have annihilated the insect.

J. W. C.

BACTERIOLOGY

QUESTION:

Last fall we had a bad scare of Black Quarter in cattle. On Muncey Reserve about 100 head of cattle died with the disease.

We are vaccinating all our cattle before we turn them out to grass. Will this be sufficient until fall or will they have to be done again through the summer? Please send me any literature you have printed on the subject and all information you have concerning it.

A. F. T.

ANSWER:

In reply to your letter re blackleg vaccination:

Calves under six months are not fully protected by one vaccination; they should be re-vaccinated after three months from time of first vaccination. For young stock between six months and four years of age one vaccination is sufficient for a season.

Stock over four years old are not very subject to the disease.

We have at present no printed matter dealing with this disease, but you can obtain a bulletin from the Veterinary Director General at Ottawa.

D. H. J.

QUESTION:

I am sending in separate parcel today a sample of potatoes for your consideration. One of them I split open to be sure that it contained the defect which appears in almost every one of them and I have about twenty-five bags. The other I left intact but feel sure you will find it defective.

Will you kindly answer the following questions and oblige:

1. Is this a disease?
2. Is it likely to appear in potatoes grown from this seed?
3. Are they fit for human food?
4. Have they any market value?
5. Is there any other suggestion you could offer in regard to them?

J. F. Mc.

ANSWER:

We have just received the two potatoes that you sent for examination. These were not suffering from any disease. The condition of the ruptured interior is due to the conditions under which they were grown. Some varieties of potatoes seem to be more subject to this trouble, but every variety is liable to have it to a greater or less extent. We have never known a whole crop, however, to be similarly affected, as yours appear to be.

The trouble appears to be due to irregular periods of growth, a period of rapid growth being followed by very slow growth. They are perfectly fit for human consumption, though no doubt those who buy them, on finding the trouble inside would not think they had good value for their money. There is nothing whatever of a dangerous character in the potato tissue.

D. H. J.

DAIRY

QUESTION:

There are a number of cheese makers around here who are talking of putting in Whey Skimmers, and they want us to churn the whey-cream for them. What is the whey-cream worth and is there a ready market for whey-butter? If so, at what price? Could we churn the whey-cream in the same churn as we churn the other cream in, or would we have to use another churn?

ANSWER:

I can see no reason why a creamery man should not undertake churning the whey-cream for a number of factories, or purchase the whey-cream outright. But I think it should be churned separately. There can be no objection to churning the whey-cream in the ordinary churn if the churn is properly cleansed after each churning.

As a rule whey-butter is worth about four cents a pound less than No. 1 Creamery Butter, although it is claimed by some manufacturers of whey-butter that they can sell it for a price equal to Creamery butter.

I should think you could afford to pay anywhere from two to three cents a pound fat less for whey-cream, as compared with prices paid for ordinary cream. However, much would depend on the quality of the cream. It should

be delivered in a fairly sweet condition, have no bad flavors, and test from twenty-five to thirty-five per cent. fat.

H. H. D.

QUESTION:

Our town is isolated from the rest of Ontario, and by reason of the poor soil and the Smelting industry, there are very few farmers in the district, so there is always a shortage of milk in the winter, and because at present there is no outlet for the surplus milk in the summer, the dairymen cannot increase their herds to take care of the winter demand. It seems that the difficulty is in the uncertain supply; and in the past, such endeavours that have been made to utilize the surplus milk have failed on this account.

ANSWER:

There are three methods by which surplus milk in town and city trade may be converted into available food products.

First, by separating it, churning the cream into creamery butter, and manufacturing the skim-milk and butter-milk into Fancy Cheese, or condensing it into powder form.

Second, to make the surplus milk into cheese, and I would think in your locality possibly this would be the most satisfactory plan. In all probability there would be a good market for all the cheese that could be made, in Sudbury or neighboring towns. The by-product, whey, could be utilized for feeding pigs, as it is a valuable feed for these animals. In case butter were made and it were not practicable to make skim-milk and butter-milk into food, these by-products could also be used for feeding pigs. At the present price of hogs, which is about \$21.00 per 100 lbs. live weight, dairy by-products may be turned to good profit in this way.

The third plan for utilizing surplus milk, as followed by large city dairy plants, is to condense it. But as this is a rather expensive plan, and requires a comparatively large amount of milk to make it pay, I would judge that this would not be practicable in your locality.

H. H. D.

QUESTION:

Our local cheesemaker is thinking of putting in a whey separator and making whey-butter. Where the factory is owned by the cheesemaker kindly give me some information with respect to the following questions:

1. Is it a paying proposition after allowing for depreciation and cost of making butter?
2. Would it pay the local cheesemaker to put it in and charge so much for making?
3. What would be a just agreement between the patrons and cheesemaker in this case?
4. Is the whey worth less for feeding pigs after the butter is taken out?

ANSWER:

1. Where a factory has eight or ten thousand pounds of whey or more daily it is a paying proposition to separate the fat, at the present price of butter fat. In fact we can no longer afford to waste it or feed it to hogs.

2. It would pay the local cheesemaker to put in a whey-butter plant if he has the amount of whey mentioned in answer to question No. 1.

3. My judgment is that the best arrangement where a cheese-maker manufactures whey-butter is to hire a man at a certain rate per pound for manufacturing, which will vary according to the amount of butter made. The usual rate allowed runs from eight to twelve cents a pound. I should think

ten cents per pound of butter would be fair. In some cases the cheesemaker is allowed to take the whey-butter, and he charges less per pound of cheese for manufacturing. But there are many reasons why this is not a good arrangement. In some cases he is given one-half the whey-butter for making.

4. As a result of tests made at the Colleg here, feeding pigs, it was found that separated or skimmed whey was worth from twenty-five to thirty per cent. less as a feed for hogs as compared with unskimmed whey.

H. H. D.

QUESTION:

Will you kindly give me any information you may have regarding "Curdalac" as to its use and its value compared with rennet.

Would you prefer using "Curdalac" at the present prices or would you recommend rennet at \$10.00 per gallon?

ANSWER:

If I were operating a factory I think I would use Curdalac at present prices rather than pay \$10.00 per gallon for rennet, although it might be advisable to purchase a small quantity of rennet to mix with the Curdalac, as we have had slightly better results by mixing the Rennet and Pepsin solutions as compared with using pepsin alone. We have also found that increasing the acidity of the milk when using Curdalac tends to give better results, for instance, if a cheesemaker were setting a vat with .17 per cent. of acid when using rennet, the acidity might be increased to .175 or .18 for pepsin solutions. Sometimes it is advisable, especially in the fall of the year, to set milk, when using pepsin, at 87 or 88 degrees instead of 86 degrees, as when

using rennet. We also find it necessary to use about four ounces per thousand pounds of milk of the pepsin solutions in order to get coagulation in about the same time as when using three ounces of rennet, the standard strength.

H. H. D.

ANIMAL HUSBANDRY

Books on Cattle and Horses

QUESTION:

Could you inform me of the titles of some good books on cattle and horses which I can purchase here. I am particularly interested in Percherons and Shorthorns.

ANSWER:

I would recommend the following books that should be suitable for your purpose: "Types and Market Class of Livestock," by Vaughan; "Productive Horse Husbandry," by Gay; "Types and Breeds of Farm Animals," by Plumb. The above three books may be purchased through the O. A. C. Co-operative Association, Ontario Agricultural College, Guelph. The following books: "Shorthorn Cattle," by Santer, and the "History of the Percheron" may be procured from the Breeders' Gazette, Chicago. The price of these two latter are about two dollars each.

J. P. S.

Rape as a Feed for Hogs

QUESTION:

Is rape a suitable pasture crop for hogs? Please state any precautions necessary to be observed in its employment for this purpose.

ANSWER:

We pasture pigs on rape every year, and usually we use rape to a greater extent than we plan because it fills in so admirably when other crops fail. There are certain precautions necessary, however. If light colored pigs or white pigs are turned into rape when it is wet or when the dew is on a blistering of the skin is likely to result. If, however, the hogs are being fed a ration which will supplement the rape and other feeds are available, and shade is provided, there need be little fear of skin trouble.

H. M. K.

Trouble with Sheep

QUESTION:

I have a flock of pure-bred Oxford sheep and they are breaking out in scabs on the lips and chin and nose. The lips are very wattery, and some pus is found. They look and appear to feel well in other respects. We have fed them clover and timothy hay all winter, and a handful of oats five times a week, and turnips and mangels twice.

ANSWER:

This disease in your sheep resembles very much what is known as plug muzzle. In most cases it is caused by eating poisonous weeds, which probably have been in the hay. I would suggest treating the sores with the following:

Lard, 12 oz.

Powdered Burnt Alum, 1 oz.

Zinc Sulphate, 1 oz.

J. P. S.



THE VETRANS



You shouted for your heroes when they marched away to war,
And your eyes were wet for those they left behind;
You were loud in declamations on the Cause they battled for,
And to any imperfection you were blind;
They sprang from field and counter and from every kind of trade;
You were proud of them in khaki when the blaring bugles brayed;
You were half apologetic for the fact that you had stayed,
While the flag of Britain beckoned in the wind.

You read the glowing tributes to their valor at the front
As they battered on the very gates of hell;
You could close your eyes and see them as they bore the battle's
brunt,
And you wished that you had played your part as well;
You could see their bloody bay nets in the pyrotechnic flare—
You could hear the crash of battle—you could hear them shout
and swear
As they swept the reeking trenches—God, you wished that you were
there—
And you'd count it greater glory if you fell!

Now their fighting days are finished and some are coming back,
But they don't fit in as easy as of yore;
They have learned to shoot and parry, they can meet and beat
attack,
But they cannot do the things they did before;
They could hold the broken trenches in the high explosive rain,
They didn't mind the danger—they didn't mind the pain—
They were in it for the finish—now they're coming back again,
And they're hoping for a welcome at the door.

There are those who didn't muster when they heard the bugles play,
Though they claimed to feel the patriotic flame,
They couldn't leave their business, and its not for us to say,
That they didn't do their part to play the game;
But the soldier is returning, minus eye, or lung, or limb;
He is back from war's abysses, though he tottered on the brim;
He saved his blooming country; will his country now save him,
Or will it drown its glory in its shame?

ROBERT J. C. STEAD, Calgary.

In "Kitchner and other Poems."

THE O.A.C. REVIEW

REVIEW STAFF

J. B. MUNRO, '19, *Editor-in-Chief.*

G. B. HOOD, '20, *Associate Editor.*

C. F. MACKENZIE, '19, *Agri.*

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

R. ALEX BRINK, '19, *Exper.*

K. MACARTHUR, '21, *Locals.*

T. H. JONES, '19, *Horticulture.*

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

C. F. LUCKHAM, '19, *Poultry.*

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

J. A. HALL, '20, *Query.*

MISS OLIVE GARDINER, '20 *Junior Representative.*

A. W. MEAD, '20, *Alumni.*

W. L. CURRIER, '20, *Athletics.*

EDITORIAL

THE PEACE PARADE

Monday, November eleventh, A. D., nineteen hundred and eighteen, was the biggest day in the history of the O. A. C.—and the rest of the world. From four-thirty a.m. there was no rest—all was action. The boys first assured themselves that reports were official, then they began planning.

In order that all operations might be carried out in orderliness the student body acted according to the dictates of the Students Council. A meeting was called and the programme planned, and committees appointed — all with schedules to follow.

The Peace Parade was the big event of the day. Carpenters, machinists and electricians worked till dark preparing floats and banners for the procession. At seven p.m. the procession started for Guelph to stage the scene. The

Guelph police force began to show symptoms of neuritis when they heard of the contemplated parade. The fossilized remains of the Force that existed in pre-war times quaked as they enquired of Dr. Creelman if the town was to be adorned with college colors in oil. Dr. Creelman assured the rheumatic arm of the law that no violence was intended, so the "cops" ventured out to see the one real Peace Parade that Guelph can boast of having seen.

At the head of the procession the College Faculty rode in cars. Then came the various units of the whole, in military fashion, marshalled by Lieut. C. M. Howarth, one of our returned men. The Mac. Girls took first place. Their float was lighted by electricity from storage batteries. The villagers were as those just awakened from a Rip-Van-Winkle rest when the electrified van came thundering down. The

Senior year followed with an illuminated float, in which a forge and anvil were being worked overtime, while returned students pounded swords into ploughshares. On the same float was arranged a set of chimes, on which peace was rung in as the procession moved along. Next came "Old Nick" stoking in an asbestos inferno, while

ity. They ordered the parade home. Not another hoof would set foot on their sanctified street. It was a sore blow to the boys and girls, who had labored so hard and long to make a good show, but they calmly took the orders and returned to the College, where a dance was given in the Gymnasium.



LIEUT. C. M. HOWARTH.

Lieut. C. M. Howarth, Marshal of the Peace Procession in Guelph, City. Lieut. Howarth has returned to College after serving in France, and is continuing his studies with Class '21

the Kaiser hung above, looking expectantly into his immediate abode.

Three other floats followed, each having its symbolical meaning. The floats were manned by students who have returned from the front wounded.

Up and down Wyndham street the procession went. Then the cops, reinforced by a detachment of men from the 64th Battery, showed their author-

It seems almost incredible that so large a host should not have returned to "clean up" on the town. The police expected it; the people whose conscience troubled them, expected it, and almost the students expected it. However, there was no "rough stuff." The boys believed that this was no time for a scrap. They felt the seriousness of the occasion and thought it wise to re-

turn sleepy and tired, but happy.

The parade, which was witnessed by many thousands of people, was conceded to be the "best yet." It was headed by the G. W. V. A. and Salvation Army Band, and in every detail strict order was maintained.



ROBERT J. C. STEAD.

The Poet and Novelist of Western Canada, whose books are typical of the land whereof he writes.

Canadians who are already familiar with the poems of Mr. Stead, and with his previous Novels, will welcome the appearance of his new novel, "The Cow Puncher," published by the Musson Book Co., Toronto, price \$1.50. The Author is a resident of Calgary, and both his prose and poetry are typical Western in character. The scenes of "The Cow Puncher" are laid in a ranch among the foothills during the Real Estate boom, and finally in the battle fields of France. Throughout the book there runs a happy vein of humour and philosophy,

and the closing chapters reflect the strong spirit of patriotism which has characterized the West throughout the whole course of the war. The Cow Puncher should be welcomed by the Canadian public as still further evidence that Canada has within herself the elements that go to make good Canadian authors and good Canadian novels.

SPECIAL NOTICE

A year ago we published an Honor Roll of the O. A. C. Boys in Khaki. It revealed to the public the fact that our college has a right to be proud of the part her boys were taking in the war. That list, though large, is only a part of the new Honor Roll that is being published in our next issue of the Review, which will be out on December 10th.

This Christmas number promises to far exceed any previous number. The staff has been assisted by the Literary Executive of Macdonald Hall, who are preparing the Macdonald Honor Roll; and a committee of five O. A. C. men have spent several weeks compiling our own. These records of our boys and girls will be of interest to all our ex-students, and we hope that every one may be able to receive a copy.

In order to be sure of extra copies it will be necessary to order same by December 5th. The price of the December Review, single copies, is 25 cents.

Dr. G. C. Creelman has returned from Europe. He went there in August on a mission for the Ontario Government and has been successful in performing his task. During his stay overseas the Doctor met a large number of the O.A.C. boys, who have represented us at the front. He speaks in

glowing terms of the part the boys have played, and is justly proud of them.

In next month's Review we expect to publish a report of Dr. Creelman's visit along with the interesting news he will give us of the boys we have there.

43 King Street, West,
Toronto, Oct. 18, 1918.

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

Dear Sir,—Permit me to suggest the desirability of the Ontario Agricultural College Athletic Association's giving some consideration to the promotion of Association Football. In the early days of the history of the College, I understand that Soccer was the only form of football played. At the present time it would appear to be extinct, though a few years ago a very rare game might be seen. Along with other Ontario Colleges and the Collegiate Institutes of the cities and larger towns, Rugby seems to have taken an exclusive place.

From the standpoint of country-life needs this is very unfortunate. Rugby football is not a game suitable for rural communities. It is distinctively a game for urban centres and large schools. Twenty years or so ago when Association Football was very commonly played at the High Schools in the smaller towns, football teams were to be found in the country nearby, promoted very often by rural teachers, who had learned the game while taking a course at these High Schools. Such teams are rarely found now, partly owing to the fact that young men are not entering country school teaching any more, partly because of a marked decrease in the rural population, and partly also because Rugby Football has

become more or less the vogue amongst our High School youth. High Schools in the smaller towns are inclined to ape the fashion of the city High Schools. The city game thus indirectly prevents the country having a game suitable for its condition.

Rural sociologists are unanimous in their belief that the establishment of a sound community spirit requires that the youth of the country should have an interest in wholesome recreation and games. It is to be hoped that there may be a revival of Association Football as a game eminently suited to the needs of country places in Ontario. Undoubtedly many of our boys overseas will be impressed with the great popularity of Soccer in Great Britain, and will wish when they return, to see it played more in Canada. Many will have learned to play it behind the lines in rest camps.

It is peculiarly a democratic game. It plays no favorites from social castes. It requires no bulging bank account from its devotees. Players do not require expensive outfits. A small school may find enough players to carry on the game within themselves. Even small boys may be as proficient as heavily built lads and may play with such without fear of any serious injuries due to lack of weight. It is a game that permits matches to be played at recess, noon hour, or after four. There is no occasion for the losing of time in the changing of clothes. It is a game where brute force is discounted and skill and headwork emphasized. It is played with more freedom and requires more co-operative all around team-play than Rugby football. It is simpler. It has no elaborate signalling devices. While the game may be rough it does not offer the opportunities for ruffianism that Rugby does, since the play is always exposed and open. It is a game

easily understood too by the onlookers. A crowd of country people could be interested without having to be initiated into the vagaries of the complicated rules and counting of points.

Association is less dangerous than Rugby. There are fewer accidents. Less time is lost from classes through casualties. There is no clashing of men as in Rugby. Its offensives are in the extended order of the British rather than the massed formation of the Hun. It permits great individual initiative and skill within the team. It is played on the basis of democracy and not on that of autoocracy. It produces good sports. It is a game well adapted to our Canadian democracy. For the people living in the open places of the country, removed from the habitations of aristocrats and plutocrats Association Football is peculiarly suitable.

The College Athletic Association would be doing a great service to rural Ontario by restoring the popularity of Soccer Football. If the Association could take upon itself a leadership in the matter of country sports, as it might very well do, it could do a great good by promoting this game, in so far as its influence may count, amongst the country schools of the province. By giving all its attention to Rugby football it not only misses a worth-while service to our rural life, but it actually does the country a disservice.

I would like to see this matter discussed further in the columns of the Review. Perhaps the college may discover from it a line of extension work as productive of large returns as Dr. Zavitz's distribution of selected grain. People do not live by bread alone.

Yours very truly,

S. B. McCREADY.



CHRYSANTHEMUMS AT O.A.C.



The following appeared in the Official U. S. Bulletin, Tuesday, September 24th, 1918:

Mr. Christie Named Successor

The nomination of Mr. G. I. Christie, of Indiana, to succeed Mr. Pearson, as Assistant Secretary of Agriculture, has been transmitted to the Senate. In April of this year Mr. Christie came to Washington as Assistant to the Secretary to aid the department in further organizing and developing its farm-labor activities. More recently he has been representing the Secretary in the field in connection with loans from the President's special fund to farmers in Montana, North Dakota and Washington.

Mr. Christie was graduated from the Ontario Agricultural College, receiving the degree of B. S. A. He also received the degree of B. S. A. from the Iowa Agricultural College. He was assistant in agronomy, Iowa State College, Ames, Iowa, 1903-1905; assistant in soils and crops, 1905-1906; and he has been superintendent of agricultural extension work in Indiana since 1906. He is a member of the National Education Association, the Indiana Corn Growers' Association, the National Seed Analysts Association, and the Association for the Promotion of Agricultural Teach-

ing. He was superintendent of the Indiana Agricultural Exhibits at the Panama Exposition, and was chairman of the Agricultural Committee of the Indiana Centennial Celebration in 1916.

All who knew him will be very glad to welcome Percy Sackville '15 back to the staff of the Department of Animal Husbandry.

The following names and addresses of some of our boys overseas may be of interest to some of our readers:

Pte. D. J. Patterson ('20) 3137468,
4th Canadian Reserve,
Whitley Camp, England.

Pte. S. Lester Carr ('19) 3035609,
Canadian Army P. O.,
12th Canadian Reserve,
London, England.

No. 528538 Pte. A. H. Cowan,
No. 2 Canadian Field Ambulance,
B. E. F. France.

No. 3038562 Pte. T. E. Shearer,
C. Coy. 2nd C. E. R. B.,
Army P. O., London, England.

C. W. Stanley, B. S. A., has consented to the publication of the following

letter from No. 335076 Bomb. R. J. Skelton, 2nd Howitzer Battery, C. F. A., C. E. F., France.

France, September 22, 1918.

My Dear Bill,—

Your letter dated August 30th reached me to-night, and as I made a special trip to the "Y" for writing pad, etc., intending to write you this evening, I can do the job in a more thorough manner when I have your letter by me. Am delighted to hear from you, and to know that you keep in good spirits. After this I should indite an epistle to the girl, but perhaps my letter writing ambition will have evaporated by then. Letters from across the water have accumulated until I hardly know who to write to first. No, it's not neglect, but simply the fact that I cannot get at it. C'est la guerre. You know yourself that if you were on Hienie's trail you couldn't very well stop to write letters.

Have heard through several sources of the Doctor's trip in connection with the Khaki University. Wish I could see him. Will be getting leave in the course of a month or two, but have indicated my intention of visiting Paris, so that cans any remote chance of renewing acquaintances with Dr. Creelman.

Well, Bill, the papers will have informed you what the Canucks have done to Heinie. It's mostly all true, too, for our fellows sure did mess him up some. Personally, I have seen enough dead Fritziess to last me a lifetime, and of prisoners, well, there were "beaucoup." Of course we had our losses, the infantry suffering more than the artillery. Believe me, I take my hat off to the Canadian infantry every time. In my opinion they have no superiors, and d— few equals.

It's pretty difficult to know just

where the censor will sit down on me, which makes it very difficult to write. There's one mistake you folks at home are prone to make. You are too optimistic as to the length of the war. To be sure Heinie has had a tremendous kick in the pants, but we did too earlier in the year. The only difference is that we have greater facilities for making good our losses. The fact remains that Fritz has still a punch in both mitts, and nothing is to be gained and everything to lose by underestimating his power of resistance. Don't misunderstand me! We are going to "get" him, but we haven't "got" him yet.

Believe me, Bill, Paris leave sounds good. I don't know when it's coming, but if I live, it can't be long delayed.

Have been away for a few days on a gas course, qualifying as a gas N. C. O. Did I mention having a stripe before? I've forgotten. Well, this course proved of more or less interest to me but I did not get what really would have been interesting, viz., the chemistry of the different gases. However, I saw Dick Sands in my travels, and as he has had some instruction in gas chemistry, he is sending me some information along that line. I don't suppose it will ever be of use to me out here, but if I ever get home again I will be able to talk more or less intelligently on a subject which no doubt will be of interest to you, and Sid and the rest of the boys with you.

Had a letter from Joe Coke and he maintains that the western girls have it all over the eastern ones. No doubt its a subject over which there is a wide difference of opinion.

Saw Tom Sanderson the other night, and spent a very enjoyable two hours with him. A fellow runs into the most unexpected people here. Also saw Bob

Bryant. He is attached to D. H. Q. Also spent an hour one evening with Lieut. McMillan '17 of — Machine Gun Battery. Mac is O. K. and going strong.

We have been enjoying wonderful weather over here. Since we went into battle on August 8th until just recently we had little or no rain, and the days were warm. At night a fellow could take what sleep he got by lying down any old place and covering himself with saddle blanket and great-coat. Of course its wiser to dig a bit of a hole and crawl into it, thus lessening the chances of getting hit by shell or bomb splinters.

Now I must knock off.

Your old pal,
BOB SKELTON



H. M. KING, B. S. A.

Harry King, B. S. A., has left the Animal Husbandry Department to take the position of Associate Professor of Animal Husbandry in the Agricultural College of the University of British

Columbia. He will be greatly missed by all those that had the pleasure of knowing him, both as a lecturer and as a friend. We feel sure that all our readers will join us in wishing him the best of luck in his new position.

E. H. Parfitt '18, who since graduation worked in the Dairy Department at the College, is now in the Bacteriological Division of the Medical Corps of the U. S. Army. His rank is that of Second Lieutenant. Parfitt's home address is 1066 82nd Street, Brooklyn, N. Y.

R. Finklestein, B. Sc. in Agr., formerly on the staff of the Bacteriology Department here, is now serving in the American Army. At present his duties are in the Bacteriological work in the Base Hospital Laboratory, at Camp Mead, Md., U. S. A.

After an absence of 32 years Mr. C. R. Brown visited the College last month. Mr. Brown was a student here in 1884-5-6, and was a classmate of Dr. Creelman and Dr. Zavitz. He secured his Associate Diploma here before the days of the B. S. A. Degree, and also was winner of the 2nd Silver Medal.

During the past eight years Mr. Brown has been teaching Biology and Agriculture in the Saskatoon Collegiate, and is at present on leave of absence. His family consists of eight children, one of whom has been overseas and returned wounded.

On his arrival at O. A. C. via Mac. Hall Mr. Brown was completely lost, and it was not until he spied the old familiar residence that he regained his bearings. In his student days the entire institution consisted of but six buildings.

Births

To Prof. and Mrs. J. Eaton Howitt on November 1st, a son.

To Mr. and Mrs. Frank Marcellus, on October 4th, a son.

To Mr. and Mrs. Archie Leitch, on October 24th, a son.

Congratulations.



"GEOFF" SCOTT. '20

Cadet Geoffrey H. Scott '20 died at Montreal on October 1st. "Geoff" was only twenty years of age, and had completed his first two years at the O. A. C. He was attending the Engineer's Training Depot at St. John's, P. Q., when he contracted Spanish Influenza, which resulted in his death.

"Geoff" was a highly respected member of his year, and held several responsible executive positions at the college.

Died

Following is the official despatch announcing the death of Geo. McGee '15: Ottawa, October 5, 1918.

"Mrs. F. G. Clarkson, Truro, N. S.

Deeply regret to inform you No. 307643 Pte. Wm. Geo. McGee, Artillery, officially reported died of wounds, 30 Casualty Clearing Station, September 28th, gunshot wound in abdomen."

After taking two years at Truro Agricultural College, McGee came to O. A. C. in 1913, entering Class '15. He enlisted with the 29th Battery in 1914.

Word has been received that Pte. Hugh David McNaughton was killed in action in France on September 15th. "Dave" was one of the sturdiest members of his year at college, and was every inch a man. He went overseas with the 160th Bruce Battalion.

Sergeant Phillip Gregory is reported "killed in action" on September 2nd. Sergt. Gregory enlisted with the 49th Battery, and in England was transferred to the 23rd Battery. He won his stripes just before leaving for France.

From April to August of this year he was in hospital in England through illness, and returned to France only three weeks before his death came. He was twenty-two years of age.

Erwin W. Weber '20 is reported as having died of illness in September. Weber spent last year at the College with year '20, taking his first and second years in one. He left here last April and joined the U. S. Navy as a mechanic.

A. J. Delamore '19, is reported died of influenza. He was with the 5th Batt., Depot Brigade, Camp Devens, Ayer, Mass.

Died of Wounds

McGee '17, 56th Battery.

Killed in Action

Donald S. Maynard '20 has been officially reported killed in action. "Don" enlisted in the Engineers last May, and had been in France less than a month. The Review extends its sincere sympathy to his bereaved parents, Mr. and Mrs. A. S. Maynard of Harwick Tp., Kent Co., Ont.

C. G. Gibson '15, killed in action at Zibeke.

Capt. Stan. Porter '15 has been awarded the Military Cross in connection with the fighting at Amiens, where he displayed conspicuous gallantry. He enlisted in December, 1915, with the 34th Battery. After training with the C. O. T. C. he transferred to the 162nd Battalion, and went over with a draft of officers in 1916, reaching France in July, 1917, with the 18th Battalion. All of the boys of year '15 will remember "Stan" as one of the leading entertainers.

Lieut. J. R. Wilson '15, has been awarded the Military Cross for bravery. He was recommended for the decoration for splendid work in the 55th Battery, when the Canadians smashed through the Hindenburg Line. He was very seriously wounded, and was only rescued with great difficulty from the advanced and dangerous position where he was lying. His rescuers, W. R. White '15 and Glendenning, were re-

commended for the Military Medal. "Blondy" was reported dangerously wounded on September 2nd, and is now reported improving in the London General Hospital, Wandsworth, Common.

Truman Morse '15, who went over early in the war, and has been for some months a prisoner of war in Germany, is expected home in Toronto shortly.

L. W. Pearsall '19 has been admitted to the Middlesex War Hospital, Napbury, England, severely wounded. He has lost his right arm, and is suffering from severe wounds in the left arm, right shoulder and left side. He is doing as well as can be expected.

Sapper P. Carnochan 2728142 ('20) is with the Divisional Signalling Co., at the Armouries, Toronto.

Art. Musgrave '19 is now a Cadet Corporal in the R. A. F.

A. M. Stewart '19, is farming at Waba, Ont.

Pte. Hugo Krauss is with the Vet. Training School, Camp Lee, Va., 1st Co., 4th Battalion.

He heard recently from Orloff Mallory '14, who wrote from hospital in Cheshire, England. His address is: No. 335272 Driver Orloff Mallory, 45th Battery, C.F.A., C.E.F., France.

W. F. Geddes '18 is Assistant Chief Chemist with Aetna Chemical Co., Drummondville, P. Q.

The following letter has been received by W. H. Scott, B. S. A., who has consented to its publication:

Ward 26, 1st London General Hospital, Camberwell, London, S. E. 5.

Dear Scott,—

I just received your letter to-day and as I have been specializing in promptness lately should keep up the good work.

I just heard some news to-day which has made me feel gloomy. Curly Brown, who was on leave from France, was in to see me this afternoon and told me about poor old Clemens and Dave Laird. Clemens and Lieut. Lepper were both killed instantly by a shell in front of Cambrai. Clemens was buried by it. McAdam was about one hundred yards behind them at the time, and was shocked to see the two of them killed in front of him. Dick Sands was among those who were able to identify Clemens after he had been killed.

Dave Laird has been seriously wounded by a bombing aeroplane. Fritzie at the time was bombing our guns. Curly Brown says the fighting is very strenuous at present. Such a war, it is hard to see your chums killed. Old, a sub. of the 56th, has been killed recently besides McLennan, Winslow and Clemens. Gud. Edwards, Laird and myself are badly shattered and at present have very poor prospects of getting back to Canada as yet.

I am quite frisky these days on my one leg and a pair of crutches. I was out to a picture show a few days ago, but it takes a deuce of a sight more nerve to cross these streets, with all the bustle and noise, than it does to pass through a barrage at the Front. I want to take in a few matinees if possible, however, as I like the London shows, which by the way is about the only thing about London that I do

especially admire. I expect Ted Varey and Smith over shortly and shall get them to pilot me about.

I was very pleased to hear the news from home, it is a treat at all times to receive news from Canada. I have been quite fortunate in receiving letters from my friends and classmates from the College.

Here everyone is very good to me, and in this Ward there are quite a few repatriated prisoners from both Germany and Bulgaria, and it is cruel to hear the stories which they tell. I don't see how it will ever be possible for us to be civil to a German again. I hope they stay away from Canada. I hope the chaps at present training in Canada will never have to come over here, enough of us have seen the horrors of the War..

Well, write again shortly, I truly love to get letters from Canada, being a stranger in a foreign land is not all that it is cracked up to be. Remember me to any of our classmates and all my other friends at Guelph.

Yours very sincerely,

(Sgd.) O. W. BENNETT '16.

The following letter to Dr. C. A. Zavitz from W. F. Gardiner '17, gives some interesting information on agriculture and agricultural education in the West:

Cannon Falls, Minn., Oct. 20, 1918.
Dr. C. A. Zavitz, O. A. C., Guelph, Ont.
Dear Dr. Zavitz,—

As Cannon Falls is not a large place I will be able to make its situation clearer by saying it is only 40 miles from St. Paul, or 50 miles from Minneapolis. The train service is good considering that the country is using all its energies to conduct a war to a successful end.

To get more personal I will say that at present I'm kept very busy, bringing the work of my department up to date as this place lost its agricultural instructor a few months ago.

I will try and give you a fair idea of my work, which I find more interesting as it gets better known. The mornings are pretty well taken up with instruction work with the high school students. Parts of the afternoons I have the VII and VIII grade students for elementary agriculture.

The High School students take up field crop instruction and practical judging of cereals and roots, etc., elementary chemistry, botany, rural arithmetic. The more advanced students take up animal husbandry lecture periods and practical stock judging, feeds and feeding, farm management. So far I have had to use my own judgment to a large extent as to the arrangement of the subjects and the range of the same, as the State Supervisor for Vocational Instruction Work has been prevented from paying us a visit on account of illness, and just lately again by an attack of influenza.

Besides this work there are four Associated Schools, that are each visited once a month. It is my duty to leave an outline of the agricultural work to be taken up until my next visit. During the next three months the Agricultural Directors, co-operating with the County Agents and the Farm Bureaus, have the responsibility of getting the men and women, especially of the rural districts, to sign a petition, asking the Extension Division to send out experts during January, February and March, to their short courses. Only one place can be selected in a county and at least 75 men and 40 women must promise their support by attendance, and a certain guaranteed sum of money.

Following this school term of 36 weeks, will be a period of looking after the students project work. This is directing by giving advice to members of Garden Clubs, Pig Clubs, Corn Clubs, etc. At least three visits per month have to be made during the season to make out official reports and see that the members are doing their work intelligently. I have been out on the Corn Club work since arriving here, and have met a number of interesting people. So much for personals.

I find the conditions as to climate very similar to Guelph. We have had an exceptionally fine autumn—nearly four weeks of ideal weather—rained yesterday, but is bright again to-day. Just finished husking about 130 bushels of good corn off the school garden—the Silver King variety. The Silver King, and Wisconsin No. 13, are most extensively grown here in this locality, with an unknown amount of the Murdock variety. Haven't seen any Flint grown yet.

Spring Wheat is King, the winter wheat apparently not in favor. My superintendent made the remark that this is principally because it is not well known here. The barley is mostly of the Manscheurie type. One thing that strikes me as strange, and it is that there doesn't seem to be a good strain of an early oat that would be suitable for sowing with barley. I'm not certain yet whether this condition exists because a good variety is not commonly known or because they prefer the oat-wheat mixture, which is a popular mixture for this locality. One intelligent looking farmer did make the remark to me that he didn't know of a good oat to ripen with barley. The real Canadian type of Swede turnip is nearly unknown here, according to my superintendent, who by the way was raised

on an old Canadian farm (Ontario). He thought that it would be a good idea to raise a 1-2 acre on the school garden next year. What they call a Swede here seems to be a yellow-fleshed type of fall turnip, of poorer keeping qualities than the regular Swedes. The potatoes recommended are the Green Mountain, Rural New Yorkers, Burbanks (White and Russet type), Early Ohio, Early Triumph, Irish Cobbler (just getting established); Davies Warrior and Empire State, for some reasons unknown. I think I have covered briefly some things of interest, so must close now.

Just got my O. A. C. Review, and got a taste of O. A. C. atmosphere, which is appreciated away out here. Best of success to you this winter.

Yours sincerely,

W. F. GARDINER.

Number Four "S. of A."

Toronto, Oct. 9, 1918.

Dear Munro,—

When I was leaving O. A. C. I remember promising to write you and give an account of myself. Well, here it is:

The week following exams found me at Queen's Park, London. The barracks there had very little to commend them and had there not been five O.A.C. boys there the quarters beneath the grandstand where we slept would have been a dungeon of despair for me. But "we strode on austerely; no hope could have no fear." Gordon Arnold and I had wanted to join the air force, and on the second day when we found that farmers were getting two weeks seedling leave we seized the opportunity. Those two weeks gave us time to make a couple of trips to Toronto and by persistent knocking at the door of the

R. A. F. office on 93 King St., we at last passed our tests and were placed on the reserve. In the meantime I attended convocation. At the end of the two weeks we went back to London and gave an account of ourselves, whereupon the Lieutenant commanding our company gave us leave of absence pending transfer to the R. A. F. Gordon and I still speak of him as a good fellow.

May and June were busy months for the R. A. F. recruiting depot. They were filled to overflowing, and when word came that no more men would be taken for an indefinite length of time we did not like the idea of going back to London. During our leave the W. O. R. had moved from winter quarters at Queen's Park to Carling Heights, just north of the city. In the vicinity of Guelph this elevation known as Carling Heights would scarcely be thought worthy of the name, but it is sufficient to afford good drainage and fairly sanitary conditions. However, after one downpour of rain quite a number of the fellows were flooded out of their tents.

I had only been tenting on Carling Heights for a few days when an N. C. O. course commenced, and somehow I found my way into it. It was interesting and kept me busy, but at the end of three weeks, true to the saying that nothing is certain but the unexpected, my transfer came through. You see how useless it is to count on anything permanent, but to obey orders for the duration, when once you get in the army.

Airmen, as we are called, are first sent to the Jesse Ketchum school, where we are sorted into three classes—pilots, observers and mechanics. This is simply a clearing station, which works on much the same principle as the Union Stock Yards. Through no good management on my part, except perhaps a

love of books, cultivated at O. A. C., I found myself in the first category. We spent a couple of weeks at Jesse doing every manner of things from acting as scullion in the king's kitchen, to guard duty. This, of course, gives one an opportunity of becoming acquainted.

Perhaps you will be surprised when I say that about a third of the fellows are from U. S. The other day I met a fellow from Alaska. Quite a number are from New York. Every corner of Canada from Nova Scotia to British Columbia is represented. There are several O. A. C. men and we keep up the friendly spirit. It is good to meet a Guelph man, even though we did not know him before.

After our term at Jesse we went to Long Branch to acquire a "smart airman-like manner" (the phrase is proverbial), and learn to take wireless at the rate of six to eight words a minute. We also get some introductory lectures on military law. We had a good time at Long Branch, although it is a discipline camp, where one has to act and even think just so. We have a very complete civilization of our own for men from every occupation are here. The wing field day was second to none. Every Wednesday there was an inter-squadron baseball game. Thursday nights the theatre marquee was the scene of very good concerts for some of the cadets have been professional actors. "A" squadron put on a very clever play "Cadet for Pilot," written by one of the fellows. We had an "A" squadron song with original music made to order for the occasion. Our departure from Long Branch was celebrated with a farewell dance, so you see camp life in the R. A. F. has its pleasures. We did not even mind getting up at reveille before daylight, for

to see the sunrise over the lake was absolutely glorious.

As I said before the O. A. C. boys form a happy family everywhere, and quite often when walking through the fields we are able to attach strange sounding Latin names to common grasses and humble weeds. The latter have even lost some of their noxious quality and I can imagine Professor Howitt feeling as though he had lost a life long friend if even one species were eradicated. The course at the school of aeronautics has obviously very little in common with what we used to worry ourselves about at O.A.C., but many of the principles learned in the physics laboratory are very helpful, and even the lectures we got from Mr. R. R. Graham, on meteorology, will save me carrying a glossary to aerial navigation classes.

Among the fellows I meet quite often are A. H. Musgrave '19, Murdock '17, G. Arnold '20, D. Hart '19, W. Scouten '19, "Husky" Brown '18, Stover '19, Case and John Hempson '18, who is on the wireless staff.

Wishing you a successful year, and hoping that the new venture in co-education will become more and more popular, I am,

Yours very truly,

R. C. Elder, 173801,

Course 42, No. 4 S. of A.,

Toronto.

We are indebted to Prof. W. J. Squirrel and Mr. Squirrel, Sr., for the following information about old boys with whom Mr. Squirrel renewed acquaintance during his western trip last summer:

Thos. (Tommy) Gadd '95 is making a success of the lumber business in

B. C. His address is Comox St., Vancouver, B. C.

W. J. (Billy) Elliott '98 is Principal of the School of Agriculture at Olds, Alberta.

I. S. H. Matson '85 is combining farming and publishing, with very great success, in Victoria, B. C.

Geo. Dick 1900 is farming in Hensall, Ont.

A. High '99, is in the lumber business in Killarney, Man..

B. W. Fansher '04 is one of the most successful farmers in Florence, Ont.

C. C. Thorn '04 is farming near Calgary, Alta.

W. L. Yerex '02 is farming near Wellington, Ont.

Jas. McKenzie '06 is farming at Green Hill, Ont.

W. F. Geddes, B. S. A., is now Assistant Chief Chemist in the plant of the Aetna Chemical Co., at Drummondville, P. Q. Until recently "Bill" was employed as chemist by British Chemical Co., at Trenton.

Weddings

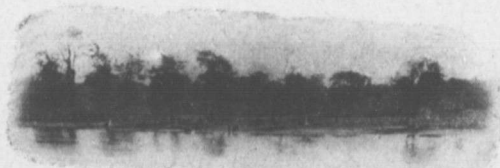
On August 12th, at Elm Street Methodist Church, Toronto, J Robert Almey '19 was united in marriage to Miss Sadie Pearl Rogers, of Ipperwash Beach, Forest, Ont. The ceremony was performed by the Rev. W. J. H. Smyth.

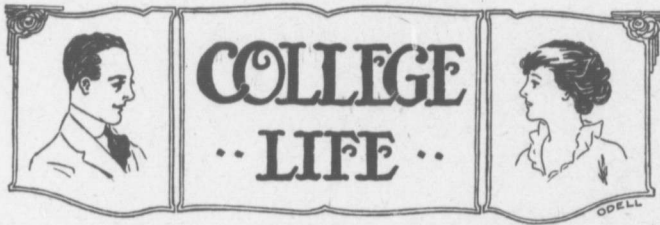
"Bob" is now completing his "Flying" training at Camp Mohawk, and expects to leave shortly for overseas. He was one of the best known students at O. A. C., having spent three years studying, and three summer vacations on the Horticulture Department. His address is J. R. Almey, 171119, R. A. F., Camp Mohawk, Deseronto.

On August 14th, at Gravenhurst, W. R. Peters '19, was married to Miss Sadie Fennel. Mr. and Mrs. Peters will reside on their farm at Uno Park.

A wedding of more than usual interest took place at Hilton, New York State, when Margaret Isabel, daughter of Mr. and Mrs. Allan Ban Fraser, was married to Percy E. Culverhouse, B. S. A., son of Dr. and Mrs. Culverhouse, St. David's, Ont.

"Cully," as we know him, was a member of Class '14, but graduated with year '15 at the O. A. C., and was a decided favorite of all who knew him. He is "carrying on" as By-Products expert at the Horticultural Experiment Station, Vineland, Ont., and is busily engaged superintending the putting up of canned fruits and jams for the Ontario Government, to be shipped overseas for the Canadian Wounded in hospitals. We wish them a happy and prosperous "bon voyage" through life.





Y. M. C. A.

On the evening of October 3rd, the "Y" evidenced its activity by having Mrs. Paul Yeftich deliver a splendid lecture on Serbia, to the Faculty, the students of the College and Macdonald Hall. It was a privilege of rare occurrence to hear Mrs. Yeftich relate in vivid language, her experiences as a Red Cross Nurse during that awful Serbian Retreat. The sufferings of that innocent and upright little nation are appalling indeed. Our whole-hearted sympathy and support goes out to such an heroic people. The meeting opened with the Serbian National Anthem, the audience rising to attention. Mr. Roy Allan presided in a very competent manner.

The Sunday morning Bible Classes have been well attended, and the interest keen. Professor Crow's discourses on "Christ and the Kingdom of God" have been instructive and inspiring. We are very fortunate to have Professor Crow as a teacher, and the students appreciate his leadership very much.

Another Sunday event of no small account is the evening sing-song. Enthusiastic singing of the good old hymans has characterized the song-services throughout the term.

The duties of the Y. M. C. A. are of vital importance. The hearty co-operation of every student is necessary in

all its undertakings. Do your bit by assisting with thoughtful, individual and earnest support.

APICULTURE CLUB

The re-organization of the O. A. C. Apiculture Club, which has been holding regular meetings during the past eight college years, was accomplished on September 30th, at a meeting of interested students.

The Officers elected for the current College year are:

Hon. President—Dr. Burton N. Gates.

President—Wm. A. Weir '20.

Vice-President—O. A. Sippel, '21.

Secretary—J. J. McCague, '21.

Treasurer—R. J. Sirrs '21.

Directors—J. B. Munro '19, E. L. Eaton '20, R. E. Barber '21, G. M. Millar '22.

The personell of the Executive, as will be seen, is made up students who are for the most part beekeepers themselves, and assures the members of a lively season.

The Apiculture Club has as its sole aim the supplementing of the College Course in Apiculture, and the programme for the current season, as already outlined by the Executive Committee, consists of bringing to the College beekeepers who have made a financial success of producing Extracted Honey, Comb Honey and Queens. The

programme also embraces a visit from specialists in Bee Diseases, and in Apary Supplies, and for the benefit particularly of the Freshmen members an evening will be spent during the Fall Term in reviewing the rudimentary principles which play such an important part in the usual Xmas Exams.

Already the Executive have been able to report three interesting and well attended meetings. The membership at present stands at forty students, with quite a few still to join. Messrs. J. F. Dunn, of Ridgeway, Ont., and F. W. Krouse, of Guelph, have given thoroughly practical talks on "Beginning With Bees" and "Pound Packages" respectively. Mr. Jas. Armstrong, President of the Ontario Beekeepers' Association, followed up these talks with a detailed explanation of his method of keeping the "Swarm Problem in Control among 200 Colonies," and the arrangement of visiting speakers has been carefully studied so as to increase the interest as the season advances.

ANIMAL HUSBANDRY CLUB

The Animal Husbandry Club held its first meeting of the year in Massey Hall on October 30th, for the election of Officers. Mr. Gunn acted as chairman, and briefly outlined the object of the club as follows: To mutually promote and encourage a livelier interest in the Live Stock Industry.

The following Officers were elected:

Hon. President—Prof. Wade Toole.

President—C. F. Mackenzie.

Vice-President—S. King.

Secretary—F. J. Webster.

Treasurer—W. Hendrie.

Members for Executive—C. Lamont, 4th year; N. Curtis, 3rd year; G. MacCrimmon, 2nd year.

Prof. Wade Toole, in a short address, outlined the work which the Animal

Husbandry Department intends carrying out. Mr. Winning also passed a few appropriate remarks.

HORTICULTURAL CLUB

The first meeting of this Society was held on October 21st, and those present elected the following officers for the year:

Hon. President—Professor J. W. Crow, B. S. A.

President—T. H. Jones.

Vice-President—W. C. Hopper.

Secretary—C. C. Eidt.

Treasurer—G. B. Snider.

4th Year Rep.—R. D. Allan.

3rd Year Rep.—Mr. Strong.

2nd Year Rep.—W. O. Coon.

1st Year Rep.—Miss Graham.

Prof. Crow's suggestion of following an outlined programme was adopted, and as a result we were favored by an interesting, instructive address on "Plant Breeding" by him on October 28th.

The future of the Club for this year looks particularly bright, considering the large attendance of the student body of Macdonald Hall and O. A. C. at the past meetings. Papers dealing with Strawberry Growing, Pruning, Intercropping of Young Orchards, Regulation of Fruit Bearing, as well as judging competitions, open to all the members, are being prepared and planned by the members for the meetings to be held throughout the year.

Such practical subjects will, we trust, prove extremely instructive, and students interested in Horticulture would do well to attend these discussions to improve his own knowledge and suggest ideas to others. We extend to every student a cordial invitation to attend our "Hort." meetings.

COSMOPOLITAN CLUB RECEPTION AND SMOKER

The annual Reception and Smoker of the Cosmopolitan Club was held in the club rooms on the evening of November 4th. Every year was well represented, and a large number of the Faculty availed themselves of the invitation of the executive and were also present. Over one hundred persons enjoyed this very successful event.

As the guests arrived tables were provided for those who wished to play cards. Euchre, Five Hundred, Bridge and other games were soon under way, and the billiard table was never idle. The "merry click of the balls" did not cease through the whole evening. Ample justice was done to the excellent "smokes" which were provided in abundance. The Club Victrola was kept exceedingly busy with the splendid selection of club records.

Refreshments were served about ten o'clock, after which Dr. Zavitz gave a short address. He spoke of the Cosmopolitan Club as a college home, believing that it was supplying a necessary place in the life of the student at the O. A. C. In closing he expressed his appreciation of the enjoyable evening he had spent, and wished the Club every success in its work.

Popular songs of every description were sung, and as some one expressed it, "everyone sung himself hoarse."

The National Anthem formally closed the evening, and many were the expressions of delight on all sides as the guests departed.

UNION LITERARY SOCIETY

On Saturday evening, November 2nd, the opening meeting of the Union Literary Society was held in Massey Hall. Mr. G. H. Unwin, B. S. A., Hon. Presi-

dent, occupied the chair, and opened the meeting with a few well chosen remarks.

The first feature of the programme was the presentation of the Governor General's Medal for general proficiency in 1st and 2nd years, by the chairman, to Mr. W. C. Hopper.

The programme consisted of a violin solo, by Miss Hattie English, accompanied by Mrs. Fuller; reading, by Mrs. Smith, assisted by Miss Scholfield as pianist; vocal solo, by Mr. J. R. Higgins, accompanied by Miss F. Leeming; reading, by Mr. N. D. Taylor, and a vocal solo by Mr. Ripley, with Mr. Waugh as pianist.

No end of excitement was caused by the "Impromptu Debate," "Resolved, that the good natured slouchy wife is preferable to the tidy, cranky one." Numerous speakers by the "jocular solemnity" of their remarks, afforded much excitement. Enthusiasm ran to such heights that the chairman was obliged to adjourn the debate so that the Mac. Hall girls could get home before "lights out."

The meeting closed by singing the National Anthem, with Mrs. Fuller presiding at the piano.

J. J. E. M.

FOURTH YEAR BANQUET

On October 29th the annual banquet of the Senior Year was held in the College Dining Hall. The occasion was made the opportunity of turning to advantage the handiwork of the "Ag" men in their poultry pursuits. This fact gave an informal nature to the ceremony that added to the enjoyment of the evening.

The guests, numbering 25, were received in the balcony by the Year's Executive, and shortly after repaired to the men's hall.

The dish of the evening, when the reputation of the chicken was still being tested, served only to enhance the fame of the year as first class poultry men. And later prohibition and war time measures could not gainsay the mirth and merriment that followed the progress of events.

Mr. Munro, President and Toast Master, soon got to work introducing the toasts for the evening. "The King" was proposed and toasted by all. During the latter part of the programme Mr. Brink, on behalf of the Year, presented Prof. W. J. Squirrell, the Year's Hon. President, with a malacca walking stick, handsomely engraved and initialed.

The programme was as follows:

Toast, "The King."

Toast, "Our Boys at the Front," proposed by Mr. R. E. Begg, responded to by Mr. H. C. Huckett.

Song, Dvr. E. C. Stillwell.

Toast, "Our Guests," proposed by Mr. T. H. Jones, responded to by Dvr. E. C. Stillwell.

Song, Mr. J. R. Higgins.

Toast, "The Faculty," proposed by Mr. R. D. Allan, responded to by Prof. W. R. Graham.

Duet, Dvr. E. C. Stillwell and Mr. C. F. MacKenzie.

Toast, "The Year," proposed by Mr. R. A. Brink, responded to by Prof. W. J. Squirrell.

O. A. C. STOCK SALE

How much am I offered for this beautiful snow white heifer, Augusta O. A. C. 5th? How much? How much? Six hundred, I'm bid—six hundred! Who'll make it seven? Seven hundred dollars I'm offered. Who'll make it eight? Eight, eight, do I hear eight? Eight I'm bid—eight, who'll make it nine! Nine hundred for this beautiful

Augusta queen—make it ten, gentlemen, make it ten. And fifty. Nine-fifty I'm offered, only nine-fifty, make it an even thousand. All done at nine-fifty—all done? First and last call fair warning. And sold for nine hundred and fifty dollars to Carpenter and Ross, Mansfield, Ohio, one of the largest breeders of Shorthorn cattle in North America.

Thus the annual sale of live stock at the College Farm on October 31st conjures up to students and ex-students alike a decided interest in the event, for the sale is the product of long years of breeding and patient effort, and the animals put up for auction show marked individuality and breeding. This year so important was the event deemed that Second, Third and Fourth year students were given an opportunity of attending the sale. For this we were duly thankful.

The Hon. Geo. S. Henry, Minister of Agriculture, C. F. Bailey, Assistant Deputy Minister of Agriculture, besides many agricultural representatives from the surrounding counties were present, and in some cases judging classes accompanied them. Mr. R. W. Wade, whom we all associate with the Winter Fair, was also present. From the number of cars parked around the Animal Husbandry building one could judge a large crowd was present. Many prominent breeders added to the quality of their herds by purchasing this famous O. A. C. stock. Some breeders were: J. M. Gardhouse, Weston; W. A. Dryden, Brookling, who by the way is an ex-O. A. C. student; J. D. Bryan, Ridgetown; Graham Bros., Brittonia Bay, and graduates of the College; John Weld, of the Farmers' Advocate, London; John Amos & Son, Moffatt; Jas. Fallis, Brampton; J. W. Lloyd-

Continued on Page XIII.



ATHLETICS

OPELL

WHY FIELD DAY WAS CANCELLED

It was with great expectations that we looked forward to our Annual Field Day, which was originally to be held on October seventeenth. Owing to the epidemic of Spanish Influenza, and consequently the closing of lectures, it was necessary to postpone the meet indefinitely. At last, however, the way appeared clear to hold Field Day on the second of November. A notice was posted to this effect and preparations made.

Our attempt to hold the meet was once more frustrated by adverse weather conditions, the weather being cold and wet. It was feared by the College Physician, that new cases of the influenza would be contracted or relapses occur.

It was with these advises before us, that the Athletic Executive considered it wise, after a lengthy discussion, to cancel Field Day for this year, and turn our immediate attention to other lines of sport. G. M. S.

FOOTBALL

O. A. C. at Woodstock

O. A. C. were beaten by Woodstock College by the score of 12 to 0. The game was featured by the sensational backfield play of Sins of O. A. C. and Bell of Woodstock, both of whom ran punts back brilliantly, and punted to good advantage.

There was no score in the first period, and Woodstock scored her first touchdown, which was converted, in the second period. In the third period Woodstock again crossed our line for another touch, which was also converted.

GUELPH COLLEGIATE 15, O.A.C. 2

The Annual Field Day was scheduled for Saturday, November 2nd, but was cancelled on account of adverse weather and a rugby game with the Guelph Collegiate was arranged at the last minute. In a previous game early in the season the College managed to win by a small score. Since that time the Collegiate had improved their condition and team play, and it was realized that the College would have to work to win. The game was reduced to ten minute quarters to eliminate chances of injury, as both teams needed their full strength for later games.

From the commencement of the game it was plain that the smooth team play of the Collegiate gave them a decided edge. They gained yards time after time, and quickly worked the ball into the College danger zone. Collegiate scored a touchdown in each of the first three quarters, but failed to convert. In the last quarter the College defence stiffened, but were lucky to keep Collegiate from further scoring. College scored two rouges in this quarter, their only scores of the games.

College wing line looked very bad throughout the game. In fairness to the boys, however, it should be stated that no practices were held during the preceding week on account of the proposed Field Day; and the Influenza earlier in the season prevented the development of a strong football machine. A number of the boys who played in Woodstock on the previous Saturday, Clark, Coon, Hockett and others, were absent from the line-up through injuries.

Though the College team was working under difficulties, the Collegiate boys must be given credit for the good game they put up. Carroll and Buckland deserve particular mention. Mr. Hooper, the Collegiate coach has a team to feel proud of, and we expect to see the G. C. I. in the finals of the Junior O. R. F. U.

Following is the College line-up:—
 Quarter, Birks; Flying Wing, McCague; Halves, Sirls (Captain), Stirrett, Bryson; End Wings, Whiteside, Stillwell; Middles, Wildman, Eidt; Inside Wing, Hendrie, Joner; Scrimmage, Snyder, McMillan, Malkin.

Referee—S. H. Gandier.

Umpire—Mr. Winegard.

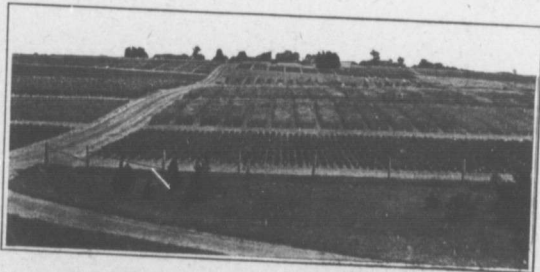
THE TENNIS TOURNAMENT

The outlook for tennis this Fall was

exceedingly promising, the annual mixed doubles having entries of twenty-nine couples. However, the epidemic of Spanish Influenza, which resulted in the closing of both Macdonald Hall and the O.A.C. for some time, reduced the players to twenty-two couples, and necessitated the postponement of the schedule for over two weeks. In spite of this the tournament finally got down to the semi-finals with three couples left. After drawing for the bye, Miss Forester and Mr. Higgins were beaten by Miss H. Scott and Mr. Grant, who then played off with Miss Chase and Mr. Richardson. After a very thrilling game, in which the honors were about even, Miss H. Scott and Mr. Gerald Grant came out winners, making them champions for this year.

For the semi-finals and finals the Faculty very kindly offered the use of their clay court, which very materially aided in making the tournament a success. Great credit is due Mr. M. Jamieson and Mr. G. Grant for arranging and handling the schedule.

Judging from the interest displayed and the number of good players in evidence both this and other years tennis has proved itself worthy of consideration as one of the important branches of Athletic Society activities, especially on this side of the campus.



MACDONALD

Scene—English class study Henry
IV. On the board:

Northumberland—H. English.

Blant—L. Beaman.

Worcester—J. Flatt.

Hotspur—W. Suttaby.

Mr. Unwin—"You will see by this speech the hot-headed, radical, wild, reckless character of this man Hotspur. Miss Suttaby has this character."

Have the O. A. C. boys the same opinion of the Macdonald students as Gong, the Chinese cook at the hospital? He says, "Very nice girls, but no head!"

After the Initiation.

1st Student—"I recognized you last night in spite of your disguise."

2nd Student—"How did you do that?"

1st Student—"Why, I knew you by your tail!"

Five o'clock in the morning after Thanksgiving.

Sleepy Student—"I wish I knew whose wretched rooster is crowing!"

Room Mâte—"That's no rooster! It's those girls who are so full of chicken they have to crow!"

"Is a dead mouse dry or wet garbage?"

"Neither. Give it decent burial a few inches below the surface where bacterial action will set in rapidly."

Why is the open kettle method of preserving fruit the most satisfactory? Because it's O. K.

THE "PROM"

The "Prom—!" For days it had been the sole topic of conversation in dining - room and corridor. And wherever the "prom" was discussed, the question arose, "Are we to dance?" The final decision was, however, satisfactory to all, for those who wished to dance might do so in all except the three musical numbers, while those who preferred might "prom" in the halls.

There was yet another matter to be decided, and this was even more important than the dance, for it involved the social functions for all the year, the question whether or not refreshments should be served. In view of food conditions, it was unanimously decided that there should be no refreshments.

On the fateful Friday evening of October the fourth, intense excitement prevailed, especially in those corridors where juniors were numerous, for this was for them the very first affair of the kind, and the seniors, who never appeared so sophisticated as on the evening, had assured the newcomers that this was indeed a momentous occasion for the "freshies." The musical numbers of the evening were especially enjoyable. Mrs. S. Brown favoured the assembly with two songs; Miss Hattie

English rendered a beautiful violin solo, and Mr. MacKenzie sang, and generously responded, to an encore.

Several girls, of musical ability, kindly supplied the music for dancing. Needless to say, this was much appreciated. All of these factors, as well as the tastefully decorated gym, with its autumn tints, contrived to make the "prom" the success which everyone declared it to be.

Mrs. Fuller returned to Macdonald on Wednesday, October 23rd, after visiting her daughter. She was intentionally kept in ignorance of the epidemic, lest she should hurry back. Although no detail was overlooked which could make for the comfort and well-being of both the rich and the whole, yet the housemother's strong, beautiful personality was greatly missed. It was felt, however, to be a fortunate occurrence that she was spared the fatigue and anxiety of the strenuous situation which taxed heavily the strength and capacity of those who took over her duties under such exceptional circumstances.

JUNIOR ELECTION

The junior elections took place on Monday, October 28th, with the following results:

Athletic Representative—Miss Jessie McDonald.

Review Representative—Miss Olive Gardiner.

Vice-President of Literary Society—Miss Luckham.

Philharmonic Representative — Miss Leeming.

Vice-President Y. W. C. A. — Miss Stemmi.

Recording Secretary Y. W. C. A.—Miss De Haviland.

Press Representative Y. W. C. A.—Miss Cass.

Social Convenor Literary Society — Miss Rogers.

Programme Convenor Literary Society—Miss Taylor.

Decorating Convenor Literary Society—Miss Staples.

Y. W. C. A.

On the evening of September 29th, the second Sunday of the college year, the students of Macdonald Hall were privileged to have with them Miss Velma Hamill, Student Secretary of the National Council of the Y. W. C. A. Miss Hamill has been engaged in Y. W. C. A. work for several years, and is thoroughly familiar with it in all its branches, and her address was full of information, and useful suggestions. This was an exceptionally important meeting, as Miss Hamill visited the college in her official capacity, and her counsel was of great assistance in organizing the coming year.

On Thanksgiving Sunday, though but a few remaining students were able to attend, yet a vesper service was held in the Drawing room. Mrs. Yeftich who had come to the Hall to help nurse the sick, gave a few minutes talk on the heroic work of the Scottish nurses in Serbia at the time of the typhus epidemic. Before she had finished she had made her hearers feel that one of the noblest things in life was to serve in times of trouble.

In spite of the prevalency of the influenza, the Y. W. C. A. met as usual on Sunday evening, October 20th, in the Drawing-room. Mrs. Dawson, who had been engaged in National Service work both in England and Canada, gave an interesting talk on the var-

ious capacities in which women were rendering service to their country. Few of the many present fully realized what a splendid work the farmerettes were doing, before hearing Mrs. Dawson's account of the experiences of herself and the girls under her supervision as farmerettes on an Ontario farm last summer. The farmer at first was very averse to them, giving all kinds of strenuous and distasteful jobs to discourage them. But by a cheerful perseverance they were able to accomplish what the farmer deemed impossible, and thus proved to him their real value. The same farmer is asking for many more farmerettes next year.

"It's an ill wind that blows nobody good." Owing to the city churches being open for one service only on October 27th, the students were privileged in hearing an address by Rev. W. Scovil, of St. George's Church. He spoke to us from his own experience of social work, pointing out some pitfalls to be avoided, and emphasized the need for more love in our dealings with our fellows. Miss Germain took the chair, and a song by Miss Totten was very much appreciated.

THE INFLUENZA EPIDEMIC

Macdonald has been shaken out of its accustomed routine by the visitation of the influenza epidemic.

The first two sufferers were removed to St. Joseph's Hospital, where they received the best of care, but it soon became evident that Macdonald Hall must be its own hospital, as one after another the students showed symptoms of the malady and were ordered to stay in bed. Quarantine was declared, but those girls who wished to go home were allowed to depart.

It was fortunate that the college was

attacked before the city, so that Dr. Stewart was able to make frequent visits.

Probably no one knows, or will ever know, how hard Dr. Ross worked at this time. With her hands more than full, she went on her way with an un-failing smile, ministering to the sick and encouraging the workers. Miss Fraser, who was taking Mrs. Fuller's place in the office, was an early victim.

Mrs. Yeflich and Miss Gordon nursed the patients with unflagging devotion, and Miss Hemming volunteered to assist them and gave much valuable help until she also was laid low. After her recovery she went to nurse at the Isolation Branch of the General Hospital, where half of the staff was incapacitated.

The senior housekeepers were organized into a band of amateur dietitians, to plan, prepare and serve the nutriment for the sick students, which was carried round five times a day. As their numbers were reduced through illness or departure—some being summoned home to care for stricken relatives—other students, both senior and junior, filled the gaps and rendered excellent service. No classes were held for more than a week, chapel services were discontinued, and social activities were at a standstill. There were more than fifty cases in the Hall, few being of a serious character.

Dr. Ross attributed the comparatively light form of the ailment, and the rapid recovery of the patients, to two main causes: The fact that all Macdonald students are required to present a certificate of sound health and constitution before being accepted, and the regularity and suitability of the diets provided for them during their illness. Miss Watson also emphasized this second point. The sufferers themselves

declared that they could not have received better attention in their own homes.

Classes were resumed on Thursday, October 17th, but there has been considerable irregularity in attendance. Some of the city folks considered that the Institute should have been closed, and the students set free to nurse some of the many suffering families in Guelph. This was a somewhat unreasonable idea. The authorities of a college assume certain responsibilities towards the parents of students which could not be set at naught in such a fashion. Miss Watson, however, recognized that there was a work which could be done, without risk to health, by such students as were willing to undertake it, and after consulting her senior housekeepers, she offered their services to the hospital as assistants in the kitchen. Other volunteers have eagerly come forward and it is probable that a Macdonald squad will go over every day until the usual staff is able to return to its duties. Their efforts have been much appreciated, and their cooking warmly praised.

INITIATION

The preliminary penalty imposed upon the freshies this year, was the wearing of a green ribbon fillet around the head, with four clothes-pins dangling therefrom. For six whole days they manfully endured this decoration, but the announcement that initiation night was fixed brought a feeling of relief.

On the evening of October 2nd, there trooped into the gymnasium, after assembling in the basement, a crowd in various wonderful disguises. There were, among others, the Katzenjammer family, Fanny Farmer, Puss in Boots, Happy Hooligan, Mutt and Jeff, Char-

lie Chaplin, Fatty Arbuckle, Cis Hopkins, a bevy of ballet dancers, some street arabs, a group of washerwomen with abnormally large waists, a bunch of "back-to-front" ladies, some sacks of grain, a donkey and a cow (each with four legs), the best looking and the homeliest men in the O. A. C., a weird individual half man and half woman, and a group of quaint grannies and grandfathers. Perhaps the most diverting moments of the evening occurred when these venerable folks joined hands and hobbled slowly round in a game of "drop handkerchief." Much ingenuity was displayed in improvising costumes, and the spectacle was full of interest and novelty.

The usual array of white-robed ghosts and black witches with brooms and pitchforks, greeted the freshies as they arrived, and struck awe into their souls, while two little red devils ran around administering doses of a vile compound to the slow or unsubmitive.

Bravely did the victims perform the penalties imposed upon them, amidst hearty laughter. A spirit of modification and good sense had controlled the programme, and though some of the tasks were dangerous or really unpleasant. A solemn declaration to conform to all Macdonald rules and to love, honour and obey the seniors, was the final obligation, and then the gym rang with cheers for the juniors, for the seniors, for Miss Watson, for Mrs. Fuller, and for the Faculty. Mrs. Fuller was greatly missed on this occasion, but much gratification was afforded by the presence of Miss Watson, so rarely accorded to Macdonald Hall festivities.



MALE PSYCHOLOGY OR OUR IDEA OF A GOOD TIME

After missing the car, and walking up the College hill, we were tired. Our feet were tired. Our limbs were tired. In fact we were tired all over. But the minute we opened the door of the Club we were tired no longer—that is we no longer remembered that we were tired—and entered immediately into the overwhelming spirit of geniality.

"Hello Jack!" "Anything I can do to help out? Gad! There's a great crowd here to-night"—we realize that this means standing on our tired feet, but yet we smile benignly. "Gee! Look at all the new member cards." "Guess we'll have to build a new club house, Wallace."

After elbowing our way to a place to leave our coat, we hear someone asking us to make a fourth at Bridge. Probably it's the chap who took our girl to the movies last night, but the spirit of the evening prevails and we greet him as our most cherished friend.

When the table is arranged the feeling steals over us that someone is smoking. Of course we accepted the cigarette proffered us at the door, but took it as an honor of distinction. When we look around, everything seems veiled in blue, and every face lit up by the sparkle of a cigarette, or the glow of "The Old Friend" filled with Macdonald "chewing."

We commence to play, but our brains are dulled by the blue atmosphere. Our eyes smart, and our head goes round;

yet we persist in smoking violently, and smiling genially for we're having a good time.

Just in the middle of a ticklish hand, some one puts on the most "jazzy" Jazz Band record in the Victrola collection, and as a result we pull an awful bone. But such is the mind of man that we insist that we're having the time of our life.

After supper someone gets up and sings "Coon" songs, with a broad Scotch accent. We immediately call him a hero—which he really is, only not in the way we mean.

Finally the spirit moves us, and we rise to the occasion with a few classmates and sing several of the good old rafter-ringing ditties.

The first couple are not too bad as we leave them to those who can sing; but at length we burst out in all our glory. Our one ambition is volume; we rather pride ourselves on it. After all, someone has said that "Harmony is the blending of discord." So we set bravely out to prove it, but somehow we forget the blend.

Even the ones who can sing throw aside their training, and tear off into notes unheard of till now.

But the effect is wonderful. Soon everyone is joining in to his greatest ability. One insists on being a Banjo, another fancies a Ukelele, while a third does a clog dance.

Finally the crowd breaks up in the best of spirits, declaring it had a wonderful time. We agree with it heartily.

Yet when we start on our way home our old tiredness returns and we commence wondering why we feel that we've had such a good time. We're wondering still, and yet our presence at the next "Smoker" is assured as strongly as Death, Taxes and Victory Bonds.—*Warren Oliver.*

SIDE LIGHTS ON THE STOCK SALE

When Piggie Bucked Year Nineteen

"Sold," roared the auctioneer automatically. "I congratulate you," he piped hypocritically to the man who had paid the fabulous price of fourteen dollars for the smooth little black Berkshire, with blue blood in his veins, his father being a Prince somebody. "Such a price," scoffed the man on the box, "for a pig of his excellent qualities and breeding."

The youthful Berk, who had been very skilfully guided to the exit by the artful Matty (who, it might be added, looked exceptionally professional in his overalls of blue), slacked up just in time to overhear the final timely ejaculation of the orator with the four hundred and fifty R. P. M. tongue.

"Ah," he squealed gently to himself, "I haven't been properly appreciated. That guy on the box hasn't given them men in the bleachers enough time to lamp me over. I'll just tote me back around that there ring and make some of them tongue-tied pig-raisers feel deucedly disappointed." So he scampered through the muscle-bound seniors to the shaved ring beyond.

And now it hapened that usher Hunter's right eye was unable to clear the rest of his face in time to prevent a specimen of young swine, about to become the centre of the audience's gaze, from continuing her piggie-gait to-

wards the determinists of her future destiny; so she trotted gracefully over to pow-wow with her litter mate, the indignant one.

Spectacled Begg, having just secured the details regarding the purchase of the rebellious Berk, bristling with business, was picking his way across the ring. Suddenly the laughter of the audience acquainted him with the intelligence that his dignified walk was not making the desired effect. Glancing with much annoyance in front of him he perceived the nubian hogs and instinctively repelled them with one of his number tens.

The pair, terrified by such an unexpected onslaught, decided on a strategic retreat and flanking each other, sped back round the ring, cheered on by the awakened crowd.

The noble nineteen men, reinforced by Messrs. Leitch and King, red-blooded all, calmly closed their ranks and bravely decided to stop the twain or be trampled under.

However, the Berks, having by this time become thoroughly warmed up, easily pierced the thin human line and led Grand Champion Gunn, the lank and lithe Jerry Grant and puffing Cecil Tice around the amphitheatre.

How long such a race would have continued is a matter of conjecture, for the piggies were fast and slippery and the fourth year men amateurs at corralling baby pigs. But the brilliant brain of tragic-faced MacKenzie suddenly conceived an idea with lightning rapidity.

Those pigs must be separated and the unruly one ejected from the ring! Why, the sale was being held up! And the crowd was ridiculing the furious futile efforts the men due to graduate in the spring of nineteen nineteen. Must some grim old farmer be forced

to descend from the galleries to catch a little pig! No! Not by a darned sight!

Suddenly the crowd held their breath, as they beheld a human leopard hurtling through the stock-tainted atmosphere, narrowly missing a hitching post. Such a tackle! Never before, in all the brilliantly played rugby games of the O. A. C. had so spectacular an acrobatic feat been perpetrated. His sinewy fingers clinched piggie's left hind limb. But, lo! that valiant stockman's muscles had softened since summer and something that anyone knowing wiry Mac. would never even have hinted at happened. The little Berk once more sped on his way, leaving disgusted Mac. sprawling amid the trampled shavings. At this point Lamont, with a tear oozing from his eye, ran up to render first aid to the fallen hero. Great was his joy to discover that the only assistance necessary was a hand up and the removal of some shavings from the dour Scotchman's hip-pocket.

And, what of piggie?

Tired by his energetic endeavors, he was forced to succumb—when the unvanquishable Gunn, seeing piggie halt for a moment, shot out his arm and clutched a hind leg. Aylesworth, seeing a chance to star, located a fore-leg and, getting into stride with Wallie, helped to carry the porker to the fence and to lower him to the proper side.

And the sale continued.

NOTES FROM A SOPHOMORE'S DIARY—OCTOBER

To-day we had practical botany from 1.30 until after dark. We tramped all over Wellington County looking at trees and learning how to tell one kind from the other. I know the evergreens from the deciduous ones now, of course

I could tell them apart before I came here, but I don't know how I did it. Mr. Wright made it all so clear in today's lecture that I don't know how I'll ever learn enough for the practical exam.

This year we have to walk farther than they used to do in order to find the trees to study. That is because Jerry Grant and Warren Oliver have labelled all the trees on the campus, and Prof. Howitt doesn't want us to get familiar with the labels, but with the trees. We are hoping that the examination will be held on the campus, where the trees are labelled. If it is our motto will be: "Stop, Look, Listen!"

One of the lecturers gave us a long talk on a Cork Elm we found. He pointed out all the Cork Elm characteristics on it, and had us pretty sure of it when Mister Eidt found some oak leaves adhering to one of the branches. Of course it was easy to mistake an Oak for an Elm when there weren't many leaves left. Perhaps if we get mixed up in distinguishing between the White Pine and Douglas Fir some leniency will be shown..

We learn the uses of the various woods too. Dr. Stone pointed out a Blue Beech and told us of the purpose it sometimes served in the olden days. Teachers must have been cruel tyrants twenty years ago.

Next week we go on another forced march. Some of the boys intend taking compasses. I'd like to go on horse back. That line in Hiawatha, "At each pace a mile he measured," always seemed extravagant to me till to-day, but now I believe it's possible.

If Harry Lauder II. still insists on "getting spoony on Mary" what will Jack Pickford say.

NEWS

Many of our ex-students have been asking us "What's doing at O. A. C. this year?" For the benefit of these who wonder just what is going on at the old place we are going to ramble along and jot down the ordinary, every-day affairs that may be of interest.

There isn't quite the usual stir on the Heights this year, and pranks are rather uncommon. The O. A. C. Student Body numbers 173, including five girls, one in third year, and four in first. The enrollment for the various year is: First year, 87; Second year, 39; Third year, 18; Fourth year, 23; Manual Training, 3; Special Course, 2; B. Sc. 1. Though things are quiet the boys are not "dead." They are quite alive, and are directing their energies toward preparation for the approaching Examinations.

The Influenza epidemic caused considerable alarm and a great deal of illness and consequent work. Owing to the timely steps that were taken in securing nurses, who cared for the boys very efficiently, there were no deaths at the College. The whole of Upper Hunt was used as a hospital, and upwards of thirty patients were cared for during the two weeks of the epidemic. Lectures were suspended for one week on the recommendation of the Health Authorities.

Some of our boys who served overseas are now continuing their courses here after receiving their honorable discharge. Among the returned men are: G. W. McCall '14, N. Curtis '16, S. Hessel '16, H. C. Hockett '16, E. Hearle '16, Sanford '17, Flatt '19, Howarth '19.

About this season every ex-student thinks of the Chrysanthemums in the green house. This year the collection

is finer than ever. The sight is simply gorgeous, and many visitors come daily to see the beautiful display.

This summer a new section has been added to the Animal Husbandry building. The wing is nearing completion, and the rooms will soon be ready for occupation. The lower floor will be occupied by the Animal Husbandry Department, while the second floor will provide new space for the Bacteriology Department.

There are few changes in the lecturing staff. What changes there are have been chronicled in the Alumnae pages from time to time. It is of interest to many to hear that J. P. Sackville, B. S. A., is returning to the College to resume his work on the Live Stock Department. Pending the arrival of Dr. Burton N. Gates, Mr. W. A. Weir is lecturing in Apiculture to the first year students. Eric Hearle is Resident Master, with H. C. Hockett Assistant.

College functions have not entirely died out at O. A. C. A casual glance over the "College Life" Department will be sufficient to see that the "Lit," "Cosmo," and various clubs are going strong.

The attendance at Mac. Hall is almost as large as usual, there being in all, 113 girls enrolled in the various courses. The influenza situation at the Hall was very acute, but the sixty invalids all have been able to continue their studies.

The C. O. T. C. began drilling at the College on Wednesday, November 7th. Reports that German Embassy was seeking an armistice on Thursday, November 8th, were taken quite as a matter of course by the students. They expected, however, that it would have required longer for Germany to have learned of the O. T. C.

Habits

CALLING at Mac. Hall is in itself not a habit formation; it is simply the visible effect of a powerful thought impulse, in the production of which we have voluntarily assisted. We need not repeat the act unless we choose to do so.

A true habit formation is something quite different. It is created somewhat as follows:—

In our daily lives at College we consider an action regularly repeated as a habit. When we perform an act for the first time it leaves in our memory consciousness an effective accompaniment. Authorities on the subject of "Mac. Hall Habits" inform us that if the impression made over there is favorable it usually possesses pleasant affective accompaniments. That this impression is not always favorable we will not venture to say. However, assuming that the visit has left in our mind pleasant remembrances, we need not repeat it unless we wish.

My will to do or not to do a thing may have the same motive from evening to evening or from week to week, but I cannot store it up to use over and over again. The impulse to repeat an act may occur involuntarily in my consciousness, but the carrying out of the impulse involves the suppression of the opposite impulse, and I do not repeat the act unless I will to do it again. If I deliberately do this, a repetition of the experience leads at first to an increase in the gross amount of the attendant joys, but if repeated too often the distinctness of the pleasure becomes dimmed by its very monotony. When repetition accomplishes this result it can no longer be called a pleasant experience, and if still indulged in

for a motive or motives unknown it then becomes a habit.

The above is, roughly speaking, the mental routine of habit forming, including the formation of the so-called "Mac. Hall Habit." Other habits are formed at the O.A.C. as well. Among them are the "Street Car Habit" and the "Lecture Habit." Regarding the former we can safely say that it is unwise to allow it to become firmly seated, for aside from the fact that each ride calls for a separate fare, it tends to develop the spirit of inertia and lack of appetite. These, with other evils due to laziness, are the consequences. Regarding the habit of attending lectures or the "Lecture Habit," it seems to be a necessary feature of College existence because for some unaccountable reason the Faculty is ever prone to look with disfavor upon any student, no matter what his creed or class, who deliberately schemes to avoid attending them. And besides who does not desire to experience the unalloyed pleasure of meeting such individuals as the *Protobasidiomycetes*, *Macroductylus subspinosus* and all their delightful kind? Thus we are forced to admit that the "Lecture Habit" is one which, viewed from any angle, must be embraced by every student who would complete his course with distinction to himself and honor to his associates.

Returning to the subject of general habits, it is a well known fact that rhythmic acts are more agreeable than those which are broken and irregular. This is given as the reason for the popularity of the "Dancing Habit." But whether this explanation is sufficient or not, personal observations by

the author have so far failed to reveal any great amount of grace or rhythm in the modern dance as usually presented. Therefore, if we would discover the truth we must look to other sources for the cause of its popularity. To the keen observer it would appear that the "Dance Habit" is closely related to the "Mac. Hall Habit." But so far the reason for their popularity is, like the currents of the upper strata of the atmosphere, only dimly understood. It would seem advisable then for any persons interested in this particular phase of the subject to do a little original investigation and experimentation in order that they may be in a position to discuss the question intelligently, should it arise on any future occasion.

E. L. EATON, '20

NOTE—The author wishes to acknowledge with gratitude the assistance received from "American Medicine," in his description of the cause of Habit.

It has been recommended that suitable chaperones be provided to accompany certain freshmen when they go down town. We are all agreed that these children should not be permitted to visit the wild, wild Village of Guelph without adequate protection. That they are a harmless, innocent lot may be gathered from the statement made in the Guelph Herald of November 8th. Never mind, boys, in a couple of years you will have come to the age of discernment, and at that time, if the war is over, you may demonstrate to the people of Guelph that you have the old O. A. C. blood in you.

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COLLEGE LIFE.

(Continued from Page 129.)

Jones, Burford; Byron Robinson, Wheatley; A. W. Whitelaw, Guelph; W. B. Hendrie, Hamilton; John Miller, Brome, and John Miller, Jr., Ashburn.

The interest was keenly evidenced by the spirited bidding for individuals representing the Augusta, Lavender and Roan Lady families of Shorthorns — the eight head, including four young bulls, brought \$3,755.00. Two Aberdeen-Angus bulls, five young Holstein bull calves, two very young Ayrshire bull calves, two Jersey bull calves, and one grade Shorthorn cow, brought a total of 31,350.00.

In keeping with the increased inter-

est in sheep breeding, forty head were sold, including some very promising ram lambs of Leicesters, Shropshires, Oxford and Southdown breeds, averaging about \$39 each.

Among the swine offered were forty-two Yorkshire sows of high quality, averaging \$48 each, the highest price paid being \$100, while in the Berkshire class the average was \$28, including a number of young pigs recently weaned.

The total proceeds of the sale amounted to \$9,500.

W. P. S.

OF COURSE!

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PHONE 888

Upper Wyndham St.

The crowd at the theatre was long and very mixed. A stout, coarse man amused himself during the long wait by saying sweet nothings to a pretty girl who stood next to him. "I wish you would leave me alone!" she said, angrily. "All right, all right," say dear!" said the coarse one; "but don't eat me!" The girl looked him up and down. "You're in no danger of that!" she said; "to-day is porkless day."

J. C. WALKER,
President.

E. J. C. WALKER,
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