

PAGES

MISSING

THE O. A. C. REVIEW

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

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Colony House Brooding

By E. C. Foreman

Commercial poultry breeders all agree that renewing the flock is the greatest drawback to success in the industry.

Our ancestors would have us believe that failure to secure a fine flock of pullets, results from disregarding the old theories of the moon's influence on all incubation and brooding operations or that cornmeal as an ideal chick ration is not fully appreciated by poultrymen of today.

In this enlightened age such theories are ridiculous, as the ability of the egg to hatch is an hereditary character, peculiar to the individual. The eggs of certain hens will hatch, whether incubated during the light or dark of moon, while with others it is almost impossible to secure a strong healthy chick. A comparison of the composition of cornmeal and a growing chick, clearly shows how impossible it would be to attempt raising chicks on cornmeal. A balanced ration is as necessary for growing chicks as for heavy egg production. Since the chick's body is made up of what is received into it in the form of food, it is evident, that the character of the food assimilated will determine the character of the body. The food determines the kind of growth and if deficient in any nutrient, the growth will also be deficient in that respect, thus a very close relationship exists between the growth of the individual and the food it eats.

On the rearing of chicks depends the results in egg production later on. The first six weeks is the most vital epoch

in the life of the chick, and after reaching this age the rest is practically smooth sailing. Of the millions of chicks hatched annually, it is a safe estimate that not over 50% are matured. How to reduce this great burden of expense and get a larger proportion "from egg to egg," thus swinging the balance of profits to the poultry breeder, is the problem.

UPON SUCCESSFUL BROODING DEPENDS:

Pre-Natal Conditions—Only breeding stock of strong physical condition will be able to transmit vitality and hustle to the chicks, chicks that will live and grow every day from the time they emerge from the shell. Conditions affecting the physical welfare of fowls is a long story in itself, suffice it to mention here, that fresh air or open front housing, deep litter feeding, with animal food given in the form of skim-milk, all exert a beneficial influence in that direction.

Incubation—The old saying that a well hatched chicken is half raised contains a great deal of truth. It is generally supposed that incubator hatched chicks do not have so complete an absorption of the yolk as do the hen hatched chicks. Commercial poultry farms whose stock have been hatched year after year with incubators entirely, show no signs of weakened vitality which leads us to believe that, incubators properly operated, can and do produce robust and thrifty chicks.

Brooding—The season for artificial brooding with the coal burning brooder stoves, is limited to the months of

January, February, March and the first two weeks in April. After this date it is almost impossible to obtain satisfactory results due to the variation of temperature. On warm days the fire must burn so low, that in a great many cases it fails to recover, and the attendant is continually building fires. The oil hovers should be substituted after April 15th.

The three great advantages of the colony house system of brooding are; 1. The concentration of numerous small flocks into a few larger ones. 2. Free range made possible. 3. Raising of flock absolutely free of vermin.

Flocks, numbering over 1000 chicks, have been successfully handled. This however, will depend largely upon the quality of the chicks.

Many good makes of coal burning brooder stoves are now on the market and the results with them are proving eminently satisfactory. The novice will secure better results by placing about one-half the rated capacity of chicks with each brooder, and in every case should give the brooder a thorough test before placing chicks in it.

The ideal initial temperature will vary from 91° to 95° Fr. depending largely upon the size of flock and quality of chicks. The temperature should in all cases be reduced as rapidly, as the chicks grow older, as is compatible with their comfort and all artificial heat removed after chicks are feathered. A wire screen of $\frac{1}{2}$ in. mesh should be placed around the hover, leaving sufficient room to give the chicks a choice of temperatures. If this precaution is taken for the first few days, the chicks will soon learn to return to the hover when the least bit chilled.

Feeding—The digestive apparatus of young animals is larger than that of the adult in proportion to their live weight, which is a physiological explanation

of their rapid growth in proportion to their live weight. The object in feeding is to get the chicks through the critical period in their development with small mortality and with as rapid growth as is consistent with health and vitality. Such rapid growth necessitates an abundance of easily digestible and nutritious food material. The chicks should not be removed from nursery of the incubators until at least 24 hours after completion of hatch. Keep the nursery darkened and well ventilated. The first day in the brooder house, fine grit and sour skim milk, only, should be given them, thus filling the gizzard and getting the digestive tract in working condition and ready for the first feed. The yolk of the egg is absorbed just before the chick emerges from the shell and is sufficient food to last 48 hours. The chick will have by this time, used the yolk completely and by thus retarding early feeding, bowel trouble and digestive disorders will be reduced to a minimum.

Skim milk should be given at least, for the first two weeks. It has a value that cannot well be overestimated. It retains all the protein and ash elements most essential to the growth of young chicks. It tends to prevent mortality from all causes, and if fed soon enough will greatly reduce the death rate caused by bacillary white diarrhoea. Moreover, it is palatable, aids digestion of other foods, resulting in increased consumption and faster growth.

The "first feed" which has probably given the most satisfactory results, with all classes of poultry breeders and for all varieties of poultry is rolled oats, fed five times daily, at intervals of two and half hours, at the rate of 1 oz. to every 25 chicks. Equally good results are claimed by some people when bread

soaked in milk and squeezed dry is given as a "first feed".

On the third day this is changed to a mixture of hard boiled, infertile eggs, ground fine, shells included, mixed with six times its bulk of rolled oats or dry bread crumbs. A small quantity of fine charcoal and chick grit are also added. The eggs fed at the rate of 1 to every 100 chicks seems to be the proper amount. This mash is given four times daily and one meal of chick feed is introduced.

The fourth to eighth day the above mash is fed three times, chick feed twice, and one meal of sprouted oats given daily. The oats should be fed while the sprouts are from one to one and a half inches in length. Chick grit and fine bonemeal should be available at all times.

The green food is a necessity in poultry feeding as an appetizer and tonic; it aids digestion and assists all body functions. With sprouted oats, the protein and ash contents run higher than in most succulent foods. Deprivation of all green foods for a short time soon shows lack of development. The assertion is that green food enables a fowl to assimilate larger quantities of grain than otherwise and to that extent quickens growth.

After the eighth day the chicks are rapidly becoming hardier and economy in feeding must be considered. The moist mash of eggs and rolled oats is gradually replaced by a mash containing meat scraps, starting with 5% and increasing to 10% as chicks get older, along with equal parts by weight of cornmeal, middlings and bran, plus 3% charcoal. Bread soaked in milk is used for moistening the mixture.

Cracked wheat and corn, in equal parts, are added to the chick feed, and as soon as the chicks are capable of

eating the larger grains, the more expensive chick feed is eliminated.

A dry mash containing 2 parts bran, 2 parts ground oats or crushed oats, and 1 part meat scrap is fed in flat hoppers placed on the floor. Sprouted oats should be given from the fourth day on until pullets are able to get out on range and forage for themselves.

At the age of twelve weeks the cockerels should be separated if the breed is early maturing, as in the case of the Leghorn family. The pullets should then be put on a developing mash of bran, middlings and cornmeal in equal parts by weight, 10% meat scraps, 5% oil meal and 2% charcoal, this mash to be available in hoppers at all times.

If it is desirable to force the pullets, the above mash, moistened with milk, and fed in a crumbly state twice daily will bring the desired results. The oil meal fed in larger quantities than 5% makes the mash very sticky and more difficult to mix.

The above method of raising chicks (Leghorns) produced remarkable results. Flocks of 300 and upwards were matured with the small loss of 5% mortality. With winter chicks, too much emphasis cannot be placed upon the value of protein concentrates. If broilers only are desired the greatest and quickest growth can be made by liberal feeding of meat scrap. The addition of ash constituents to rations composed of certain feeds is absolutely essential, making straighter breast bones and stronger frames.

In feeding the pullets from the time sex can be distinguished until maturity, aim to keep them growing as rapidly as possible without forcing into pre-mature production. Feed as fast as they will grow, without injuring their digestive apparatus.

Do You Grow Corn?—Then Know Your Seed

By N. R. Martin '16.

Year by year the acreage of corn is increasing. The Corn belt is creeping Northward. Who would venture to define it's limits? It has been done—foolishly, we think. In these days we are becoming very much interested in Corn growing. That "good seed is the basis of maximum production" we know to be a truism. It is particularly true of corn. Many bushels of corn, and many tons of ensilage would be added to our store if we nailed to the mast-head the slogan, "We will not plant poor seed corn." Let us look into what is good, where we shall get, and how we shall know it.

SECURING SEED CORN

In determining on the source of seed corn supply, there are several things that should be considered. Secure your seed if possible, either from your own crop or from a successful corn grower in your neighborhood. This is desirable because it insures a variety that will mature well in your locality. Many who grow corn are firm in their belief that it is necessary to change seed frequently. They believe their own variety or strain has run out and that they must buy some vigorous seed from some other locality. Is this necessary? Must growers of corn every few years buy high priced seed in order to maintain their yields? It seems that the answer to this question is another question! How did the man who sells the new and vigorous seed keep it from running out?

WHY CORN "RUNS OUT"

It is true that corn which has been grown for a number of years on the same farm may be giving diminishing

yields of inferior quality and that purchased seed may yield more and of a much better quality. But the difference is not due to any unavoidable tendency to deterioration inherent in the corn plant. It is largely the result of differences in the manner of selecting the seed. If the corn has been collected for several years by gathering it up with a scoop shovel from the "leavings" in the crib in the spring, and if the seed bought was grown by a man who practised proper methods of seed selection the difference is accounted for. It is in the value of the man and not in that of the corn plant that the trouble lies.

FIELD SELECTION BEST

In order to obtain the best results in seed corn selection, the stalk which bore the ear should be studied as well as the ear itself. This does not mean however, that great improvement can not be made from a study of the ears only. But it is a fact, nevertheless, that a better selection may be made at husking or picking time than any other. Then, and then only the opportunity is afforded of knowing the nature of the parent plant as well as that of the offspring or seed. The best type of stalk to select the seed ear from is one which bears the ear a little less than half way up, the ear drooping.

BUY EAR CORN FOR SEED

If your conditions are such that you must buy your seed corn be sure to get it from a reliable source and get it *in* the ear. There are excellent reasons for this and we quote the Iowa Agricultural College as follows:

"The following facts are offered

as evidence that the custom of purchasing shelled seed corn is unwise and detrimental to the best interest of the corn grower:

When the corn is in the ear, the farmer can see first what he has. If after a critical examination, he is confident that the corn is unsatisfactory, he can reject it and return it at once to the grower. This plan will enable him to secure corn from another source or use his own seed, which in fact, may be superior to that which has been shipped to him. He will not lose a year in discovering that he has an undesirable type of corn. The corn grower seldom buys seed for his entire acreage and therefore it is possible for him to select from the few bushels which he has purchased the best ears in the entire shipment. If these have been selected with care and are of a desirable type as to size, shape, market condition and character of the kernel, they should be planted on one side of the field where the conditions are the most favorable. Thus a limited area is grown from the best seed. This portion of the field should yield superior corn for seed for his future crops. When this plan of selection is repeated year after year corn is grown which is well adapted to the latitude and conditions in which it is raised.

Again when seed corn is received in the ear two or three kernels should be removed from each ear and tested. Those ears which show poor germinating qualities can be rejected. On the other hand, if shelled corn is purchased the kernels from the ears of low vitality or germinating power are mixed with the others and cannot be separated. The result must necessarily be a poor stand and a reduced yield.

Another very important reason for securing seed corn in the ear is that

butt and tip kernels may be discarded. By butt and tip kernels are meant those at the extremes of the ears, which, because of their situation, are for the most part stunted in size and distorted in shape. In germination the middle kernels are superior to both butt and tip kernels, about 85% of butt kernels germinate, 91% of the middle, and of the tips about 72%, other things being equal. However, such kernels make even planting impossible even by hand."

TAKE CARE OF THE SEED

The Purdue University Experiment Station, Lafayette, Indiana, offers the following very practical advice on this subject.

"Much corn that is intended for seed is injured by improper methods of drying and storing. It is most liable to injury during the first month or six weeks after husking. As it comes from the field, it still contains twenty-five or more per cent. of moisture, and as this moisture is contained within the kernel and cob it takes considerable time to get rid of it unless artificial heat is used.

It should be stored at once in a dry well ventilated place, and in such a way that there may be free air circulation around each ear. If this is not done its vitality is almost sure to be injured, either by moulding, fermenting, growing or freezing. There are many methods of storing seed corn but in all cases, the place of storing must be dry and well ventilated. Seed corn should always be stored in the ear. The attic or an empty room in the house upstairs is a good place for storing, if it is not too warm and close, while the corn is still damp. The barn and the crib are suitable places for storing if there is time enough for the ear to become thoroughly dry before freezing weather comes. The amount of

freezing seed corn will stand depends entirely upon its dryness. If thoroughly dry and surrounded by dry atmosphere it will stand very cold weather."

A well filled ear with kernels of good depth, will give large per centage of corn to the cob.

The purchaser however must not expect too much; seed ears such as are exhibited at corn shows are hard to find.

However, uniformity of size, shape and color of both ears and kernels, such uniformity as indicates good breeding, trueness of type, strong vitality and freedom from mixture, should characterize every ear.

MAKE A GERMINATION TEST

It is perfectly practical for every farmer to make a germination test of every ear he plants. Unless the corn has been very carefully preserved this should always be done. If an ear lacks

in vitality the character is shared by the majority of the kernels on the ear, consequently if a half dozen kernels are selected from different points of the ear and tested, a very good idea of that ear's germination may be obtained. It will be found in ordinary crib corn that a good many of the ears will have to be discarded entirely. The ordinary practice of planting such ears is responsible for most of our poor stands of corn. The time necessary to do this testing is very trifling in comparison with the money it will bring. A day's time will be enough to test sufficient corn for twenty-five acres; and a little figuring will show the income it will bring. The germination box costs practically nothing and if one wishes several may be run at once. Probably the most convenient size is one two feet square, which will test about one bushel of corn.

Fourth Year Stock Judging Trips

By R. J. Bryden, '16.

One of the most interesting as well as valuable features of the fall term, especially to the "Agricultural Option" of the Senior year, was undoubtedly the stock judging trips. The object of the excursions was to familiarize the students with the different types of livestock and to make them acquainted with the best breeders in this part of Ontario.

In all, fourteen trips were made under the direction of Mr. H. M. King, B.S.A., It will not be possible to treat them all in detail in a short article of this kind and perhaps it will suffice to say that on them we met many of the most noted breeders in Ontario, and saw some of our finest show stock under home conditions.

We first visited Auld Bros at Eden Mills, the well known Shorthorn breeders and importers. The outstanding animal in this herd perhaps was Burnbrae Sultan, its head, who was in splendid condition. Auld's cows and young stock were of high order. This initial trip to Eden Mills was followed by trips to Elora, Toronto, Markham, Hamilton, Burlington, Galt and farms in the close vicinity of Guelph, where the well known herds of the different breeders were inspected.

It is hard to pick out any of these animals or breeders for individual mention. A general concensus of opinion among the option, however, seems to call for special mention of Messrs Watt and Hassard and their stock.

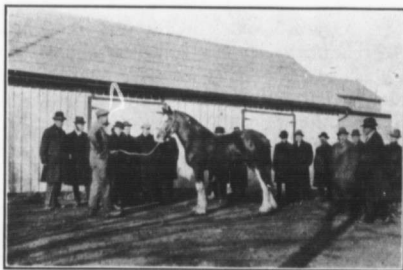
A whole day was spent at Elora, where in the morning Mr. Lowe's Aberdeen Angus cattle were judged, and the afternoon was spent in looking over Mr. Watt's Shorthorns. This last breeder has some magnificent animals. His two bulls Gainsford Marquis and Gainsford Perfection are, without a doubt, two of the best animals of the breed in Canada today. This herd is one of the largest and most noted in the Dominion. It has taken years of patient and intelligent judging, breeding and selection to build it up.

Mr. Hassard's stables at Markham contain some of the best Clydesdales

of Wm. Davies and of the Swift Companies both of which were very interesting.

For, actual record beaters probably no herd came up to that of Messrs. Flatt at Hamilton. This gentleman has a fine stable containing a number of richly bred Holsteins which have made wonderful records. In listening to his description of how these animals were brought up to record pitch, much valuable information was gained.

As indicated in a foregoing paragraph, the value of these trips was not only in the judging, but also in the incidental information picked up by speak-



Agricultural Option at Hassard Stables, Markham.

and Percherons in Ontario. Among the horses he brought out were Marathon and Macaroon and the splendid two year stallion, Count of Hillcrest. He also had some very choice Percheron mares, though his string of this breed was not as large as usual, due to the war which has cut off his importations.

Two expeditions were made to Toronto, where both Crow & Murray's and Pier's stables were visited. The former had some very nice Hackneys, Roadsters and Saddle Horses; in fact some of the winners of the New York Horse Show were in his possession. While in the city, the students were shown through the packing plants

ing with breeders and their herdsmen, and in seeing their stables and farms. For instance Mr. Brown at Preston, who had a large number of cross-bred Angus-Shorthorn cattle in the feedlot gave us some splendid methods of fattening cattle for market purposes. Mr. Whitelaw, located close to Guelph, was the source of a great deal of information regarding sheep. He had a splendid flock of Leicesters containing noted winners at many of the large shows.

Among the other breeders whose stock we had the pleasure of seeing were Messrs. Hogate, Gardhouse, Reynolds, Mitchell and Bowman. These

gentlemen had very choice stock and the privilege of looking over them was much appreciated by all the students.

In conclusion I may say that the

actual value of these trips cannot be estimated, many new ideas and much information being gained besides a very enjoyable time being spent.

The Winter Fair

By D. M. McLennan.

"**A**GRICULTURE," said Hon. Martin Burrell in declaring the Fair officially open, "is the most peaceful and generally the least associated industry with war, during times of peace, but when that period changes to one of strife, agriculture is the foundation on which the chances of success depends."

Judging from the showing made at Canada's greatest Fat Stock Show the farmers and stockmen of Ontario are doing their part in helping insure our chances of success in the war in which we are now engaged. The announcement that the Fair would be held as usual came so late that many expected a smaller show. In this they were agreeably disappointed.

With the exception of two classes the number of exhibits showed a large increase. The horse and cattle classes were much larger than in former years. The entries in swine classes were nearly double last years' large entry. An extra stable had to be provided for cows entered in the dairy test and even then they were badly crowded. The poultry department of the Fair is one of the main features. Some idea of its importance may be gathered from the fact that there were over five hundred more entries than at the San Francisco Exhibition. In all, upwards of five thousand five hundred birds, were on exhibition. They ranged in size from the smallest pigeon to the largest turkey.

The slight decrease in the number of entries in sheep classes was explained by secretary Wade who said, "The high price of mutton has cleaned out so many sheep that the demand for breeding stock in the West, is draining Ontario." The entries, however, were more evenly distributed among the different classes. The seed display was very neat and attractive. When one considers that the summer of 1915 will be remembered as "the wet summer" a decrease of only four entries as compared with 1914 is a favorable showing.

The chief interest of the students centred in the Judging Competition. Of course the interest was prompted by various motives but it is safe to say that if every man who took part in the competition was not rewarded financially he at least was no poorer. The experience gained will also be of value. In the Inter-year Judging Competition for the Day Trophy the Senior year won first place, the Third, Second and First years coming in the order given. M. C. McPhail, '17, was champion judge, getting away with firsts in swine and poultry. The cup which was donated by Prof. G. E. Day, becomes the property of the year winning the highest number of points. Each year is represented by a team composed of five men in each class. The cup must be won three times before it becomes the property of the year. The names of the men who represented the different years are as follows:-

Beef Cattle—(1) R. J. Bryden, '16; (2) W. H. Scott, '16; (3) W. R. Shaw, '16; (4) J. W. Brownridge, '16; (5) *P. D. Vahay.

Dairy Cattle—(1) C. Patterson, '18; (2) A. H. White, '17; (3) A. G. Skinner, '17; (4) C. F. Luckham, '17; (5) M. Powell, '19.

Horses—(1) J. H. McCulloch, '16; (2) J. Glavin, '16; (3) H. W. Clarke, '17; (4) *P. D. Vahay; (5) A. G. Skinner, '16.

Sheep—(1) D. E. McEwen, '18; (2) L. H. Hamilton, '18; (3) M. F. Cook, '19; (4) D. R. Schuyler, '16; (5) J. S. Steckle, '19.

Swine—(1) M. C. McPhail, '17; (2) *W. Brooks; (3) *L. Sutton; (4) A. B. Baird, '16; (5) S. B. Stothers, '16.

Poultry—(1) M. C. McPhail, '17; (2) W. Strong, '16; (3) K. Welton, '16; (4) J. A. McAdam, '18; (5) G. R. Wilson, '18.

*Outsider.

In order to encourage a deeper interest in live stock on the part of the young men of the province, the Winter Fair Board has inaugurated a special competition to be open to a judging team composed of three men from each county. The teams must be selected by the District representative from those young men who have attended

a short course in agriculture and have not taken a regular course at an agricultural college. A silver cup was donated by Hon. Jas. S. Duff, as a trophy. This cup must be competed for annually and is to be won three times in succession before it becomes the property of one county. The Oxford County team, composed of Wray, Chambers, Arlington, Robinson and A. G. McCorqudale was successful in winning the cup. The teams representing Middlesex and Wentworth were second and third respectively.

An excellent lecture programme was provided. The students, however, seem to enjoy watching the judging of the animals in the ring and consequently only a small number of them got the benefit of the lectures. Men accustomed to hearing several lectures a day may feel more or less "fed up" on them but this is a rare opportunity to hear men who are experts in their particular lines discuss questions of importance.

Much of the credit for the success of the Fair is due the energetic Secretary and Manager, R. W. Wade, '05. He was here, there and everywhere and if perfection was not attained, it was not because he did not strive for it.



The Fruit Game on the Prairies

By J. H. Winslow, B.S.A.

Editor's Note—The writer of this article gives a few personal glimpses from the wholesalers' viewpoint of the distribution of fruit in the Canadian West, and the status and possibilities of Ontario's product. We must have more modern packages, a real standardization of grade and pack, and a more businesslike selling agency before we can check the ever increasing consumption of American fruit.

THE prairie fruit market is a unique one in Canada in that there is practically no local production to compete with the fruit districts which now supply the demand. This is one of the factors which has permitted the rise of the chain of wholesale houses known to the trade and the western growers as "The Nash Outfit." Every fruitman from Winnipeg to the coast now involuntarily associates the word fruit with the word Nash. And it might be interesting to review this marketing system as it might ironically be called.

The Nashes—two brothers, with headquarters in Minneapolis, control the stock of some fifty or sixty wholesale fruit and grocery houses in Western Canada and the U. S.; of this number there are two in Winnipeg, one in Brandon, one in Portage, two in Regina, three in Weyburn, three in Moose Jaw, one in Swift Current, one in Yorkton, two or three in Saskatoon, one in Camrose, three in Medicine Hat, and others in every town or city large enough to warrant a jobbing house. The organization cannot be said to be a combine. Each house is under separate management, and although there is some co-operation in buying, especially in handling a large

deal, yet for the most part each manager is left to his own devices. There is very keen inter-competition among the houses, and the retail buyers sometimes profit by this, though it must be said that the competition does not often take the form of price cutting, unless some independent house is being fought, or some other definite purpose is in view. In Calgary during the past season quite a fight was waged by one of the independents, Plunkett & Savage, while Regina witnessed some keen competition also. So while the Nash houses undoubtedly do a large proportion of the fruit business of the west, they are far from having things their own way.

The late Robert Thompson, manager of St. Catharines Cold Storage Co., frequently asserted that it was the policy of the Nash outfit to encourage the importation of American fruit, notably from the State of Washington. It must be remembered, however, that Washington tender fruit comes on the market earlier than either B. C. or Ontario, and in a market of keen competition, the early bird, etc. Also it is undoubtedly true that up to date the American growers have our Canadian packers beaten at turning out a uniform high quality pack, especially in peaches, prunes, and pears, though the B.C. grower promises to equalize this very soon. The Nash houses supported the B.C. apple grower the past season, through the Okanagan United Growers, and were rewarded by having one of their competitors alone import 50 cars of Washington C grade apples, which sold freely at a very close margin and much below the figure being quoted for B.C. No. 2 wrapped. In common with their com-

petitors the Nash houses will handle whatever fruit is most profitable, and which gives the most satisfaction to their trade and consumer. But they certainly do not favor American fruit other things being equal.

The packages finding the greatest favor with the jobbing houses, the retail trade and the consumer are as follows:-

Strawberries—pt hallocks, 24 to case.

Raspberries—flat pt hallocks, 24 to case.

Cherries Sour—4 basket crate or 20 lb. lug box.

Cherries Sweet—pt. baskets, 24 to case, or 4 basket crates, or 20 lb. lugs,

Italian Prunes—3½ in. or 4 in. box, (similar to peach box.)

Other Plums—4 basket crate or 20 lb. box.

Peaches—Standard 20 lb. box, wrapped fruit.

Pears—Standard pear box, wrapped fruit.

Apples—The Economy crate, of the O.U.G., or the Sandpit crate, packed by Sterling and Pitcairn of Vernon, B.C., containing 40 to 50 lbs. of fruit, unwrapped, was quite popular, but winter varieties of apples are preferred wrapped in the standard apple box of one bushel. All American apples were received in boxes, wrapped.

The foregoing applies mostly to Saskatchewan and Alberta conditions.

In these two Provinces there is little Ontario fruit handled with the exception of apples. I recall a car of peaches, pears and plums in 11 qt. and 6. qt baskets which found its way past the Manitoba boundary. Compared to the smooth workmanlike finish of a car of boxed B.C. or Washington fruit, one might suggest a jinricksha and a Packard. It looked medieval. I am informed that there is a brisk demand for Ontario fruit in baskets in Manitoba, and if so can easily understand why the dealers endeavour to alter it to call for Western fruit. Ontario apples were of course poor in practically all localities this year, but as a business proposition and with an eye to the future, most of the apples which did go west should have been fed to the hogs, not packed in barrels and branded 1, 2 or 3 grade as the fancy of the packer dictated. The writer saw several samples of No. 1 Spies which would not go in a C grade Washington or No. 3 B.C. packs.

Ontario fruit most certainly possesses a flavor and has an appearance equal to that of any district. But if Ontario growers desire to obtain and hold support from the Western dealers and consumers, it is necessary that the present antiquated styles of package be superannuated, real grade laws made and enforced, and co-operative selling societies organized and strengthened.



Chrysanthemums for the Amateur

By H. H. Selwyn, '17.

THE accompanying illustration shows one of a number of 'mums which the writer has grown during the past year from cuttings obtained in the O.A.C. Greenhouse.

These plants went through many vicissitudes during their development, but notwithstanding, have made a splendid showing in the house and go

and produce a healthy root system without infection from bacteria which would have been sure to occur had they been placed in garden soil direct.

In some four weeks' time those cuttings surviving the ordeal were transplanted to 3 inch pots containing a sandy loam and in these they remained until the middle of April when they were again removed from the pots, the roots shaken free of earth and the plants wrapped in moss and newspaper into a tight package and taken home.

In spite of close confinement in a trunk for three days, during which time they journeyed over three hundred miles, the 'Mums came out in good condition and were immediately set out in the garden. Heavy frosts occurred during the following weeks but by placing a board frame around the plants and covering with bags, no harm resulted.

Through the remainder of the summer they continued to develop into sturdy, well rooted plants and since their transplanting into 12 inch pots in the house, have made a very attractive color scheme and called forth much admiration on the part of visitors.

Of course it is realized that the average person has not the opportunity of utilizing a green house for the starting of the young plants, but these may be obtained in the spring from any reputable green-house man at a nominal figure, and may be set out in much the same manner as young aster plants.

The plant shown in the cut is known as "Celtic" and is one of quite a number of the same type particularly adapted for house culture, as they are of medium height and bloom very profusely.



'Mums for Window Decoration

to substantiate the fact that Chrysanthemums may be grown without special facilities, by those who care to beautify their homes during the autumn season.

The Chrysanthemum is essentially an autumn decoration and comes at a most appropriate time, as practically all our other blooming plants, both indoor and out, are over.

The plants in question originated as small cuttings, taken from near the base of old flowering stalks in March and set in a flat of clean bank sand. This gave the slips a chance to callous over

One cannot help but reflect on the subtle changes which take place within the plant from its beginning as a small green shoot to the fully developed graceful structure, bearing nodding

heads of velvet-like petals in colors which defy description. Most truly it may be said that "Nature moves in a mysterious way, her wonders to perform."

"The Fussier"

By H. C. Mason, '17.

— "What dire event from amorous causes
springs,

What mighty contests rise from trivial
things,

I sing;" —————

IT was that witching hour succeeding supper, when all rules of Residence vanish, and the Dean becomes even as you or I; the hour of visit or vendetta, when old friendships are revived or old wrongs recalled; the hour of sing-songs, war, and water-fights.

Grub Alley has a reputation for ingenuity in breaking regulations, water jugs, reputations, fan-lights, harmony, and various other assorted breakables, second to none; and being jealous of the said reputation, was this evening endeavoring to surpass all records, not without success. Service vouches for it that "The Northern Lights have seen strange sights"; the electricians of Grub Alley have seen sights no less weird and wondrous.

The laundry bags had been hung out that day; but, utilized as they were as weapons in violent single combats "which reeled and rolled in clanging lists" from end to end of the hall, 'twas very doubtful if they would hang out much longer. At the foot of Cataract Hill a hoe-down was in progress; while at the opposite end an impromptu wrestling match held its ring of yelling partisans. An assembly of enthusiastic choristers, with much more

volume than tune, held forth unwearingly upon the joys of getting up in the morning; while farther down the street a wailing violin wept maudlin tears over the sad necessity of calling around on Monday. Small conclaves eagerly debated politics, the short-comings of the Dean, football, ethics, hair-cuts, and all went merry as a marriage bell.

Behind the carefully bolted door of Baxter's Saint's Rest stood "Big Mac" Macaulay. Ordinarily such "ructions" would have brought a most cherubic expression to his high-boned Scotch face; but apparently they conveyed no joy tonight to the champion rough-and-tumbler of the hall. In fact, 'twas a most lowering countenance that he scowled at in the mirror. Upon the bureau before him lay the remains of a tattered tie, and a wilted, crumpled collar; and a second cravat was rapidly succumbing to his vicious attempts at adjustment.

Beside him, half-reclining in his chair, sat "Rah-Rah" Hurst, his roommate; (for Fate, per Cap Gandier, had assigned the most inveterate "fusser" in the college to his exact opposite, the most persistent "non-fusser.") Full-clad in faultless attire, from latest style collar to shimmering pumps, he lay, and smiled at his friend's frantic efforts to attain a like perfection. Finally, after the complete demolition of the second tie, and the subsequent rummaging for a third, he interjected,

between several unprintably derogatory remarks concerning ties, their history, manufacture, and ultimate destination—

"Some folks say the Scotch are stingy; I don't believe it."

"—Yuh don't, eh?"

"How much did those cost you, Mac?"

"—Don't worry your little self; you're not footing the bill."

Silence for the moment; Big Mac is palpably in a black mood; the tie catches on the collar-point and crinkles it into a semblance of a poorly-plowed field. Then—

"Well, as I'm responsible, I was just thinking we could go halves on 'em. You see—"

"—Responsible! You're not responsible! Its my fault for being such a dog-gone dithering idiot,—let you put it all over on me!"

Silence again; the songsters next door prepare to leave, to an "odd promiscuous" burst of melody, and signalize their departure by dumping a bed with its occupants. A muffled crash, and then a confused sound of stamping strife, which swirls up and down the hall, pauses a moment, and then redoubles just before the "Saint's Rest". A reeling knot of wrestlers crashes into the door, and wallows on the floor without. Hurst saunters to the wash-stand, takes a bag which hangs conveniently at hand, (in time of peace, prepared for war,) fills it with water, and drops it from the fan light; a smothered swish of water, and excretions loud and dire. But water quenched the flames which it had kindled, and the tumult and the shouting died; and the "alarums and excursions" ceased.

Macaulay, somewhat restored to normality by the prospect of a fray, resumed his struggles with the refrac-

tory tie; and after a particularly violent series of wrenches, turned to his roommate with triumph in his eye. — "Eureka! I got the brute at last! Where's my—" 'Tis far beyond my feeble pen to convey even a faint conception of the extraordinarily complicated series of emotions which flitted in swift succession across his grim Highland visage; dazed unbelief, stony surprise, and then blank horror, rapidly displaced by a murderous glare. The notch of the collar, being specially designed to prevent slipping, had, quite as a matter of course, done that very thing.

But, as he realized the full horrors of the situation, going fussing; first offense; going fussing at the Hall, whose customs he did not know; going fussing with he knew not whom,—he'd been introduced over the phone; with a hard, unfeeling, remorseless, unsympathetic room-mate to hold him to a rash promise, given jestingly in those happier days of long ago,—(those *were* the days); as the full realization scorched itself into his brain, the fury faded from his eyes, and he gazed at his comrade with the piteous air of a little child.

"—Lemme off, for the love of Mike! Can't you see what you've let me in for? I'm scared stiff,—an'—an' I'll never get ready in time, an—"

And he promised many things, but all of no avail, wherefor he sat upon the bed in utter helplessness, and well-nigh wailed from sheer impotency.

But the stern room-mate, (inwardly bursting with laughter), moulded him as putty in his hands, and finally, inflexible to the last, marched him down the hall, becollared, betied, clothed, and in an approximation of his right mind.

* * * * *

A stealthy step stole up Grub Alley.

quiet now, suspiciously quiet, and dark save for the midnight lamp of some late plugger. Came a fumbling at the door of the Saint's Rest, and a tall form passed in, stumbled, lit a match, and then the bracket lamp, which flung a dim light upon a scene of utter devastation and confusion. Beds, clothing, chairs, everything except the ever-sacred books, lay mingled in a strange conglomerate upon the floor, —the vengeance of the water soaked.

Yet there came no frown to his face; but a rapt expression, as of one who gazes far away, rested there, and a

pensive smile flickered about the corners of his mouth. He was at perfect peace with all the world. No thought of past failures nor of approaching exams, troubled his entranced spirit.

A gust of song from a knot of late-returning roisterers, blew through the transom—

*"And I will hold her
Close to my shoulder——"*

Macaulay, the confirmed girl-hater hesitated; and then his voice boomed into the rollicking chorus—

*And in my future life,
She's going to be my wife———*

A Little Journey to the Dining-Room

By A. Nony Mous

*That all-softening, overpowering knell
The tocsin of the sand,—the dinner bell.*

—Byron.

THE other day I took a little journey to the dining room. Now we all take little journeys to this same spot about three times a day, week in and week out, but on this particular day my little journey extended beyond the ordinary routine. I went in at the front door, passed through the spacious and beautifully equipped dining-room that in all we know so well, and disappeared through those swinging doors at the far side. Come with me, dear reader, on a little journey beyond these swinging doors.

To the left the first thing I noticed was a dish-washing machine. Dishes in racks were pushed along a shute, entered a kind of a shower bath arrangement and came out the other end ready to be dried. It worked easily, smoothly, and quickly. I thought what a splendid thing this would be to have in our gym where all we fellows could get in line, be pushed along the shute into the box containing the

showers and come out the other end bright and clean. Then all of a sudden I took a dislike to this brute of a dish-washing machine. For an instant I imagined it replacing the human dishwasher in the home—cold comfort indeed to the youth who has kindly pictures of himself standing alongside of Her and, with long, and lingering strokes of the towel, drying dishes in the slanting sunlight and mile long shadows of a Sunday evening.

From this room I passed along the corridor and turned to my left into the cooking room. Here I saw three big copper tanks in a row, two for coffee and a larger one for tea. On top of the latter was a safety-valve which automatically controlled the strength of the tea, (that's what was told me anyway.) In the centre of the floor were steam cookers for porridge, vegetables, soup and fruit and over at the far side were ovens for cooking meat. I could not help noticing the admirable arrangement. The element of clumsiness was entirely lacking. The glass-ware and silver were all washed in

wire baskets that were dipped in boiling water. On coming out they were dried and polished so clean they looked as if they were fresh from the jeweller's shop. A gas toaster stood in the middle of the floor and on top of it was the square plate on which our pancakes were baked. Downstairs are the stove room and bake room. Pull a lever and the bread is mixed by machinery. It was baked in big "Dutch" ovens, this bread that we all tell mother about when we get home. Over across the hallway was a machine that peeled potatoes, another for peeling apples and so on. Space will not allow me to describe all I saw and all the varied and efficient machinery that was used to put our daily meal on the table. Nothing was clumsy, nothing was crowded, nothing was out of place. The whole was scrupulously clean, so clean and so orderly that it seemed to be out of place in our mortal scheme of things here below.

Now I knew why it was that when the top plate was lifted the rest never followed, hanging like fly paper to a cat; now I knew why that confounded water pitcher always sat in front of my plate at the dinner table; now I knew why our tables were always so neat, so clean, so exact. Just the other day I was the guest at a stylish dinner and as I sat down I forgot which side my bread plate should be on. Immediately my mind ran back to the arrangement on our table at the O.A.C. and it saved the situation.

I have eaten in places when pale-faced waiters in swallow-tails did everything but chew my food for me, where portly magnates in white vests and diamonds, wore their napkins tucked in at the chin and where society swells, in brief attire, radiated their humbug and idle foppery. Also I have eaten in the quick lunch joints down the pike

where, perched up on a stool and with head lowered to a strategic position about a foot above my plate, I have shovelled in the murderous cooking with swinging scoops of my knife. I have also eaten in the O.A.C. dining room. I know, when I say that here is the service "vot iss," simple, distinctive, without humbug, foppery, grease or cockroaches.

She put the "E" in Efficiency and her name is Rutherford—Marion K. Rutherford—because all this never just happened; it is the product of a directing genius. Every room, every nook and corner of the building says Rutherford to you as you enter, for Rutherford and efficiency are synonymous terms. And yet she is human too. She took me down to her office. At the door, Peter, her pet rabbit, hopped up to meet his mistress. I entered. The office was that of a woman, neat, clean, but yet of slight disorder that savored of the eternal feminine. A spool of thread, some sewing, a ball of yarn and a half-knit sock told their tale and gave it all away. Where on the face of this earth is the woman who can divorce sentiment from business?

I sat and listened as she told me the "inside" story of the dining room. She explained how all this efficiency was arrived at. She showed me records, marvellously complete, of every phase of the business. She had figures for everything, records for everything, card-indexed to the minutest detail and available on a moment's notice. This was System, and the thought crossed my mind that here at least was one woman in the world who had a few brains. And then again, I thought that right here I was gathering the best lecture on Farm Management I had ever received in my life.

"On what basis do you figure menus," I asked, and then came the an-

swer, that there were many things to consider. There was the cost of the particular food served, the preparation of the food, the suitability of the food, the combination of foods and so on and so on. Do you know, these things never occurred to me before. I never realized that this was a science in itself. I found there were many things we could not have because the cost was too great or because it could not be prepared in large quantities, that the dining room did not begin to pay for

itself, that it was a hard thing to avoid monotony when preparation was on a large scale. I learned that the words "protein" and carbohydrates" were actually taken out from the covers of books and put into practical use and I also learned that here was a woman giving the very best of her time and thought and study that we might walk in and sit down to the best meals that it was possible for her, under the circumstances, to give us.



DUTY

The principal duties shine aloft like stars;
The charities that soothe and heal and bless
Are scattered at the feet of men like flowers.

—Wm. Wordsworth.

THE O. A. C. REVIEW

REVIEW STAFF

J. C. NEALE, *Editor-in-Chief.*

D. M. McLENNAN, *Agriculture.*

J. COKE, *Experimental*

C. C. DUNCAN, *Horticulture.*

W. STRONG, *Poultry.*

W. J. AUSTIN, *Query.*

H. H. SELWYN, *Alumni*

C. M. NIXON, *College Life*

C. F. LUCKHAM, *Athletics.*

D. C. McARTHUR, *Artist.*

H. J. SULLIVAN, *Locals.*

MARGARET SAXTON, *Macdonald*

M. BURKETT, *Macdonald.*

Editorial

In this, the first issue of the New Year, the *Review* extends to all its readers the time-honored, but never time-worn greeting, "A Happy and Prosperous New Year."

How often we have heard this greeting; yet it has never ceased to excite a thrill of anticipation of good things in store for us, expectation of something better in the future than the past has produced or a desire to do something, however small, for which we may be justly commended. But, perhaps, never before have we realized its full significance as we do at this time, when the brightness of the prospect is dimmed, somewhat, by the clouds of war and every man, every woman, every child, realizes that his or her part must be fulfilled to the utmost, that, with the passing of another twelvemonth, we may truly have, "A Happy and Prosperous New Year."

THE RETIRING EDITOR

Again the foreseen but inevitable has happened. With the Christmas Number, Mr. A. M. McDermott, who has so ably wielded the editorial pen for the past year, retired from office.

One of the greatest handicaps which a College magazine must overcome is the yearly change of its staff, both chief and sub-editors. Luckily, the decrees of fate are not such that these changes occur simultaneously.

Mr. McDermott is deserving of unstinted praise for the manner in which he has performed the work of preparation of the last eleven issues of the *Review*. He has ever been conscientious and untiring and to his energy is due the eleventh issue for 1915—September—something which had, heretofore, never been attempted. Since his enrollment as a Freshman, Mr. McDermott has taken an active interest in the various phases of College life, both Y.M.C.A. and Literary Society having benefitted by his executive ability before the *Review* claimed so much of his time. The *Review* extends to him heartiest wishes for success during the remainder of his College Course and in his subsequent career.

ARTICLES BY STUDENTS

This is not a new topic of discussion in these columns. Almost continuously the students are reminded of

their opportunity to develop any latent journalistic ability by contributing articles to the *Review*. This is one of the primary objects of a College Magazine. Why is not more advantage taken of the opportunity thus afforded? An article may appear much better in print than it does in manuscript. Let us have your views upon matters in which you are interested.

THE UNFORESEEN

As well as the foreseen, the unforeseen has recently happened. While most of us were at home, enjoying our Christmas holidays, we received, through the newspapers, the astonishing news that our skating rink had again collapsed. Last year we were surprised; this year we could scarcely believe the report until we returned and actually beheld the gaping hole in the roof. But this catastrophe was not, as some would have us believe, the inevitable result of Co-operative ownership. It was entirely a matter of mechanics. Therefore, do not let us join the ranks of some outside scoffers and greet those who are on the executive with, "I told you so." Co-operation built the rink, Co-operation repaired it last year and before this appears in print, Co-operation will have safely repaired it again. A privately owned concern would probably have been abandoned with this second mishap but Student Co-operation has made it possible for us to continue to skate without going all

the way down to a City rink. In unity there is strength.

DRILL

On account of the fact that there is a likelihood of many students enlisting after February 15th, the C.O.T.C. authorities have decided to hold drill four nights a week in order that the course may be completed and the examinations written before that date. This is a decided advantage. It will enable those who wish to enlist, to qualify as Lieutenants before doing so, and also enable others to put their Military examinations behind them without interference with their regular academic examinations. So let us turn out to drill regularly, even though we have to forfeit a little skating. It is necessary to have a large regular attendance in order that instruction and demonstration may have the desired effect. Those of us, who, for various reasons, cannot go to the front at present, can at least do this much to assist those who are able to go.

CORRECTION

A slight error was made in the reproduction of the *Review* Contest Prize Photos in the Christmas issue. The first prize photo under the name of G. R. Wilson was entered by J. C. Roger and the second prize photo under the name of A. C. McAdam was entered by G. R. Wilson.

College Life

"So may the New Year be a happy one for you, happy to many whose happiness depends on you; so may each year be happier than the last"—*Dickens*

TIME did not drag for those students who remained at the College during the holidays. Much excitement prevailed at times, especially when the College rink repeated its gymnastics of last year and again collapsed, breaking three of the re-enforced arches built in when it was last repaired.

The optimism of our Student's Co-operative Society refuses to be squelched by such mishaps as these; in fact they only serve to illustrate some of the difficulties a real co-operative society may easily overcome under efficient management.

Not only will the rink be repaired, but it will be repaired in such a way as to eliminate all possibility of another collapse of this kind. The carpenters are already at work, repairing the damage done, and before this appears in print there will be, "Skating as usual."

The arrival of many huge boxes at the O.A.C.O.T.C. headquarters in the New Physics Building, occasioned much speculation as to their contents until a notice was placed upon the bulletin board intimating that the new uniforms had arrived and were ready to be fitted.

The interior of the laboratory on the ground floor resembled the inside of a large Gent's Furnishing establishment. Great piles of breeches, tunics, caps and great-coats were arranged in an orderly manner. Each student in his turn received a uniform, great-coat, and cap. The great-coats are of a soft grey material, well made in military style, and will add much to the

comfort, and appearance, of the Corps while on parade.

THE PHILHARMONIC CONCERT

It has become an established custom for the several branches of the Philharmonic Society to present a programme of music and drama near the close of each term to the students of the college and their friends. These concerts add very much to the interest students take in these several activities by supplying a definite object towards which to direct their efforts, and serves to show the general student body just what can be accomplished through their own efforts. Although there were this year many extra demands upon the spare time of the students on both sides of the campus and many of the most active members had answered the call of country, it was decided to carry out the usual work which resulted in a concert given as usual near the end of the fall term.

Under the leadership of Mr. Ernest Heatley, assisted by Miss Jessie T. Hill, piano accompanist, a number of selections were presented by a mixed chorus of seventy voices. In the very limited time at his disposal Mr. Heatley has endeavored to arouse an increased interest in good music among the students, and to produce in the choruses good quality and tone as well as volume. The varied selections rendered by the chorus including "The Old Brigade" and "Boy and the Bee" by Coldicott and "Good Night Beloved" by Pinsuti were calculated to demonstrate to the audience what success had been attained by the chorus in these essentials. The hearty support they received was a source of great encouragement.

Notwithstanding a very considerable pressure of work, Mr. G. H. Unwin had kindly consented to help along the work of the Dramatic Club, and under his direction was offered a one act farce, "April Fools," which gave an opportunity for amusing dialogue and very distinguishing garb. The identity of the actors as well as that of the contents of the "attractive jug" were for a time in doubt.

The orchestra, conducted by Mr. James Reilly, was one of the most successful features of the evening, giving a good variety both of old favorites and latest musical hits. There were no "pink" notes in evidence, which alone is a good indication of quality in such a young organization.

Readings by Miss D. Adams and Miss Fairclough lent variety and brought from the audience that most convincing expression of appreciation—numerous encores. The same may be said of the popular College Quartette, which though slightly cramped for stage room, accepted this as a condition of "close harmonies" and entertained their hearers by their profound pathos and musical mincings. Doubts have not yet been cleared as to just why Sully's "doggie" ran away. Perhaps we were not correct about the "harmonies."

A word of appreciation is due those of the students whose efforts, while not so easily seen, are yet always essential to the success of such affairs. We hope, however, that they will share with the others the general satisfaction arising from a "full house" and the expressions of appreciation overheard "on the way home".

V. C. Lowell

THE COLLEGE COMPANY

During the term just closed there has been a very active interest taken in Military matters at this College, and

a considerable number of the students are thinking of enlisting. For this reason, the College is planning to raise a company for Overseas Service, to form part of the Wellington Battalion now being recruited. During the year past, a number of the students and staff have been qualified as Lieutenants and Captains, and from these part of the officers have been chosen.

The Company will be under the command of Major G. J. Spencer, B.S.A., who for several years has been a member of the college staff. The second in command will be Captain R. C. Merrick, one of the students themselves. Three of the Lieutenants also have been chosen, viz., Lieutenants W. H. Wright, B.S.A., E. L. Davies, B.S.A., and W. B. McMullin, the first two being members of the College staff. Two other Lieutenants will be named later.

The O.A.C. Company will be open to students and ex-students and their friends, no matter where they may reside. It is hoped that the College spirit, which draws men together during their College course, and forms a mutual bond of union among them as ex-students will make the O.A.C. Company a success both in numbers and efficiency.

Recruiting for the Company began as soon as the students returned from their Christmas holidays. Students enlisting in the company will continue their studies until February 15th, when they will be granted their year's standing. In the meantime they will continue drill with the C.O.T.C.

RESULT OF GENERAL ELECTION

DEC. 4th, 1915.

ATHLETIC SOCIETY

Hon. Pres., Prof. C. A. Zavitz; Hon. Vice-Pres., J. E. Britton; Pres., T. B. Martin; Vice-Pres., G. Michael; Treas.,

G. Newton; Sec'y, J. Mathieson; Foot Ball Mgr., S. H. Gandier; Basket Ball Mgr., A. W. Baker; Soccer Mgr., H. King; Track Mgr., J. Bird

UNION LITERARY SOCIETY

Hon. Pres., Prof. G. E. Day; Pres., D. M. McLennon; Sec'y, A. S. Watt.; Treas., P. B. Slack.

PHILHARMONIC SOCIETY.

Hon. Pres., Prof. Harcourt; Pres., J. W. Lawrence; Vice-Pres., W. C. Jakes; Sec'y, Geo. Ames; Treas., J.

M. Shales; Choral and Choir Mgr., V. C. Lowell; Orchestra Mgr., C. W. Duff; Dramatic Mgr., G. Dutoit.

Y. M. C. A.

Hon. Pres., L. Caesar; Pres., G. A. Richardson; Vice-Pres., W. G. Scott; Sec'y, T. Shields; Treas., J. Andrews; Bible Study, M. C. McPhail; Mission Study, E. McConkey; Religious Meetings, L. W. McKillican; Church Relationship, E. L. McLoughry; Library, W. C. Caldwell; Musical, A. Delamore; Social Service, W. S. Van Every.

Alumni

The O.A.C. is losing another able man and the Manitoba Agricultural College may consider itself fortunate in securing his services.

Mr. Galbraith was graduated from the O.A.C. in 1911 and shortly afterwards went to Toronto University to carry on post graduate work. From there he was recalled to the O.A.C. to act as lecturer in Geology which position he filled and developed with conscientious and untiring energy. During the summer of 1915 he was placed in charge of a systematic soil survey of this province, a new departure on the part of the provincial authorities and one of growing importance.

When the O.A.C. decided to organize an Officers' Training Corps to assist in furnishing qualified officers for active service, Mr. Galbraith entered enthusiastically into the work and in no small degree is the College indebted to him for the success of the movement. Notwithstanding the press of regular work during the College term, he found time to take charge of one company of the battalion and form it into an efficient unit.

Mr. Galbraith's home was Hornby



MR. A. J. GALBRAITH, B.S.A.

The resignation of Mr. A. J. Galbraith from the Department of Chemistry at the Ontario Agricultural College to take charge of Soil Analysis and Soil Survey work in Manitoba will be keenly felt by all who knew him.

Ont., and previous to beginning his College course he taught school there for a year or more. In 1913 he married Miss Catharine Holmes, a graduate of the Guelph General Hospital.

We take pleasure in reproducing a cut of Mr. Galbraith and would extend to him the hearty congratulations of the staff and student body upon his latest achievement. Even though Ontario is the loser, we may at least console ourselves that he has not gone beyond the Dominion, and his genuine straightforward personality will do much toward creating more of the type for which Canada is becoming so widely recognized.

Miss Hill is a recognized authority on poultry-craft, articles from her pen appearing in our *Canadian Agricultural Journals* from time to time.

Miss Hill has done considerable work in connection with rural schools under direction of the Provincial authorities, and with her ardent love of nature and keen interest in farm live stock, we feel sure she will fill this new position at the Queen Alexandra Sanatorium to the satisfaction of all concerned.

Mr. Richard Hartley, of South Africa—Miss Hill's fiancé—left on the outbreak of war to assist in the extermination of the German element in his own country. Mr. Hartley is a member of Year '17 and we hope that in good time he will return to take up his work in Biology, for which he has a special aptitude.

The *Civilian*, the official organ of the Dominion Government Service, prints the following account of Hugh Lindsay, which the Review takes the liberty of copying in the interests of his college associates:—

HUGH Howard Lindsay was reported wounded and missing after the battle of Langemarck, April 24, 1915. Hugh Lindsay came to Canada from England at the age of 16, in 1909, being then placed under the guardianship of his uncle, Mr. Ernest H. Godfrey, of the Census and Statistics Office. When the war broke out he joined the First Contingent of the Canadian Expeditionary Force, in the 43rd D.C.O.R., and was attached to the 2nd Battalion as corporal.

Up to the present no definite information has been obtained respecting Mr. Lindsay's fate. It was thought that he was made a prisoner, and his relatives cling to the hope that inquiries which are being made by the Canadian Red Cross Society may re-



MISS MARION S. HILL

MISS Marion S. Hill, Guelph, Ontario, one of Macdonald Hall graduates of 1915, has accepted the position of Supervisor of Dairying and Poultry at the Queen Alexandra Sanatorium, London, Ont.

sult in his being found in some hospital for the wounded. His commanding officer, Captain Birdsall, writing to his father, Mr. Crawford Lindsay, of the Manor House, Lydeard St., Lawrence, Somerset, England, on June 4, spoke very highly of young Lindsay, stating that he had been instrumental in getting him his promotion to the rank of sergeant, that Lindsay was wounded with another soldier when performing a dangerous duty and that efforts to find him after he fell were unsuccessful.

Recently more detailed information has arrived from Private Dick Reynolds, who was present when he fell. The following tells the story very vividly of how two brave young British soldiers performed their duty, and incidentally throws an interesting light upon the actual conditions of the battlefield:

Extract from a letter received in Ottawa by Mrs. Reynolds, of 434 MacLeod Street, from her nephew, and relating to her son, Private Dick Reynolds, 2nd Battalion, First Contingent, dated June 28, 1915.

"His wound has healed up very well, but his thumb is still a bit stiff. He was wounded by a bullet between the first and second joint of his left thumb; fortunately it just missed the bone. It appears that after the Neuve Chapelle fight his regiment was brought up to strengthen the others, after their terrible losses during that charge, and that during the night the lieutenant in charge of his company instructed one of the sergeants (Hugh Lindsay) to go forward to some men who were holding a trench of their own in front of the general line of trenches and instruct them to come back to the main position. He told the sergeant to take another man with him in case he got hit. Dick, who was standing near

and heard the conversation, asked to be allowed to go with him.

After making preparations the sergeant and Dick left the trench to go forward to the isolated company. Waiting till all was dark they made a dash for about 30 or 40 yards, when up goes a "starlight" from the German trenches, when they immediately had to fall flat and keep stock still until it went out, then another dash and again another "starlight." They had by this time covered about 80 yards with about another 80 to go. During this second wait the sergeant told Dick he thought that he had better make a dash for the remainder of the distance, light or no light. After a few moments, the lights having burnt out, they both made the final dash. No sooner had they gone about 20 yards than whizz! up goes another "star." The sergeant shouted to Dick to keep on running, when he was shot right through the neck and collapsed. Dick immediately dropped down beside him to see what was the matter with him and the sergeant turning his eyes towards Dick, said: "I guess that's the fortunes of war, Dicky." He spoke no more.

Dick at that moment suddenly felt a sharp blow and a stinging pain in his left hand and then found they had got him. There was nothing left for him to do now but to get back to his trench and report, which he did safely, one moment running, the next lying down, dodging the "starlights" all the time. He had one bullet pass right through the tail of his overcoat between his legs, which he showed me whilst here, as he still has the same coat. Then, as his arm was becoming numb, through the loss of blood, he was sent back to the base and thence on to England. You will therefore see that you have a son to be proud of. Many who have done less have won fame;

others like Dick who have done more are not heard of, and it was only by keeping on questioning him that I have been able to tell you what did really happen.

As for this life in the trenches, it is no picnic, not knowing one moment from the next whether you are going to be blown to pieces by a shell suddenly dropping beside you, or watching for hand grenades, which if they do not explode when they fall, must be snatched up immediately and thrown back, sometimes exploding in the hand and killing three or four poor devils; the constant watching through the night, not knowing one moment from the next when the enemy may make a sudden charge, taking your turn for half an hour or so in the sniping holes through the sand-bags of the trench parapets."

At the time of his enlistment Hugh Lindesay held a position as inspector in the Botanical Division of the Experimental Farms Branch of the Department of Agriculture. He had attended three out of the first four sessions necessary for graduation as B.S.A. at the Ontario Agricultural College at Guelph. A fine athlete and of sterling character he had (and if living has) before him the brightest prospects for a useful and successful career.

OBITUARY

R. HAY FERGUSON, for the past two years Extension Professor of Agricultural Economics in the Massachusetts Agricultural College, died at his home in Amherst on December 1st, after a brief illness brought on by an operation which he had to undergo.

Mr. Ferguson was graduated from the O. A. C. in 1913, specializing in Agricultural Economics.

He was born in Belfast, Ireland, afterwards moving to New Zealand, where he spent the greater part of his life. In 1911 he came to Canada and entered the O. A. C. After graduation he taught Agriculture and Economics in the Harrisonburg, Virginia, Normal College, resigning this position to accept the one held until his death, in the Extension Service of the Mass. Agr. College.

The increased interest in farmers' co-operative movements in Massachusetts and a number of successful co-operative exchanges organized under Professor Ferguson's direction, testify to his success in his chosen profession. He evolved a rural credit system which has been acceptable to bankers, farmers and Federal authorities interested in this line of work.

He was married to Robina Orr, who survives him. He also leaves a mother, Mrs. Elizabeth Ferguson, of Hastings, Hawkes Bay, New Zealand, also three brothers and one sister in that country—to all of whom the Review staff would offer their sincere sympathy in this untoward bereavement of so young and promising a member of the family.

Walter S. Chaffey, of Central Park, Vancouver, B.C., has been reported killed in action. Mr. Chaffey attended the Ontario Agricultural College during the college year of 1909-10, and was residing in the West when war was declared. He enlisted in British Columbia. It is with sincere regret we chronicle his untimely death. Exact particulars as to where he fell are not obtainable at the time of writing.

APPOINTED TO AGRICULTURAL COLLEGE STAFF

Announcement has recently come to hand of the appointment of F. S. Jacobs, B.S.A., to the position of Chief of the

Animal Husbandry Department of the Manitoba Agricultural College.

Mr. Jacobs leaves the Editorship of "Farm and Ranch Review" at Calgary, to accept the vacancy on the College staff.

Mr. Jacobs was brought up on a live stock farm in Ontario and was graduated from the Ontario Agricultural College in 1902, after which he went West and devoted several years to agricultural journalism. In addition to an intimate knowledge of live stock he has made an extensive study of economic problems affecting the live stock farmer. This close study of western conditions, together with his other qualifications, point to him as a distinct acquisition to the province of Manitoba.

We wish Mr. Jacobs every success in his work.

WEDDINGS

ARMSTRONG—COLQUHOUN.

The marriage of Winnifred Cecily Nora, daughter of Mrs. Colquhoun, of "Barton Lodge," Hamilton, to Capt. Westropp Armstrong, of the 86th Machine Gun Battery, son of Mr. and Mrs. Armstrong, of Admiral Road, took place in the Church of the Ascension, Hamilton, on Tuesday, the Rev. Dr. Renison, Chaplain of the 86th, officiating. Mrs. Colquhoun held a small reception after the wedding, a few of the relations and the officers of the 86th being present. The marriage was very quiet, and there were no attendants.

Miss Colquhoun attended Macdonald during 1914, taking the Homemakers' course.

FRASER—CAVERS.

At Carleton Place, Ontario, on November 23rd, 1915, Miss Jean Cavers was married to Mr. Roy Fraser, B.S.A., Superintendent of the Arbuckle In-

stitute, Brooklyn, N.Y. The wedding took place at the home of the bride's parents. Mr. and Mrs. Fraser will reside in Brooklyn.

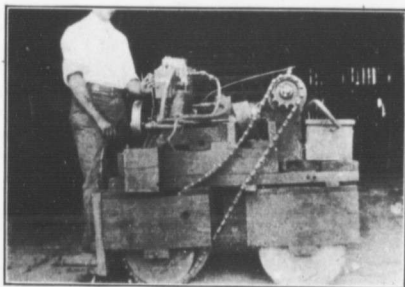
Mrs. Fraser is a graduate of Macdonald Institute of Class '14 and while here was elected to be President of the student body, an indication of her popularity at College.

Mr. Fraser was graduated from the O. A. C. in 1910, specializing in Bacteriology. His first position was with the Agricultural College at Manhattan, Kansas, where he carried on post graduate work in connection with his specialized subject.

At present Mr. Fraser is acting as Superintendent of the Arbuckle Institute of Brooklyn, N.Y. From information gleaned from pamphlets at hand we learn that this is an institution endowed by John Arbuckle for the advancement of learning, as the following quotation from him will show: "I wish those studies to be pursued here that will help worthy young men and women increase their daily wage and improve their condition in life."

Mr. Fraser's popularity and success in his work may be judged from the following, clipped from the "Arbuckle Institute Record," issued each month by the institution:

"As for Mr. Fraser, he needs no introduction to Plymouth people. No more loyal Plymouthite lives. His former work in the Forum Class and his present duties as head of the Institute, speak for themselves. He has been, in fact, such a tireless worker that his friends have often remarked that he seems wedded to the Institute. We reckon, however, that after he returns to Brooklyn with Mrs. Fraser, he will have to rearrange his schedule and spend a part at least of each 24 hours at home.



Home-Made "Tractor".

This interesting traction engine was constructed, with the exception of the engine, by Messrs. Fred and Clinton Walker, of Haysville, Ont., both ex-students of the O. A. C.

The engine is a marine engine. The real purpose of the tractor was to roll the lawn in front of the house. The rollers are constructed of cement. The chains and necessary parts aside from the engine were obtained from an old threshing machine and manure spreader.

When not in use as a roller it can be utilized to run the milk separator, a special pulley having been added.

The tractor is steered in the same manner as an automobile, by means of the wheel at the back.

Mr. Fred Walker is seen standing on the platform holding the steering wheel. The camera missed half of his face.

During the harvest season the engine was removed and put onto the binder, owing to the ground being so wet.

D.B.S.

Athletics.

THE HOCKEY SITUATION.

SPORT of all lines, as well as in all places, has been affected by the war in Europe and Athletics at the College have not been an exception. We are confronted with handicaps on various sides but the chief ones are lack of leagues in which to play, and shortage of experienced men to form teams. This is rather an unfortunate situation no doubt, but this season may see more men playing hockey and more hockey played at the College than in the past.

To say that there were no leagues in which the College might have entered

a team is hardly accurate, for the Intermediate O. H. A. is running this year. But O. A. C. withdrew a year ago from the O. H. A. in favor of the Intercollegiate and the conditions which prompted the change still exist, so it was decided not to return to O. H. A. ranks. Both the Intercollegiate and City Leagues failed to organize this year so the choice remained between O. H. A. and some form of home organization. At a meeting for the discussion of this year's programme, the latter plan was adopted.

This plan provided for the selection of a team to represent the College in

exhibition games which could be conveniently arranged, as well as the playing of a full single schedule of interyear games. In the past the "sudden death" elimination schedule has been objectionable in some ways, so the present system should remedy, if not completely remove, these objections. The series has usually been played at the end of the season on soft ice, all the games being rushed on in a very limited time, and little opportunity given for organization of the various year teams. This year it is the intention that a preliminary series be played previous to the regular one, but that it shall have no bearing on the championship. The object will be to produce as good teams as possible and, of course, to accomplish this, practice is necessary. Now the best practice is to play a game, where every man gets a fair chance as well as seasoning. One game develops a man more than several practices, and one of the chief aims of the present season is to produce players for next year or such a time as the leagues resume activity. There can be no doubt but that we have the material, if only it were given opportunity to develop.

The team to represent the College in exhibition games will be picked from the year teams and it will be given extra practice as the arranged games demand. By encouraging more men to learn the game there will be more from which to draw players of the calibre necessary for Intercollegiate and O. H. A.

In view of the mishap in connection with the rink it may not be possible to play the preliminary series as was intended, for this series should have started by the tenth or twelfth of January. At any rate, under the present circumstances, it is fortunate we have no team entered in O. H. A.

for it would have been somewhat handicapped by the slightly delayed opening of the rink. This will not interfere in carrying out the primary aim, which is to maintain interest in the game for the present season, as well as develop players. There is no apparent reason why it should not be successful.

—W. L. Iveson.

RUGBY

WESTERN UNIVERSITY VS. O. A. C.

The final game of the home and home series with the Western University was played at Exhibition Park, Saturday, November 20th, and was witnessed by a rather small crowd, owing to the cold disagreeable weather. But anyone who was there and saw the game must admit that it was one of the prettiest games of foot-ball that has been played in the Royal City for some time.

The lines both worked well and the College looked like the winner for a time, but a pretty run of about 50 yards down a clear field, gave London a touchdown and spoiled the game for the locals. O. A. C. kicked for all its points and some real spectacular kicks were pulled off by Foreman. They gained six points this way but the London aggregation added a couple to its touchdown, which gave them the game by one point.

Foreman, McEwen, Evans and Michael starred for the locals, while Smith and Kingswood played real rugby for the University.

Final score: London, 7; O. A. C., 6.

BASKETBALL

29TH BATTERY VS. O. A. C.

The Basket Ball aggregation of the 29th Battery paid its second visit to the College, Saturday, November 27th, and played a losing game, the College team proving its superiority by a score

of 58 points as compared with the 26 tallied for the soldiers. The first half of the game was fast and very close, the score at half time being 14-13 for the College. In the second half, however, condition began to count and in this the College had it over the soldiers and ran the score up to 58 points. "Shorty" Culham and "Peter" of the Battery put up a good game during the first half but the last part was a little too long, for "Shorty" especially. Rowland and Foreman played a good game for the home team.

The College was represented by;—White, Wilson, Foreman, Raymond, Bryden, Welton, Bissett, Lambert, Rowland.

IVTH YEAR VS. IIIIRD YEAR.

The two upper years met in a basket ball tilt November 30th, in which the Juniors easily won out, scoring 30 points while the Seniors could only tally 14. The first half ended with the Juniors leading by about twelve points and the men still strong. "Blondy" Wilson, who had up to this time sat on the sidelines, warmed up to the occasion and at half time donned a gym. suit and got into the game. In the early part of the second half the Seniors began scoring, and for a time they looked dangerous, but the novelty of scoring soon wore off and the Juniors had the game their way for the rest of the period.

INDOOR BASEBALL

SOPHOMORES VS. JUNIORS.

The third game of the fall interyear series was played off between the "Sophs." and the Juniors November 17th, and much enthusiasm was shown by the fans of both sides; but either by merit of the "Sophs." team-play, or by a special agreement among ye fates the Juniors were forced to defeat by a score of 12 to 7.

Junior's line up: Rowley, Wiggins, Lawrence, Bird, Hill, Springstead, Cudmore, Bissett, Guild (White).

Sophomores: Malyon, Stoddart, (Jakes), Brown, W. R.; Newton, Brown, R. W.; Copeland, McEwen, Michael, Fisher.

SENIORS VS. FRESHMEN.

The Fourth Year and the Freshmen met in the gymnasium November 19th to play ball, but there really wasn't much real ball played, for the Freshmen hadn't the material and hence the Seniors had but little opposition and they soon piled up a 26-7 score in their favor.

The Freshmen seem to be rather "up against" it this year for they have lost to each of the other three years. We hope, however, that they will get their men together this term and show the other years that whoever wins the Spring laurels this year will have to work for them.

SENIORS VS. JUNIORS.

The final game of the Fall series was played between the Seniors and the Juniors December 3rd, and was a splendid victory for the Seniors. The Juniors were either out of trim or hadn't the material. We hope it was the former and that they won't be found lacking in that essential during the Spring games of 1916.

So now you have all seen your various years play, probably to be beaten, but have you been supporting them? The success of a team depends largely upon the encouragement they get from their years. So get out and root for your men whether they are losing or winning and no matter whether it's baseball or basket ball they're playing, and with this co-operation we all look for the most interesting sports this season that were ever "pulled off" at the College.

The following men have been awarded official O's for merit:

TRACK.

Raymond, Lambert, White, Bird, Newton, McGregor, Schuyler, Welton.

RUGBY.

Springstead, Steckle, Michael,

Surgenor, Musgrave, Clare, Cook.

The following have been awarded O. A. C. II's for merit on the second rugby team.

Richardson, Hoard, Sutton, Jakes, Begg, Pearsall, Copeland, Corbett, Edwards.

Macdonald

THE Union Literary Society held a very successful promenade on Friday evening, January 7th, when all the lads and lassies were free to disport themselves not till "the wee, sma' hours o' the mornin'" but until the prosaic time of 10.30 p.m. Judging from the demand for seats in the dim, dark corners of the corridors all were enjoying themselves. We have a few suggestions to offer in regard to the next event of this kind, viz.: that a few more chairs be provided, that the lights be turned a little lower and that each girl be permitted to entertain at least two men at a time so no "wallflowers" may be left.

MACDONALD LOCALS

"Is D—r—n W—l—n young looking?"

"No, she's landed him."

S—ll—v—n—"Would it be wrong to take the jitney home after service on Sunday?"

Answer—"Ungallant youth! take P—t instead."

"My friends say I am getting careless and do not pay enough attention to details. How can I learn to make little things count?"

Answer—"Train as a teacher."

Mr. B—tt—n—"I met a swell girl the other day, but am rather shy and

should like to know what steps to take to become better acquainted."

Answer—"The front steps of Mac Hall."

C—nn—g—m, stumbling over a club bag at the station—"I am sorry, but I'm just getting over the grip."

"Where does C—l M—l—s get her daily letter from?"

Answer—"From the Postman."

My heart leaps up when I behold
A rainbow in the sky,
Until I think how tame it is
Beside Dean Fancher's tie.

Mr. Leckie—"Miss Bell, would you kindly return Dante's "Inferno" to the library?"

Miss Bell:—"Please give me two days' grace. I have gone through Hades and Heaven and am half way through Purgatory and would like to finish my little journey."

Wanted—An automatic talker to keep up the conversation during the night with one of the occupants of room 231. The other occupant would like to sleep.

One Hopeful—"If seeing were the same as sawing—"

Another Hopeful—"You could cut your wood by looking at it."

Miss L—ng——d—"Don't you think it's fierce that they won't let us sleep in class?"

Miss Br—g—t—"No, there's a death penalty now for kidnapping."

It is a well known fact that all the coons look alike. Do all red-haired girls look alike to Mr. Skelton?

Senior (in the lab. at a Practical Chemistry test)—Mr. Iveson, you appear to be enjoying yourself immensely.

Iveson—Yes, you know every dog has its day, and this is mine.

Miss Hopper (at the Winter Fair when the girls were looking at the geese) "I don't like to look at those geese. They look scarcely human."

~INTRODUCING
MR. J. C. NEALE,
OUR GENIAL EDITOR~

COME FOUR BEGGARS
MANUSCRIPT



DAN McARTHUR
'18

Locals

LOCAL EDITOR'S QUERY COLUMN

Dear Editor—Here is one for you. If Mr. White took Miss W— out for a walk on Sunday afternoon, and Rowley saw them go, why would this resemble the Union Jack?

Answer—It would be red, white and blue, the blue in the background, the red and white together.

Hoard (tearing his coat)—“My, that means an all night job for me.”

McLeod—“Why not go to the Taylor?”

Mr. Skinner seems to have forgotten where the Review office is. He was found in Cap. Gaudier's office asking for pencils(?).

Fair damsel at Rugby game—“Just look at those men out there, all covered with mud; how do they ever get clean?”

Way ('19)—HUH!! What do you suppose our scrub team is for?

When a fellow has money to burn, it's easy to get a girl to strike a match.

—Socrates.

Bird—“I can't say I like your new tooth paste.”

Richardson—“That's shaving cream.”

Dr. Stone (in third year Botany)—“Gentlemen, please sit down, that end table has been walking around all afternoon.”

SOME TABLE.

