

PAGES

MISSING

THE O. A. C. REVIEW

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

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Outapiaries.

By C. P. DADANT, EDITOR OF AMERICAN BEE JOURNAL.

IT was in 1871 that I established my first outapiary. I was working with my father, for I was only 20 years old, but very enthusiastic and very ambitious. We had ascertained that an apiary of over 100 colonies, in our locality, would prove unprofitable.

Here, it may be well to say that there is no doubt in my mind that, in many locations, the bloom of white clover, or of sweet clover, or of buckwheat, or in fact of any special product of a region, may be sufficient to maintain several hundred colonies in one spot. In fact, if bees were in the habit of flying 6 or 8 miles for honey, readily and with good results, as claimed by some people, a radius of this size—16 miles across—would give illimitable crops.

But unfortunately, bees do not fly much beyond 2 miles, profitably nor ordinarily. Their extensive flights are only in immense plains or continuous valleys. Then their success at any place does not depend altogether on the one crop. They must have some yields in light amount to help prepare for the harvest and sometimes to store honey for wintering. I have in mind the fact that if we had no spring flowers, no dandelions, no fruit blossoms, a plentiful clover bloom which could not be extended over several months would not prove profitable. Similarly, the extensive crops of palmetto honey, in April-May of Florida, are insufficient for successful beekeeping, as there is too much idle

time before and after, when the bees consume their stores, laboriously acquired during a short honey crop.

Thus, it is necessary to keep only a moderate number of colonies, even in good localities, so they may not overstock the vicinity during the blooming of the less abundant early and late honey-producing plants. So, whether right or wrong, we long ago decided that, in our locality, a hundred colonies is a full quota for a radius of 4 or 5 miles.

It used to be of some importance to place outapiaries as closely as convenient to the home apiary, to save traveling wear and tear, as well as time. We soon ascertained that apiaries located 5 miles apart would yield very varying results, in the quality, color and quantity of the honey. This confirmed our view that, in Illinois at least, bees are not in the habit of harvesting honey much faster than two miles from their homes.

With only one outapiary, besides the home apiary, it was not difficult to conduct intensive beekeeping. By this I mean that we could still keep an eye on every colony weekly, during the height of the breeding season, when the bees are to be produced in large numbers the coming harvest. It was possible to watch their progress, their increase, very closely, and help the needy ones whenever they were short. The supers were not put on until the colonies became quite strong, even if it required several visits before all were provided. In this

manner, the swarming of strong colonies was more readily avoided; for once a colony gets overcrowded and takes the swarming fever, it is almost impossible to prevent it. Our aim was always to prevent swarming as much as possible and to secure the increase from the division of such colonies as were not lively to have their force in time for the height of the harvest. I do not mean that we took our increase from weak colonies. But after rearing our queens from the very best mothers, we secured the bees for increase from colonies which, being a little late in breeding, would have their forces of numerous harvest workers a little too late for a full harvest.

Since the advent of the automobile, the distance to outapiaries is much less important, for an apiary which might have been considered out of reach, with horses, may be established 20 to 30 miles from home and visited with less loss of time than when we traveled 6 or 8 miles with horses and vehicle. But the roads must be of a passable kind.

When we increased our outapiaries gradually to four, five and six, we found it impossible to continue as close inspection of the bees, as regular a control of their condition, as formerly. The production of comb honey became much more difficult, and we abandoned it entirely, for the following reasons:

1. In the production of comb honey, swarming is much more difficult to prevent. The rules which we have promulgated in the American Bee Journal, as our guide in the prevention of swarming, are less easily followed, especially in supplying the bees at all times with sufficient space to store their honey. It is necessary for them to have combs built ahead of need, so that in the best days of harvest they may find room for their fast gathered nectar. This is much more readily supplied with the production of

extracted honey. We have, on the average, enough room in our extracting supers for some 80 pounds per colony without the necessity of the bees building a single comb.

2. To produce an attractive article in comb honey, it is necessary to watch the colonies closely and remove, as quickly as possible all sealed sections, so they may not be travel-stained by the bees. This requires numerous trips. So the product was less per pound, but the the natural result was a change from comb to extracted honey. The value of quantity produced was much greater and, from year to year, we preserved numerous supers full of combs, which increased the possibilities of the next harvest. We now have supers of combs which have been in use annually for over 40 years.

It became also necessary to be more lavish as to the amount of honey left in the brood chambers. This was greatly facilitated by the large hives which we have used for many years. Our brood chambers have a capacity equal to between 12 and 13 Langstroth frames and we make it a rule never to extract from the brood combs. In this way we have rarely less than 40 pounds of honey to winter the bees. The colonies are strong when they go into winter quarters, they winter better than smaller colonies, their breeding is not interrupted by lack of food in spring unless the previous crop has been short, and the production of young bees for the crop is usually immense.

In order to make short work of putting on supers, we aim to have the colonies as much as possible of equal strength when the crop begins. If the queens are equally good, the food equally plentiful, the breeding will be fairly uniform. If it is not, and some colonies are only of fair strength when the harvest begins, we can either equalize by ex-

changing combs of brood and bees for the empty combs, or preserve the colonies under strength for increase, as mentioned above. There is a little loss in giving brood and bees from a very powerful colony to a middling one. But the great advantage of having all colonies up to a certain average, for giving them supers, greatly overbalances the disadvantage, when we know that the work of attending a number of apiaries requires a somewhat wholesale management

At subsequent visits, after the opening of a honey crop, supers may be equalized. We usually give two supers to a colony, in a good season, at first, if the colony is powerful. We aim to have room, supplied with empty combs, in sufficient amount to insure against swarming, in ordinary circumstances. The swarming problem is thus reduced to so small a proportion that bees require next to no attention on this score. But should they swarm, we expect the farmer, on whose farm the bees are located, to supply some willing person to harvest the swarm, and we always have a few empty hives in readiness for this purpose. The price we pay for this trouble is usually 75c per swarm.

For the location of the apiary, we now pay either a round sum annually, say \$25, or a tenth of the crop of honey. We have often heard a farmer say that the little spot where our apiary is located is the most profitable spot of his entire farm. He is usually pleased and we want him pleased.

It is not our custom to extract the honey crop, before it is over. We aim to supply the colonies with a sufficient number of supers to lodge the entire crop. But in extraordinary seasons, such as that of 1916, when our bees averaged over 220 pounds per colony, spring count, it is out of the question to supply supers

enough for the crop. At such times, there are usually a large number of supers well filled, in which the honey is well ripened, so that it may be extracted, long before the harvest is at an end.

We have never practiced removing the honey in the supers from the outapiary and bringing it home to extract. The apiarist who is short of help and needs to use a power extractor can hardly afford to haul the outfit from one outapiary to another. So he removes the supers, brings them home, extracts the honey, and then brings the supers back to the hives. This requires a great deal of time and leaves the colonies deprived of those supers for at least two or three days.

We prefer to extract the honey, on the spot. In this manner we have taken supers from colonies in the morning, extracted the honey, and returned them to the hives in time to see fresh honey in them before evening. If we were forced to work single handed or with only one assistant, we would still prefer to use this method even if it entailed the purchase for each apiary of an entire outfit as expensive as they are made nowadays.

We have an extractor and a honey house at each apiary. The honey houses are inexpensive affairs. They are light and the main requirement is that they be bee-proof and mouse-proof. They are exceedingly cold in the winter and we want them cold, for we expect the freeze of our Illinois winter to kill all eggs or larvae of moths, which may be lurking in them when the combs are put away, at the end of the season.

Our honey extractors are large machines, capable of holding 8 of our extracting combs at one time. They are not of the reversible kind, but are so arranged that the combs may be reversed without lifting them out. We do not use a

capping melter, because of the additional heat it produces, in hot weather, and because it impairs the good flavor and color of the honey. But beekeepers who cannot readily secure help and who are located in places where the heat is not oppressive can use both capping melters and power engines to advantage.

The extracting on the spot does away with the annoyance and inconvenience of hauling combs and supers back and forth. We barrel our honey temporarily, because it is the easiest way to haul it home and because we do not know, at the time of extracting, just in what shape it must be ultimately put up, whether in small jars, small tins or large cans. The use of first class barrels, however, is indispensable. Soft wood barrels will not do.

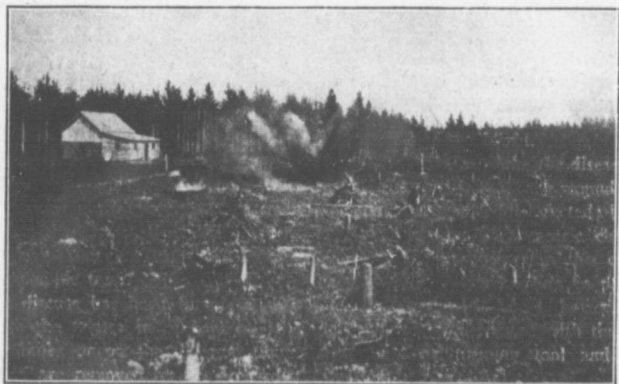
Clean alcohol barrels are the best for our purpose. They are the cheapest package that we can secure and are preserved from year to year without the objectionable features that are conspicuous with second-hand 60 pound tins.

As the methods of wintering differ according to location, I will not attempt

to describe our method. But if the apiary is left to itself during the winter, after protecting the hives in one way or another against cold and especially strong north winds, it must be kept fenced so neither cattle nor hogs will disturb the bees.

We have wintered bees in several different ways; in silos, in cellars, out of doors without protection and also with heavy and light protection. If I lived in Canada, I believe that cellar-wintering would be my choice. A well-made cellar, in a hillside, with the honey house over it, is a safe place, and when the thermometer stays for months below zero, we feel that our bees are safe, provided they have sufficient ventilation and ample protection. A visit or two during the winter are sufficient to make sure of conditions.

We now have seven outapiaries and the younger generation of Dadants, the third in beekeeping on a large scale, assert that a man, with a little occasional help, can take care of a thousand colonies of bees and make it pay.



The Advance of Agriculture

Home Beautification

By A. H. TOMLINSON, B.S.A., IN CHARGE OF LANDSCAPE GARDENING, O. A. C.

NATURALLY Ontario is a beautiful province, with its wealth of trees, bushes, flowers and green fields, also winding streams, rivers and lakes. These last three, in clear weather, ap-

pear mirror-like, reflecting the wonders of the sky enclosed in a beautiful framework of woodlands, green meadows, grass, clay or sand banks. To-day this natural setting is interspersed with man-made homes, farms, and gardens, which mark progress, and do not mar the beauty of the landscape. But, alas! this is not all, large areas of buildings, homes, houses, factories, and the like, have been erected. This may further mark the advance of civilization, but Nature's charms have been destroyed; and few adornments, even to remind one of the former beauty, are seen. The streams or lakes, where large aggregations of buildings exist, are now not always in a state to reflect Nature's beauty and wonder.

This condition is the reason why so much is written and said about home

beautification. Nature has been interfered with and something must be done to mellow the artificial and material side of industry. That is, with modern progress, not only must industry make headway, but also art must be developed and particularly the beauty in art. To-day philosophers tell us that beauty is utility. Where things beautiful are found as part of the environment of a house, factory or district, the residents and workers are found to reflect this atmosphere. Have not such as the National Cash Register Company, U. S. A., Cadbury's Cocoa Company, the Sunlight Soap Co., of England, and others, proved this. The Garden City Movement is founded on the same principle.

Nature is willing but has not the power to work according to definiteness in design. She must be aided. Artificial planting is needed either as a street or yard decoration, or as an embellish-

Has not a little planting made a great change?

ment to a dwelling in the form of a garden. This latter may be just a win-



A fine house, but possessing the appearance of a corner hotel.



dow box or the planting of the grounds. Harsh lines of buildings must be softened by suitable planting, shade trees are wanted to protect one from the sun's direct rays, and, in winter, evergreens are required for protection against the cold winds. Wherever possible, beauty spots should be arranged if only as a reminder of the beauties of nature not far distant in the open country, away from the crowded city and smoky atmosphere.

Man's art is wanted to design features where nature may be seen at her best. Under artificial conditions of formal buildings and streets, she must be handled in a certain manner to bring about the best results. In the more natural arrangement of a few irregular buildings and streets or roads, nature must appear to have sway. Interference by men must be

hidden; yet his art will be needed just as much, if not more so.

Thus two great styles in landscape gardening arise, namely the natural and formal. The chief on this continent is the natural. Western Asia and Europe are largely responsible for these styles; various forms have been brought by setting, climate and customs. Thus each country, or section, has its own particular form of the natural, or formal style. The early settlers of this continent created what is known as the Colonial form. This is a conglomeration of French, Dutch and English sys-

tems, and would be catalogued under the natural style, although phases of it might be considered formal. Italy is the home of the more modern type of formal garden. With modifications, it is adopted very easily as an architectural, or rhythmic, garden feature of Ontario's more formal buildings and grounds.

A natural setting needs a design with natural curves, groups, vistas, open lawns and meadows; and colors in graduation.

The whole arrangement must be without symmetry — irregular.

Formal or architectural featured buildings need planting to coincide. Thus geometrical lines and curves must predominate. Symmetry must prevail; colors must be in contrast, not in diffusion.

Much thought is necessary to design a planting scheme. A plan is

needed for every beautification project. Various ideas occur to one; these should be noted and a plan drafted. This plan should show the location of present and proposed buildings, paths and roads. The planting arrangements must be made clear, the proper varieties in their correct places. A planting list, too, must be provided showing the material to be used. Unity or harmony must be the main theme supported by character and simplicity. A proper quarter must be provided for things grotesque, whether plant or statutory, and not intermingled with common or popular features.



Paint on the shutters, doors and windows, climbers around the verandah posts, a stretch of lawn and a few trees make this old frame farm house a very pretty and comfortable home.

Such are the outlines for any beautification scheme. In commencing, many things have to be considered; for instance, in deciding where to live, choice of site and style of architecture. To make an ideal home-beautiful, the matter of district first arises, which means the question of neighbours, pure water supply, sanitary conditions, drainage, conveniences, cost of building and exposure, together with other things; briefly, it is health, happiness and cost. As regards the site, such as the location for a dwelling to secure the best view, shelter, drainage and economy of space, a south-eastern exposure is best usually, but south or south-west are all right if there is no alternative. A direct northern aspect, where possible, should be avoided, unless shelter exists or can be made with walls, or evergreen wind-breaks. The living rooms should be on the east side. The house should be placed as far from the road as space and height will allow. A rural suburban or a city home with large grounds attached should be at least three times the height of the building back from the road. This prevents trouble with dust, and noise, and allows more lawn space and privacy, with proper planting. A city home may be close to the street, and usually is, but where there is enough space a lawn and garden may be arranged at the rear, or side, of the house.

The style of architecture usually causes much concern. It is wise to choose a style which will fit in with site and district. It is true that almost any type of building may be made to conform to its surroundings by correct planting, which will mellow and soften any harsh lines and give character and finish. It is not recommended to erect a colonial type of house, or a middle age style of mansion, on a street in an Ontario city with such as factories and

chimney stacks for its associations. These types of dwellings need space for a planting scheme with provision for vistas, diverting of sky lines, the creating of immediate objects of interest, the hiding of unsightly places, the arranging of lawns and special gardens, also winding paths and roads.

The planting of the grounds is the chief concern, after the district, site and style have been decided upon. For a building 50 feet from the road, natural system of laying out the grounds should be followed with winding paths, an open lawn, and planting towards the boundaries. With a house under fifty feet from the street, usually straight walks are the best, with a formal system of planting between the buildings and street. If space permits at the rear or side, a natural garden may be made.

In designing a garden or lawn the idea uppermost should be that of extending the home to the outside. If it is possible some amount of privacy should be planned. For a small place, where a verandah exists a covering of vines or flowering foliage plants arranged in suitable boxes will bring about the desired effect. Larger places need the planting of trees, shrubberies and hedges for this result. A garden should be so planted that in fair weather, time may be spent in the open air and thus rest and recreation enjoyed. Surely such a garden may be called an outdoor room with a lawn, trees, bushes and flowers as the carpet, furniture and decorations respectively, with the sky above, the most beautiful ceiling possible.

The class and variety of tree and plant to make use of is often a question of much importance. In the country native trees, bushes and flowers must always be considered paramount, although varieties which have become naturalized

Factors Influencing Profitable Dairy Farming.

The Winning Speech at the Public Speaking Contest.

DELIVERED BY R. ALEX. BRINK, '19.

IN our province, the dairy industry engages a large population of intelligent, progressive and hard-working farmers. There are some who are assuredly more progressive than others and some whose efforts are attended by vastly greater financial returns than others. The recent Farm Business Survey in Oxford County had for its object the revelation of the features in dairying having the greatest effect on the amount of profits. The remarks I will make to-night on "Factors Influencing Profitable Dairy Farming" will be based largely upon information gleaned in this survey with such notes as I shall add from my own observation and acquaintance with the industry.

Four years ago, I was personally interested in dairy farming to the extent of milking five Holstein cows in the morning before I left for school and again in the evening after I had returned. Conjoined with this intimate experience, it was my privilege on Saturday mornings to haul the milk to the factory, a distance of about two miles. As I would take my place in the long line of wagons there, converged from all parts of the community and manned by hardy individuals as varied in nature as in appearance, I often wondered, as I surveyed the scene, what reward attended each man's long hours of steady labor, what returns for the ceaseless round of toil that is the lot of the dairy farmer. In that long line there were individual cases of interest. Here would be a man

grown old and feeble in the endless duties of the farm and there a sun-browned boy whose father had said he was going to be a farmer and didn't need to go to school any more, the lad yet scarcely able to lift the cans from his wagon. Here one would see a smart outfit with every indication that its owner was a happy and prosperous man, while behind him his neighbour would be waiting, gloomily, probably complaining about the weather, while his horses sullenly hung their heads, apparently ashamed of their master's incompetence. How interesting it would be, I thought, to stand at this point of focus and read each man's story right back to the farm. The recent Farm Business Survey has made that possible and, from the scores of patrons daily converging at that factory, I have selected two whose cases are such that they form a perfectly fair basis for comparison. Each tilled 95 acres of first class land, each derived 85 per cent of his income from dairy cows, each hired the same amount of labour and neither suffered any handicaps beyond his control. But despite the equality of their opportunities, Mr. Common, as I shall designate the less successful man, after he had paid the running expenses of his farm, deducted depreciation on equipment, the labour of the unpaid members of the family and interest on his investment at 5 per cent., had left a labour income of but \$850, while the other, whom we

shall call Mr. Preferred, generally reputed to be a successful man, earned an annual labour income of \$2,400, or nearly three times that of his less successful fellow farmer. Whence you ask comes the great difference? That is the key note of my address tonight. The difference between an income of \$2,400 and \$850 is the difference between good live stock and poor stock, the difference between the best feed and unsuitable feed, the difference between successful management and inefficiency.

Without going deeply into details, for details in such matters only lead to confusion, let us consider the leading features in business influencing profits. The most potent factor in determining the amount of returns in dairy farming is the quality of the live stock. It is the individual cow that counts. Some men keep cows that are not producers, no matter what their feed may be, while others have cows that if well fed will prove their ability to produce at a profit. In 1917, Mr. Preferred enjoyed a return per cow of \$160, while Common's cows gave him only \$90 each. While the farmer's handsome returns are due in part to better feeding, one has but to consider the breeding of the two herds to explain the main reasons of Mr. Preferred's success. About nine years ago, Preferred, progressive as he was, purchased a pure bred Holstein sire of proven ability and began to breed for more milk. He kept individual records, weeded out his poorer cows and replaced them with better ones. The splendid herd of Holstein cattle that he owns to-day owes its high milk producing ability to the judicious breeding carried on since that purchase nine years ago.

But what of Mr. Common? He

keeps grade Shorthorns and Holsteins and I am told that the sire that heads his herd resembles in many respects what Henry Clay said about the mule, "without pride of ancestry or hope of posterity." Better breeding simply means giving the cow, through careful selection of the individuals, the power to do larger and more profitable work. We know of many men who, like Mr. Preferred, started with 4,000 lb. cows, and to-day their herds will average 10,000—and they will tell us that it is not a difficult thing to do.

Just as the ability is in the breed, so is the proof in the feed. "Successful dairying is a partnership between an able cow and an able feeder". The advisability of feeding the farm crops upon the farm is unquestioned and in most cases the purchase of supplementary feeds is warranted. It is very exceptional that the sale of roughage is a profitable or feasible practice, but a scheme followed by many successful men, that I think might well be emulated by the others, is the growing of a special cash crop such as wheat or potatoes, and investing the return from this in concentrated feeds, such as cotton seed meal or oil cake. Preferred gained just \$632 on Common one year in this way. He grew 10 acres of wheat, which he exchanged, as it were, for concentrates, enabling him to give each of his cows \$70 worth of feed, while Common's had at their disposal but \$55 worth. And, remember that Preferred's profits were nearly three times those of his less successful fellow. It pays to feed well.

Another very remunerative way of increasing the farm business is by following a system of all year round dairying. The Oxford County Survey has shown that it is possible to increase

the profits twenty per cent by producing as much milk during the winter months as in the summer, rather than limiting the productive period to the season in which the cows are running out. This universally results in a greatly augmented labour income.

And our best disciples of dairying concede to the cow a position more than a mere machine, that is incapable of reaction with its environment, but grant that she is a highly organized living thing, sensible to the conditions that surround her and distinctively responsive to kindness and good treatment.

The outlook is hopeful. Throughout western Ontario, for I know that best, the seeds of "the better gospel according to the cow" have not fallen upon barren soil. Our dairymen are realizing that their business is the child of intelligence and intelligent purpose. The grading up of herds with pure bred sires is rapidly improving the quality of the dairy stock generally. Balanced rations are coming to be the watchword in feeding and silos are to-day concrete things. Sections of our country are establishing wide reputations for the quality of their pure bred dairy stock. And there is satisfaction and hope in knowing that our dairy farmers are organizing Milk Producer's Associations. They do not conceive that

duty calls them to render their indispensable service to mankind under any handicap, whatsoever, that will deprive their children of any opportunity of education or themselves of enjoying the rewards of honest toil.

In no other branch of farming probably does the personal factor play such a rôle as in dairying. There are some men who are specially fitted by temperament and inclination for developing a dairy business to a highly specialized degree with pure bred cattle. But unless his heart is in the work, unless he is prepared to give to his stock careful, intelligent and constant attention, unless he is prepared to devote time and study to the problems of successful breeding, his adventure on the seas of specialization is doomed to disaster.

But for him who possessess the instincts of a dairyman, for him who realizes that success with high grade cattle comes only when the capital invested, feed provided and care given is in proportion to the high quality of the stock, dairy farming offers a reward that cannot be measured entirely in dollars and cents. The success of such a man strengthens the whole industry. The fruits of his labour live after him. He has sounded the depths of a useful life—he leaves the world better than he found it.



Perhaps the city man cannot understand the joy of seeing a calf grow, a colt develop or a straight furrow, yet there is a peculiar quality of satisfaction to the farmer that more than pays him for his work.—Farmers' Magazine.

Crop Rotation

System in the growing of field crops essential to success

BY W. C. CALDWELL, '19

IT is possible to grow the same crop year after year in the same field with a degree of success, provided there are large quantities of suitable fertilizer applied annually. This, however, is neither practical nor profitable, except in extreme cases, and it is not with such a purpose dealing.—What is of greatest importance to the largest number of farmers is in the best interests of agriculture.

The successful growing of field crops, depends largely upon farm management; and this latter is taking more and more, the form of a science. It involves the organization of the farm for best results and in the scheme the most important feature is the crop rotation.

Value of Rotation.

The benefit derived by growing a variety of crops has been conclusively proven by experience. By using a rotation the farmer is enabled to maintain the supply of organic matter in the soil. The remains of grain crops — stubble, roots, etc.—is not sufficient for this purpose. In the rotation are humus-producing crops. A cover crop may be introduced which will be a great source of organic matter. The use of leguminous crops is possibly the best method of supplying humus. The clover sod is rich in it and besides increases the nitrogen content of the soil. The growing of legumes is the cheapest and best way of securing nitrogen, because such plants are able to take it up from the air in the free state by means of bac-

teria (azotobacter) contained in nodules or tubercles on the roots and build it into the tissue of the plant. Thus when the roots and stems of clover or other legumes decompose they leave a supply of available nitrogen for the succeeding crop.

In the rotation, the fact that all crops do not feed to the same depth is taken advantage of. Those which have short roots are followed by a crop which feeds at a greater depth. In this way the plant food is used uniformly and the soil is not impoverished for any one crop.

The soil is sometimes left in a bad physical condition by a crop. It should be followed by one which will correct the trouble. Generally speaking, however, in a really good rotation each crop leaves the soil in good condition for the one following.

With such a rotation livestock become more profitable because a larger number can be fed. There is then more manure available and the systematized field work makes possible the best utilization of it. Each field receives its share regularly.

A suitable rotation will do something more. It assists in the control of fungus diseases and insect pests, and the hoed crops tends to keep down the weeds. Labor is better distributed and the greatest production made possible. The farmer is not dependent solely upon a single crop. If a year proves to be bad for one crop, there will be another crop not so affected.

The Selection of Crops.

This is governed too often by the likes or dislikes of the farmer. He may be prejudiced against some crop or variety of crop which if grown would prove much more profitable and better suited to his conditions than one which he persists in growing. Some farmers like to be tampering with novelties—new, untried crops. This as a rule is unprofitable. In some lines of industry, it is, no doubt, of great advantage to be the only one or the first in the field. Not so in agriculture. If you are in the livestock business keep the breed most numerous and most popular in your locality or district. It becomes known that a certain breed can be had there and thus buyers are attracted. Hence much better marketing opportunities.

This is also true in the growing of field crops. Those already most extensively grown, are the best. They have proven best suited to the district and most profitable or they would not be popular. Where the same varieties of crops are largely grown, shippers are able to get uniform earloads so that marketing is simplified and better prices are realized.

The Rotation.

A suitable rotation for all conditions cannot be given. The nature of the soil, the climate, the kind of farming followed, and the market demands will tend to vary it.

For a dairy or mixed farm a four year rotation will prove possibly the best. The following is one which is used by the best farmers and can be recommended:—

Four Year Rotation.

1st Year—Hoed Crop—corn, roots, potatoes—for which the land has been manured.

2nd Year—Cereal crops—chiefly oats or oats and barley—with this crop the land is seeded to clover and Timothy, about 10 lbs. Timothy and 8 lbs. Red Clover, or 10 lbs. of Timothy, 6 lbs. Red Clover and 2 lbs. alsike.

3rd Year—Clover Hay.

4th Year—Hay and Pasture.

Where the farmer has rough land and does not need to pasture the land he works, a three year rotation is very satisfactory. There is no better or quicker method of improving the soil.

Three Year Rotation.

1st Year—Hoed Crop for which the land was manured.

2nd Year—Grain Crop, with which the land is seeded to Clover.

3rd Year—Clover Hay.

In this rotation the land receives an application of manure and has a clover sod turned down. The soil is thus kept rich in nitrogen and humus.

There are various other rotations used and found satisfactory for different districts. These range in duration from three to seven years. The farmer must arrive at a decision as to what is best for his conditions. In this he can be greatly assisted by consulting his agricultural Representative.

In conclusion let me say that a rotation is essential to success. Hit and miss, haphazard methods cause failure.

Answers to Correspondents

(as they might be)

BY PLANT PATHOLOGIST

DEAR SIR,—There is something wrong with my raspberries as they do not grow very well. I cannot understand it because I chose them carefully from the nursery myself. I had read of the wonderful way in which root nodules on clover and peas are formed by helpful germs, so I took care to pick my raspberry bushes with as many of these round nodules as possible. Maybe you can suggest something.

Yours very truly,

FRANK LIGHTOP.

Answer.

DEAR SIR,—Your case reminds one of the boy who after finding out from his mother that flies are harmless playthings, proceeds to capture a large specimen,—and finds it is a bee. You like him were stung. Look up these wonderful root nodules in some bulletin and you will see what I mean.

DEAR SIR,—I grew potatoes this year on a large vacant lot. In a good many of the hills the potatoes came up out of the ground and grew in a bunch around the stem, just as if they didn't like it down there and came up for air or something. I suspect it was manure for I put a large wheelbarrow full on the lot in the spring and it smelled horribly.

Yours very truly,

AMATEUR.

Answer.

DEAR SIR,—Would suggest your looking up the Rhizoetonia disease on potatoes before casting such foul suspicion on sweet innocence.

DEAR SIR,—I was treating my corn seed for smut the other day when the District Rept. came in. He laughed at me in a most insulting way and told me I was wasting my time. It made me mad, a mere chit of a boy like him speaking that way to a man who grew corn before he was born. I told him a few things and asked him didn't they want us to treat wheat and oats for smut and if so why not corn too. He said that was different and tried to get out of it that way, but I had him nailed. If these fellows they send out to teach us farmers would only learn things thoroughly before they come we would like them a lot better. I ask you why shouldn't I treat my seed corn for smut as well as the others.

Yours very truly,

SANDY SHORTGRAIN.

Answer.

DEAR SIR,—No reason in the world why you shouldn't, Sandy, except that it is generally considered to be a work of supererogation. In your case, however, I would advise Putnam's Painless corn treatment as likely to be more generally useful.

DEAR SIR,—Last spring a neighbor sold me some bean seed left over after he had planted his own and I paid him half price for them. They did not look very good as they had dark places in them. The rows did not grow very well and the pods were all black spots. I think my garden must be too rich or

something because his own beans are splendid and so it can't be the seed.

Yours very truly,

MARY WARGARDEN.

Answer.

DEAR MADAM,—It can be the seed Mary, and what's more it is. Your neighbour is a wise guy and has unloaded on you the diseased beans that were in his seed, keeping the good ones to plant himself. Advise you to poison his cat by way of getting even.

DEAR SIR,—We have a barberry bush on our farm at the front gate, and every summer it has little orange spots on the leaves with the tiniest little caps in them. I asked granny about it and she said it was the fairies; they dance there at night and pelt at each other with dewdrops, and wherever a fairy has been standing these spots come afterwards. Father says Humph and Tom says O pshaw. Is it really and truly the fairies?

Yours very truly,

NORA NOLAN.

Answer.

DEAR MADAM,—Granny is right Nora Nolan. You have stumbled on a really wonderful fairy tale which has to do with the barberry bush and the wheat in the field and another mysterious plant which "grows and grows but nobody knows." Some day I will write and tell you all about it.

DEAR SIR,—I have a field of oats which is very poor although on fairly good land and well cultivated. The poorest place is just along the road. Our Minister was here the other day and he thought it might be because that strip was shaded from the sun by the row of buckthorn trees that were planted years ago. After he had gone, however, I suddenly remembered that this row of trees is on

the north side of the field and so would never shade it. There must be something wrong with the soil because I have never had oats do well there. In fact my farm seems to be always a poor oat farm.

Yours very truly,

JONAS HARDCRABBLE.

Answer.

DEAR SIR,—A hard fact often disturbs the smooth flowing product of the ministerial mind. Nevertheless, the reverend gentleman's wild throw almost hit the mark. It is the buckthorn, friend Jonas, that makes your farm a poor place to grow oats; these two vegetables will no more flourish together than foxes and chickens in the same coop. The reason is that the oat rust also lives on the buckthorn and your trees are a fine breeding ground for the disease. You can have oats or buckthorn on your farm but not both. It's up to you to decide which.

DEAR SIR,—I have some fine Hollyhocks each summer and an old man living beside me has some too. Last fall he came and asked me if he might have the old stalks and leaves after they had done flowering. I told him yes and he came and gathered every scrap of them and took them away. I suspect he burned them as he did his own. Are the ashes of Hollyhock useful for anything or is the old man just a little off.

Yours very truly,

LETITIA LITTLETOWN.

Answer.

DEAR MADAM,—No the old man's top structure is not a nut as you suggest but is a good sound old bean. He apparently knows something about Hollyhock rust and was merely taking the easy way of getting rid of all your rusted leaves as well as his own so that the rust would not be carried over the winter.

Manuring and Fertilizing Gardens

In Applying Fertilizers, use the Kind that is going to give you the Desired Results—Phosphates often Lacking.

BY AUSTIN RICHARDSON, HORTICULTURAL DEPARTMENT, O. A. C.

A YOUNG gardener often thinking to get strong plants of rapid growth is tempted to sow seeds in soil charged with rich manures and to apply manure or fertilizers to young seedlings. This is unwise, as a seedling is fully provided with food and germinates better in pure sand than in rich soil. Manures placed in contact with germinating seeds are of no assistance and in many cases prevent the appearance of the plant.

It is highly important for the gardener to remember that roots cannot select their own food. They cannot reject what is objectionable, but have to take what is given them; they are not like an animal which rejects what it does not like by taste or smell. They have to take any substance that is dissolved in the soil. It is taken up by what might be called the mouth of the root. The plant takes what is necessary from what is taken through the mouth into the inner side of the root, and fresh supplies take its place, but that which is objectionable stays in the root and as the capacity of the root is limited the root is soon overcharged with useless and objectionable food. If the soil contains too much, and the plant is seriously injured or dies—the younger the plant the quicker this occurs, owing to the limited rootage. This is one reason why the analysis of plants or roots of plants cannot be depended upon as to what chemicals that plant requires and why the analysis of the same variety of plants differ in

different soils. What the roots do not require and do not absorb form a large percentage of this analysis of the root. It would appear important, therefore, to be careful with manure, especially when the plant is young. Be careful with nitrate of soda; if too much is given the plant will be forced to absorb more than is necessary, as nitrate of soda is taken up very quickly. This does not mean that young plants do not need any manure at all, although they will germinate without any, but is meant as a warning not to try to force a young plant too quickly. If it looks green and luxuriant and has glossy and shining leaves, do not apply manures, but if its leaves are pale green or yellowish, dull and dry, it should have help.

In many gardens seeds are always sown too thickly—the result is poor, spindly plants; if the seed is thinly sown, the result will be strong, sturdy, and productive plants. The bad effect of thickly sown seed, the plants from which have not been thinned out as early as possible, but have been left too long, is very seldom realized. Later, perhaps, the result will be blamed to something else. The same variety of plants sown in some other garden at the same time and in poorer soil, but which have been sown thinly and kept from overcrowding, are better in every way. The cause is very seldom put down as the gardener's fault, but it is blamed on the soil—the soil is too rich, the seed bad, the soil poor, and so on.

A plant adapts itself to its surroundings; if it is overcrowded it does its best to get above the others and grows spindly; if it has plenty of room it starts to spread out its leaves to get air, sunshine, moisture and so forth. If it is grown in rich soil and in favourable circumstances, such as warmth and moisture, it grows accordingly. If it is transferred to a poor soil, dry and shaded, it most likely will suffer more than if transferred from a poor soil to a poor soil, but if it is transplanted from a poor soil to a richer one it is likely to do well, because it is hardier and ready for richer food. It is not wise to plant soft luxuriant plants in a poor cold soil. Always choose a sturdy plant. When buying plants for transplanting bear this in mind. On manuring a garden it is well to know that there is quite a difference in stable and farmyard manure. Animals fed on rich food yield a rich manure. Young animals that are growing rapidly require more nitrogen and phosphates to keep them growing and in good condition than do older animals, consequently they yield a manure that is less rich. An adult animal that is working or being milked will require more out of the food to support it than will those that are being fattened or resting. Any animal that is living on poor food, such as turnips, mangels, straw, etc., only, will yield a very poor manure. Hen manure is worth three to four times as much as stable manure, if it is dry and has been kept so. If it has been kept in a wet condition it is not worth as much. Hen manure should not be mixed with lime or wood ashes. This liberates the ammonia in the manure.

Stable or horse manure is a little richer than cow manure, but more liable to loss on keeping, as cow manure is

cooler. Sheep manure is rich in nitrogen. Pig manure is valued between horse and cow manure. Horses produce dry, hot manure that ferments and rots quickly, but does not last long. The manure of cattle and pigs is cool and slow rotting and lasts longer. It is unwise to apply fresh manure to the soil. It causes a loss of nitrates in the soil.

It is also wrong to mulch heavily in the spring unless growth is wished to be kept back; the reason for this is that the soil is thus prevented from getting properly warmed. It keeps the land cold and wet and warmth and air do not reach the roots. Mulching should be done after the soil gets warm and before hot dry weather comes.

In order to produce the best crops it is wise and sometimes necessary to use fertilizers, but they should be used with care. When used wisely they are a great help. Nitrates promote growth, but if too much are used it will result in too much leaf and stem at the expense of root or fruit. If the foliage is lighter in colour than it should be it generally denotes that nitrates are required.

The best system of applying nitrate of soda (which is the quickest acting of the nitrate fertilizers) is a little at a time—150 lbs. an acre is a safe and useful application at one time for most purposes, but if it cannot be applied again later double or treble that could be used. It cannot be broadcasted on any crop that is soft leaved, such as lettuce, cabbage, etc., but can be applied without much danger on gross or hard leaved plants, such as strawberries. When the crops are up apply between the rows and harrow or rake in. One pound to forty-eight square yards is at the rate of one hundred pounds to the acre. Less is not advis-

able. It is better to apply three hundred pounds to the acre in two applications—one hundred and fifty pounds each time rather than one—once on sowing or a little later, then about three weeks or a month later.

A plant such as Rhubarb that is grown solely for its stem or stalk is helped along considerably by fertilizers in addition to stable manures, Nitrate of Soda being the best. Phosphate will help the color and earliness, Potash the flavour. In using fertilizers, the kind applied depends on what is required. For instance, take tomatoes. A tomato plant is apt to go to foliage, therefore, keep off nitrogen and apply phosphates. Generally a rich soil contains enough Potash as it does not wash away like nitrates and phosphate by rain. When the tomato has set its fruit then the plant can be given nitrogen (nitrate of soda) to swell the fruit. Peas would not require more than the first dressing of nitrate of soda, as later they provide nitrogen for themselves from the air. **The best guide is the foliage. If it is dark green and luxuriant it is not needed.** Peas are benefited greatly by lime and calcareous matter, old mortar from buildings, etc., and wood ashes.

Phosphates encourage fruitfulness and early ripening and are about the most important garden manure. The garden may have had lots of farm or stable manure and produce lots of foliage, but not enough fruit, root (turnip, beets, etc.), tubers, or cabbages may not head out good. Phosphates in the form of superphosphate would help out considerably. It is quick-acting. Tomatoes will take a lot of phosphate without injury. Celery benefits also from superphosphate. It helps to make the stalks firm. Very little nitrate of soda or nitrogen in any form should

be applied to celery. It is liable to cause spongy or frothy stalks. Superphosphate can be applied at the rate of 1 pound to 6 square yards each time or about 3-4 oz. a plant. 400 to 600 pounds an acre is considered a good dressing for general use, but for gardens where frequent dressings can be made and where intercropping and successive cropping are followed more can be used with profit.

If the soil has a tendency to produce too much foliage at the expense of roots and fruit, it is not in such a case true to say that the soil is too rich but rather that its plant food contents are unbalanced. Grow crops such as Swiss Chard, Cabbage, Spinach, etc., that will use up the nitrogen — and apply phosphates. It would not be wise to grow such as peas, as the tendency would be to grow too much vine and not many pods. Possibly the pods would not fill. Such would donate that the phosphates would be a benefit. It would produce fruitfulness and fullness of pods. Onions on such a soil would have an inclination to grow thick-necked, especially if they had much moisture. Wood ashes, lime, burnt soil and phosphates would help them. High manuring, such as generally happens in gardens, means a great demand on the lime of the soil, because in applying manure which contains ammonia the ammonia must be turned into nitrates by lime, so that in heavy manuring a lot of lime is used up. It is something similar to requiring heat in a house. You have water in a boiler, but without the burning of coal or wood you cannot get the heat. If you manure ever so heavily and there is no lime in the soil the ammonia cannot be turned into nitrates. It is sometimes puzzling to find that, although the soil has been heavily manured, no

apparent benefit seems to result from it, except to odd crops—the probability is that there is a shortness of lime. Some crops require the soil to be sweet—others will do well in soil that is slightly acid. Lime (agricultural lime) can be applied in a garden at from 8 oz. to 1 lb. per square yard. Occasionally in the flower garden the plants do not bloom or they form buds but do not open. Roses, for instance, and carnations will sometimes make many buds but they do not open. This state of things will probably disappear with the application of superphosphate. Apply as a liquid, or in dry form, about 1-2 oz. to each rose tree at intervals of one week or ten days, about four times. Carnations would require considerably less—not more than a teaspoonful to a plant. If in liquid about one teaspoonful of superphosphate to one quart of water. If the blooms are poor in colour it generally means phosphate is needed. Basic slag applied in the fall of the year to the roses and Perennials will help the blooming the following season. It goes under the name also of Thomas Phosphate Powder and takes much longer to act than superphosphate. It contains a surplus of lime. Superphosphate is deficient in lime, having more acid than the lime can neutralize. When giving liquid manures to plants do not do so if the soil is very dry, but either wait for rain or wet the soil first with plain water. **In applying fertilizers to plants of any kind do not put the fertilizer close to the stem of the plant.** The roots are not there. Dust around the plant so as to coax the roots to spread out after it. It is always difficult to get a new beginner to put the fertilizer far enough away from the stem of the plant, with such plants as tomatoes. It should be at least six inches—a foot

is better—from the stem of the plant, in a circle around the plant, as evenly and thinly as the quantity applied will permit.

There is little or no value in coal ashes. If applied to heavy soil it will loosen the soil, but it should not be used on light soils. Generally the soil itself is richer than the ashes. Perhaps one of the reasons why phosphates have not been used as much as they should be is that the result is not so apparent to the untrained eye, as is nitrates, which has an immediate effect on the colour of the leaves. Phosphates produce fruitfulness and quality. The belief is still held that Tomatoes require poor soil, because when farmyard manure alone is used, which is rich in nitrogen, the result is a luxuriant growth of leaf and stalk and no fruit. If a heavy application of phosphates is used along with the stable manure it would balance up the growth and there would be plenty of fruit.

I have advocated superphosphate in preference to any other phosphate, because it is quicker-acting and can be applied at the time when needed, but there are others such as Bone meal dissolved, Bones and Basic Slag, but these have to be applied several months ahead. These should be used on soil deficient in lime, as they contain more lime than the acid can neutralize, but superphosphate contains more acid than lime, therefore, on a soil inclined to sourness lime should be used with superphosphate.

On some soils wonderful results have come from the use of Basic Slag on grass land, on the north east coast of England, in Yorkshire where the wild or native white clover grows in the pastures. Pasture or meadow fields that

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Fence Sense.

*The Replacement of Old Rail Fences by Woven Wire Ones is Economic.
Moreover, the Erection of Temporary Cross Fences instead
of Permanent Fences is Better for Several Reasons.*

BY C. M. FLATT, '21.

SINCE agriculture has become recognized as a commercial industry, the energies of all farmers have been directed towards the introduction of new economic features and the elimination of old and expensive methods of farming.

The problem of farm fencing has been solved as far as efficiency goes by the advent of woven wire fencing. All that is now necessary is to convince the farmer that permanent fencing is a good investment, and not an unnecessary expense.

A good woven wire fence should be strong, durable and elastic, besides being closely woven. Practically all fences offered for sale to-day are heavy enough to insure sufficient strength. Durability depends to some extent on the quality of steel, and largely on the galvanizing process which the fence undergoes. The elastic quality in a fence is obtained by a twist or wave in the horizontal wires. This is important as it allows for contraction and expansion and relieves the force of anything striking the fence. The number of up-rights or stays is important, as they add rigidity and strength to the fence. The method by which the horizontal and upright wires are fastened together is also important. If the lock allows the stays to slide out of place the efficiency of the fence is materially impaired.

At the present time there is little

difference between the cost of a standard wire fence and the value of old rail fences, if used for fuel. The absolute security with which all classes of stock are held is in itself reason enough for the erection of a good fence—but there are many other advantages.

The fences on the average hundred acre farm in Ontario occupy about two and a half acres of land, if they are old-fashioned rail or stump fences. This area is an unsightly mass of weeds and bushes, and it is impossible to work the land close to the fence. **The erection of a wire fence will reduce this area at least one-half.** It can easily be seen that this saving of land would soon pay for the erection of good fences. Besides, the eradication of weeds would be greatly facilitated by the fence rows being cleaned up.

In most districts, line fences dividing farms and road fences must of necessity be erected permanently. Lane fences in many cases may be the same. **But it is not desirable to have other inside fences permanently placed.** The changes in rotations and other conditions incident to all classes of farming call for a system of fencing that can be manipulated to suit circumstances. In short, a portable fence is desirable for inside fencing. With a few rolls of woven wire and a few steel posts a fence can be quickly erected across the farm, wherever desired, and as easily moved when necessary. By

using this method of fencing, advantage can be taken of pasturing land after such crops as hay, corn, grain and roots, so that no feed is wasted. Pasture lands can also be divided and pastured alternately, thus keeping some part fresh all the time. An added advantage is the facility with which fall ploughing can be done. All the cross fences can be removed and much larger sections ploughed at once, saving time and securing thorough cultivation for every foot of land, and leaving no spots for weeds to grow on.

The wire fencing and steel posts will last an indefinite time if handled properly. For permanent fences either cement or steel posts are very satisfac-

tory and durable, but for portable fences iron posts are better as they can be moved easily and hold the fence rigid, at the same time allowing close cultivation.

Adding to the above advantages the neater appearance of a well fenced farm and its increased value as a result of good fences, it is obvious that the erection of woven wire fences is a profitable investment.

In general it can be safely stated that the most efficient and prosperous farmers and the most advanced communities can be selected by the fact that the farms are well fenced with woven wire fencing.



Rail fences may be picturesque (?) but they are not economic.

Co-operative Bull Associations

By S. G. COLLIER '21.

A GOOD deal has been written of late regarding the necessity of using better sires, and yet as time passes on we find that the situation changes but little. Prof. Wade Toole, one of the best authorities on present day live stock, recently made the startling statement that "In a survey of conditions in a dairy district it was found that only slightly over fifty per cent. of the dairy men keeping daily milk records were using pure-bred sires—and the best men keep milk records." Sad to relate this is a type of conditions found to be only too common throughout all Canada. How long is it going to last? Until the men who are backing the dairy industry realize to the fullest extent the necessity of relegating the scrub sire to the scrap heap, no permanent and enduring progress can be expected.

The establishment of Co-operative Bull Associations throughout the country presents a fair solution of the problem. And just what are they? They are organizations maintained by farmers for the purchase, use and interchange of pure-bred bulls. Their maintenance and cost are paid for by the farmers in proportion to the number of cows owned. This enables the farmer to improve his herd at small expense. It also aids its members to combat the contagious diseases of cattle and helps in the sale of stock and dairy products. Between fifteen and thirty farmers form an Asso-

ciation and jointly owns five bulls. The territory is divided into blocks, a bull to each block, and each bull is moved to the next block every two years, till the circuit is completed, when they may be disposed of, and a set of five better ones purchased. The individual outlay of the farmers will be about \$50.00. This covers a period of ten years, and the farmer has always at hand the service of a pure-bred bull with good solid backing.

In the dairy survey conducted in Oxford County last summer only 46% of the farmers used pure-bred bulls. Yet it was found that where a proved pure-bred sire was used, the average profit per cow over feed was \$38 above the average profit per cow where a scrub bull was used.—Ed.

The eyes of Europe are on Canada. She is the future storehouse of the world. On the fields of Flanders Canadian boys have proved that they are equal to the best, and now that the war is over and more peaceable pursuits are being followed, cannot Canadians take equal rank in agriculture? Surely they can. Of all the problems demanding immediate solution there is none of more importance than the elimination of the scrub bull. At this stage of the game we cannot put forward the plea that we are not sure whether careful breeding counts for much or whether there would be reward in actual dollars and cents. It has been proved conclusively and beyond all doubt that the daughters of cows on whom proved bulls have been used have in some cases almost doubled the production of their dams and in almost every case increased on it.

And then there are other features of the idea which must not be overlooked.

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Poor Stock and Equipment is Poor Business

S. H. Culp's Method of Starting Farming.

I MUST say that I consider myself in the class that works for what it gets, writes S. H. Culp '11, actuated by Geo. E. DeLong's article, "*Back to the Land.*" Had I gone four years to

and some of Prof. Graham's bred-to-lay Barred Rocks. Everything was the best I could purchase, as I considered that starting with inferior stock and implements would be a waste of time.



Mr. Culp and family ready for a spin.

college, I would have been strapped, so I decided to put what money I had left into the business of farming, as I thought my chances of success at that were decidedly better than in holding out for a government job. Moreover, farming always was a pleasure to me, and I wasn't afraid of work.

In the spring of 1911 I started on a farm at Vineland, Ont., consisting of 100 acres, 70 acres under cultivation, 30 acres in bush and rough land, and 6 acres of badly neglected orchard. The buildings were fair. This was obtained at a cost of \$7,000. The stock and implements cost \$3,000. These included a complete set of new Massey-Harris implements, four good sound horses, one of Haley's twenty-pound pure-bred Holsteins, the best Berkshire sow at the Winter Fair,

We have always aimed to make dairy cattle and apples our chief lines, with bacon hogs, butter and eggs as side lines. Pride Margueritta 2nd, the only pure-bred cow we have ever purchased, served as the entire foundation of our present herd of twelve pure-bred females. In addition to these we have ten grade Holsteins. The herd is headed by one of Osler's bulls, who possessed a thirty-two pound dam. Our previous herd header, Sir Korndyke Ormsby, was a full brother of Korndyke Queen Segis.

The six acres of old apple orchard are now in good condition. As well, we



Berkshire and Tamworth Crosses, bred by Mr. Culp. These weighed 200 lbs. at five months.

have eight acres of young orchard coming on nicely. The low parts of the farm are underdrained, the place is well fenced and in a good state of cultiva-

tion. The barn is fitted with modern equipment. We have power for churning, separating and washing in the house. Moreover, we have the very best in farm machinery, including a power spray rig, Gifford apple grader and a Briscoe "eight" car.

While the debt on the business is not quite wiped away, concludes Mr. Culp, yet I consider that the only way to start farming is by getting the best stock and equipment. Poor stock and equipment is poor business.



Picking and Packing Apples in the Culp Orchards.



Approximate dates of arrival of some of our more common birds, for Guelph and vicinity.

- | | |
|---------------------------------|----------------------------------|
| Prairie Horned Lark—Feb. 15. | House wren—April 30. |
| American Crow—Feb. 20. | White throated sparrow—April 30. |
| Robin—March 11. | Brown Thrasher—April 30. |
| Blue bird—March 16. | Towhee—May 2. |
| Kildeer—March 17. | Field Sparrow—May 3. |
| Black bird—March 17. | Red-headed Woodpecker—May 7. |
| Song Sparrow—March 20. | Bobolink—May 10. |
| Red-winged black bird—March 20. | Yellow Warbler—May 11. |
| Herring Gull—March 21. | Spotted Sandpiper—May 13. |
| Cowbird—March 25. | Catbird—May 14. |
| Phoebe—March 25. | Baltimore oriole—May 15. |
| Meadow Lark—March 25. | Chimney swift—May 16. |
| Junco—March 26. | Kingbird—May 18. |
| Sparrow Hawk—March 30. | Hummingbird—May 19. |
| Flicker—April 6. | White-crowned Sparrow—May 20. |
| Vesper Sparrow—April 8. | Redstart—May 24. |
| King Fisher—April 12. | Night Hawk—May 24. |
| Tree Swallow—April 16. | Red-eyed Vireo—May 27. |
| Great blue Heron—April 24. | Warbling Vireo—May 29. |
| Barn Swallow—April 27. | Scarlet tanager—May 30. |
| Chipping Sparrow—April 27. | |

Durham Boys Win in Stock Judging

*Beat All Competitors for Provincial Trophy
Given By Stock Pards*

THE championship in the inter-county live stock judging competition for the trophy donated to the winning team by the Union Stock Yards of Toronto was decided at the Ontario Agricultural College on March 13th, and went to the team from Durham County, who ran up a total of 1,925 points. The competitors were from Lanark County, who made 1,690 points. The contest which was decided here is the result of these two counties winning their sections, Durham being the winner of the J. I. Duff Trophy at the Guelph Winter Fair, held in December last, while Lanark County won the Peter White Trophy at Ottawa Winter Fair, held in January.

ARRANGEMENTS OF CONTEST.

The competition was conducted by R. S. Duncan, of Toronto, Supervisor of Agricultural District Representatives, while C. F. Topping, Treasurer of the Union Stock Yards, represented that organization. The judges were Prof. Wade Toole and Prof. J. P. Sackville of the O.A.C. staff, and the college animals were used.

The credit of training the Durham county boys goes to G. A. Williams, district representative, and he was delighted at the splendid showing made by the team. The losing team was trained by Fred Forsythe, of Perth, district representative of Lanark county.

The entire expenses in connection with the deciding of the championship were borne by the Union Stock Yards, and the trophy was presented to the winning team at a banquet held at the Walker House, Toronto, on Thursday of the

same week, following an inspection of the yards and packing plants.

A STRENUOUS DAY'S WORK

The competition was a strenuous one for the boys, all of whom are practical farmers. They began their work at 8.20 in the morning and did not finish until 2.30 in the afternoon. They judged ten classes altogether, two classes of Clydesdale horses, two of beef cattle, Aberdeens and Shorthorns, two of sheep, Leicesters and Shropshires, two of swine, Yorkshires and Berkshires, and two of dairy cattle, Holsteins and Ayrshires.

The total possible number of points was 3,000. The Durham county boys were winners in every class, with the exception of swine, where they were beaten by six points.

NAMES OF TEAMS.

The members of the winning team are: Roy Ferguson of Blackstock, who was high scorer of the day, with 692 points; W. E. Snowden, Bowmanville, 630 points, and Reg. I. Fallis, Millbrook, 523 points. The Lanark county team was composed of W. Strong, Perth, 594 points; Sheffield Graham, Almonte, 579 points, and J. Hughes, Balderson, 517 points. There were eighteen counties in the Guelph competition and seven in the Ottawa contest.

SCORES BY CLASSES.

Durham county's score in dairy cattle was, 460; beef cattle, 434; horses, 274; sheep, 412, and swine, 345. Total, 1,925. Lanark County's score was: dairy cattle, 424; beef cattle, 328; horses, 229, sheep, 358, and swine, 351. Total 1,690.

FARM POWER

Rambling Right Along to Market

The Motor Truck Saves Time, Men—and Money, if Enough Transportation is Provided.

BY HARRY K. PARKES

“I MADE the trip in just 3 hours,” said the young fruit grower, getting down off the seat of the motor-truck. “I started at quarter to four this morning. Early? Yes, but a mighty pleasant change to what it was last year—and to what a lot of fellows are still doing. Why,” he continued reminis-

my team pretty well trained. Poor old boys—they used to be pretty jaded by the time we pulled into town. Some change is right.”

“Have you enough transportation to make it pay?” I interjected.

“Yes. You see dad and I don’t own the truck ourselves.



With a system of good roads in Ontario these will come into much greater use.

ory. “I used to have to start early the evening before and lumber along all night to get to market here for the opening. Tough? Well, it made a man miss a regular sleep, although I used to have a good many naps on the road. I had

“Four of us went in together and between the lot we manage to keep her on the road nearly all the time. We make it a point to. If we didn’t we wouldn’t make running expenses, let alone overhead. We generally make a trip here

twice a week, a couple up to Guelph, and also travel back and forth to Hamilton. Between the four of us we raise enough fruit and truck to keep her going."

"There seem to be quite a few more trucks in use this year," I observed.

"You bet there are. A truck saves a mighty lot of time. And time to us fellows is money. Of course," he smiled, "there are going to be some people stung on this motor truck proposition, simply because they're not going to get enough out of them to make it pay. That's the big thing to consider, having enough produce to keep it going. But co-operation gets around that difficulty."

"Yes; you're right," he replied to my question. "A man has to know a little about machinery and have some common sense to keep the thing running smoothly. But, then, there are a whole lot of men who can't drive horses right. They haven't got the knack. Spoil them, make them balky."

"The motor truck is going to come into use more and more," he continued. "With good roads, it's going to be a great thing. Over in the States they

not only use them for marketing fruit and garden truck, but also general farm produce. There, the smaller farmers do the same as we are doing. Three or four club together and buy one. Between them they have enough stuff to market to make it go.

"A truck would make a great rig to gather milk in. They use them in the city for that purpose, and many farmers in the States collect milk with them. And I think they're coming here for the same job. They're talking consolidation of cheese factories. At the present time some men have a mighty long haul in going over their route. If they consolidate their factories it's going to mean longer hauls still. That's the place for trucks.

"Yes," he said in winding up. "a truck's all right if you give it a chance. It saves time and men, and"—just then thinking of another point—"it allows you to take advantage of good markets. Several times this summer I've come up here, got a good price, seen there was a big demand for certain things, and come back up with another load next day. We couldn't have done that without a truck."

Some Points for the Inexperienced Tractor Operator to Observe In Breaking In.

IN learning to operate a tractor, the beginner should, first of all, read the instruction book carefully. Then he should study the use of each lever. He should work all the levers several times and trace out what they control before ever attempting to start the motor.

In working a lever, throw it as far forward or backward as possible, so that the gears will fully mesh. The motor should never be allowed to idle, unless the gear shift lever is placed in neutral and the clutch engaged.

An inexperienced operator should prac-

tice running a tractor in an open field, where there is plenty of room to turn. He should not be in too great a hurry to begin any farm operation, but first learn to drive it. He should never try to put in gears with the motor running fast.

The tractor should not be allowed to start with a jump. Too great a strain is thus placed on the gears and bearings. In reversing, the same care should be exercised. It is rather dangerous to reverse or let the clutch in suddenly

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THE O.A.C. REVIEW

REVIEW STAFF

G. B. HOOD, '20, <i>Editor-in-Chief.</i>	
R. C. FRITH, '21, <i>Associate Editor.</i>	
C. F. MACKENZIE, '19, <i>Agri.</i>	W. C. HOPPER, '20, <i>Col. Life.</i>
R. ALEX BRINK, '19, <i>Esper.</i>	K. MACARTHUR, '21, <i>Locals.</i>
T. H. JONES, '19, <i>Horticulture.</i>	M. C. JAMIESON, '21, <i>Artist.</i>
C. F. LUCKHAM, '19, <i>Poultry.</i>	M. BARBARA SMITH, '19, <i>Mac.</i>
J. A. HALL, '20, <i>Query.</i>	MISS OLIVE GARDINER, '20 <i>Junior Representative.</i>
A. W. MEAD, '20, <i>Alumni.</i>	
W. L. CURRIER, '20, <i>Athletics.</i>	

EDITORIAL

The Attitude of O. A. C. Students Toward Mr. Charles C. Nixon's United Farmer.

IN the February number of the Review there appeared among the locals two items to which Mr. Charles C. Nixon, Editor of a sheet called "The United Farmer," took strong exception. Correspondence passed between Mr. Nixon and the Editor of the Review upon the matter, but with the mailing of his last letter the Editor decided that the Nixon-United Farmer affair was concluded.

However, the Editor has since come in contact with a March 4th issue of this United Farmer and, even though that sheet is not of sufficient importance to warrant more words on the subject, and although many may criticize the action of the editor in giving the Review the semblance of a yellow journal, by print-

ing the facts of the matter, yet, for certain reasons, he has decided to publish the whole proceedings.

Mr. Nixon was diplomatic enough to publish in the stated number the two mentioned items, his letter to the Review and certain reflections of his own — without waiting to hear what the editor of the Review had to say on the matter. In this Mr. Nixon inferred that the two locals expressed merely the opinion of the writer and that the action of the editor in publishing them was not entirely honorable. Moreover, Mr. Nixon was indelicate enough to drag Mr. H. H. LeDrew's name into this erratic sheet, demonstrating quite clearly that the editor of the Review is not the only editor that might be accused of publish-

ing facts before he was fully aware of their truth.

As soon as the news reached the college that Mr. Nixon had registered the name "The United Farmer," and had started a paper under that name, there were heard on every side strong words of indignation. The indignation was so general that the Editor decided to write an editorial on it, but reconsidered, on being advised that it would give Mr. Nixon exactly what he wished, advertisement. However, the Editor allowed the two locals that appear below to be published.

Now that we have begun to rake over the embers, we might as well tell Mr. Nixon that we have nothing to apologize for. True, the first local is not quite true, because The United Farmer is not a renamed Rural Canada; but the main idea of the item is still, and likely to continue to be, the opinion of O.A.C. men. No one can see what justification Mr. Nixon had for originating his paper. His motive appears to be the same as the Klondyke Miner who, on learning that another miner has discovered gold, rushes to town and registers the claim ahead of the real owner. Whatever Mr. Nixon's motive was the fact remains that the name applied to his paper was very misleading. If this is Mr. Nixon's idea of helping the farmer we can only say that he must be suffering either from a severe attack of egotism or an entire lack of discernment.

The following is taken from the March 4th issue of Mr. Nixon's United Farmer:

"WHERE A MAN FINDS HIS OWN
ENEMIES

A man's enemies are the men of his own house."—Micah 7: verse 6.

"The prophet Micah pointed us very clearly to what a man might expect from the men of his own house, and accord-

ingly we are not concerned personally over the items, as below, published for February, in the Guelph paper, of which our old friend, Mr. H. H. LeDrew, is general manager, and Mr. G. B. Hood, of the Class 1920, is the newly-appointed editor-in-chief.

"Ferdinand, of Bulgaria, was known as the fox of Europe, but we greatly doubt if he possessed any more cunning than one of our Ontario farm paper editors. The gentleman in question recently became publisher, as well as editor, of this Rural Rag. Influenced possibly by interested parties, he renamed this so-called farmers' paper, taking—lawfully 'tis true—the name belonging to a farmers' organization. The sorriest part of the whole affair is that this man is a graduate of the O. A. C. Boys, whatever you do, don't be a Judas."

"If you are in the least bit interested as regards our attitude in this matter, you may care to locate it in the following copy of a letter, which we have sent to Mr. LeDrew. We extend our sympathies to the staff, or to whoever is responsible on this paper, for most evidently 'they don't know what they do.'"

Toronto, February 28th, 1919.
Mr. H. H. LeDrew, General Manager
The O. A. C. Review, Guelph, Ont.

Dear LeDrew,—I trust you will not mind my giving you the full personal credit for the two little items relative to The United Farmer, which you have in the O.A.C. Review for February—for surely one of your student editors would hardly take this responsibility.

The saving point about the situation is that you have featured these in the jokes, and of course one would not really take them seriously.

I am surprised that you would not first of all get all of the facts before having gone ahead on this particular proposition.

While I was in Guelph, and at the College for a few hours on Tuesday, the Review Office was locked, as it was at the noon hour, and I did not get a chance to see you. I did not know at the time that these items were in the Review, and they were drawn to my attention by one of my friends as I was on the car going down town to catch the train for Toronto.

First time I see you I will give you the facts straight and I know you will do me the justice to publish them in the next issue of the Review. You will be amazed at the truth when you get it and more of it will be given in the next issue of The United Farmer.

In case you did not see our February 18th issue, I am sending you a copy in another wrapper.

Yours faithfully,

CHAS. C. NIXON,

Editor and General Manager,

Canada Farmers' Publishing Syndicate.

N. B.—Would it not have been better for the public and the honorable course for the writer of the item, as published, to have drawn from facts, rather than to have used his own imagination? The writer of that paragraph should apologize, *in extenso*, to readers. Does the O.A.C. Review reflect college atmosphere or just this particular writer's own mist?

WANTED TO KNOW

How any individual has the nerve to call a privately owned paper by the name: "The United Farmer."—Query in O.A.C. Review.

THE ANSWER

Because the grave need of the hour, in Canadian agricultural reconstruction, has not produced, or brought forward, any other man, or men *who will stand up* for what he knows is right and publish

independently and free, *the truth*, for "the people in bondage."

The following correspondence resulted from Mr. Nixon's first letter:

March 3rd, 1919.

Chas. C. Nixon, B.S.A., Editor and General Manager, "The United Farmer."

Dear Sir,—Mr. H. H. LeDrew, Business Manager of the "O.A.C. Review," has just handed me a letter from you. In this you give him full personal credit for the two locals published in the February issue of the "O.A.C. Review." In charging him, Mr. Nixon, you are mistaken; Mr. LeDrew is not responsible for the contents or policy of this magazine. The student editor, the undersigned, is responsible for the appearance of the two little items.

Now, Mr. Nixon, I would not do you an injustice knowingly. In permitting the publication of such matter I did so because the feeling of the students of the O.A.C., as well as myself, was expressed therein. We could see no justification for any private paper assuming the name of a farmers' organization, even though such an organization did not meet with the approval of that paper's editor—and sincerely have the interests of agriculture at heart. We wish to know what grounds you have for taking the name "The United Farmer."

We will indeed be pleased to learn that we have misjudged your motives in starting your "United Farmer," and we will appreciate an early expression of your position in the matter, so that we may more thoroughly consider the question. Moreover, we will be glad to put before the apparently misinformed readers of the "O.A.C. Review" your defense for placing your "United Farmer" before the public, and, having heard your side of the matter, as well as any

other side that may be introduced, we will give you justice through our editorial columns.

Thanking you, Mr. Nixon, for informing us that our opinion is perhaps not correct, and hoping to receive your statement in the very near future, I am,

Very sincerely yours,

GEO. B. HOOD, *Editor-in-Chief,*

O. A. C. Review.

March 6th, 1919.

Geo. B. Hood, Esq., *Editor-in-Chief,*
"O.A.C. Review," Guelph, Ont.

Dear Sir,—For so long as you take the attitude as shown in your letter of March 3rd, we do not care to discuss for your publication, the matter of *The United Farmer*.

We take it, especially from the second paragraph of your letter—that you are quite willing to blunder ahead and hurt anybody on your own impressions, without having the facts, as in the case of the item in your February issue, when the facts, which could and should have been obtained, were available.

We really are at a loss to know just what your letter means anyway! And frankly, we wonder if you are not a judge of your own phraseology.

In calling for a defense of *The United Farmer*, you practically admit a fixed opinion—a fixed prejudice; evidently you have swallowed, holus bolus, Mr. J. J. Morrison's statement that I did not have his authority.

Please tell us just why we should defend our position. We were first in the

field. Our publication is National, not local.

Yours very truly,

CHAS. C. NIXON,

Editor and General Manager,

Canada Farmers' Publishing Syndicate.

P. S.—Why regret that anyone is an O.A.C. man?

March 7th, 1919.

Mr. C. C. Nixon, *Editor and General Manager,* "The United Farmer," Toronto, Ont.

Dear Sir,—Your letter of March 6th amuses me; in fact it reminds me greatly of the phrase "Just for that I'll slap you on the wrist." However, Mr. Nixon, I am not extremely sorry that you wish to break off negotiations. Indeed, I am rather pleased, as I have more than once considered, previous to the receipt of your letter, that in publishing your statements—whatever they might be — we would be giving you more free advertisement than you or your so-called paper deserved.

In conclusion I might say that the "Review" has accomplished what it wished to do, namely, it has acquainted you with the attitude of the students of the O.A.C.

Hoping that your paper so successfully achieves the purpose for which you began publishing it, and glad to know that you admit that you are in the game for the very reason I at first thought, I am,

Very truly yours,

GEO. B. HOOD, *Editor-in-Chief,*

O. A. C. Review.



Do not grasp at the stars, but do life's plain common work as it comes, certain that daily duties and daily bread are the sweetest things of life.

—Lord Houghton.

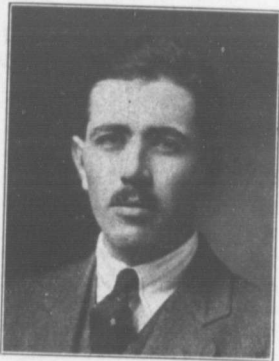
The Alumni Editor Deserves Your Assistance

THE Alumni Department is generally considered to be the pivot of the Review. It is the medium through which the old boys are kept in touch with each other. The very fact that it is concerned with the progress and migration of ex-students suggests to any thoughtful person the amount of work involved in compiling the items that appear in this department. Our old boys, being quite modest, are not keen to forward information regarding them-

must edit the various items and proof-read them.

It is thus obvious that this gentleman must not be afraid of work. If he is, it simply means that a heavier burden is piled upon the shoulders of the office boy, the managing editor.

A. W. Mead, '20, popularly known as "Duke," is the man in question. He has had charge of the Alumni since June, 1918. From the beginning he handled everything, hunting news like a Scotland Yard man, and writing up this news, many a night, after the hour when even students are supposed to have a deadened brain. Great credit is due him for the manner in which he has edited the Alumni.



A. W. MEAD, '20

selves, so that the Alumni editor is forced to trail everyone who might possess some news, read a couple of dozen papers and magazines, and check up the letters containing Review renewals, in order to keep his department running. Nor, with the procuring of the news does the Alumni editor's work end. He

While the war was on, many letters were received from men overseas. This source is now happily cut off, with the result that "Duke" has greater difficulty in securing news. However, we hope that the men who once graced the college campus, will forget their modesty and acquaint A. W. Mead, O. A. C., Guelph, with that part of their personal affairs which they think would interest the readers of the Review. Thus each old boy may consider himself directly responsible for the maintenance of the Alumni columns. We feel certain that this appeal will be heeded, especially when it will greatly assist a man who, though he has many other interests, strives hard to make the Alumni what it should be.

*Parting Thoughts*

WE are nearing the close of one of the most momentous college years in the history of the O.A.C. After four years of struggle in which the united efforts of the best blood of the

world was engaged in combating the strongest evil forces existing since the world began, we are again left to work out our own destiny free from the overshadowing menace of an evil autocracy.

On every hand we hear nothing but discussions concerning problems of reconstruction. Among these problems, arises that of Agricultural Reorganization, and a small but important phase of that particular problem is the question of how we can not only keep up the already high standard of this college, but, go on, and in a great spirit of united effort set the standard so high that, as long as Canada is a nation, the Ontario Agricultural College will be as it is now, the centre from which radiates the scientific agricultural knowledge by which the greatest industry of the nation progresses.

We came here as Freshmen, knowing sometimes very little of the achievements accomplished by the graduates of this institution. We know perhaps that some have attained high positions, we may perhaps know something in a general way of the influence of the College on agriculture in general, but often we are ignorant of the fact that on the continent of America, this is the greatest authority on Scientific Agriculture, that from these halls have graduated the men who to-day hold positions from which they are moulding the future of Canada as an agricultural nation. We do not realize that graduates of this college are respected the world over, that they are placed wherever agriculture is practiced from the farthest north to the far distant south, and are upholding in a high degree the honor of their Alma Mater. For these men are modest and it is not their wont to boast of their achievements. So sometimes when we are beginning our college career we fail to get the real "College Spirit."

So now as we are finishing our year, let us consider what we as individuals can do to maintain the honorable name which we received when we entered. We will shortly be scattered over a wide-

spread area. Let us not miss an opportunity to do what we can in our locality to make the name of the O.A.C. respected. Perhaps the District Representative will have something that we can do to help him in his work. Our aid may be a factor in making the School or Township Fair a success. The ability we show in practicing the facts we have learned here will determine largely the opinion our neighbors entertain of the value of the college. Our willingness to do whatever we are asked to do, no matter how small a thing it may be, will demonstrate the spirit of service, which can be learned in no better school than in the student body of this college. Throughout the whole summer let us keep our minds concentrated on our chosen calling so that when we return to begin again next autumn we may make fuller use of our time, and be a greater force in the college.

While we must ever keep in mind the fact that the acquisition of scientific agricultural knowledge is the primary object of our course, let us not forget that from every phase of college life, that we are capable of entering, we can derive some benefit which will better fit us to be efficient agriculturists. If we can excel in any line of athletics or even do something along that line for the college let us spare no labor in doing it. If we can debate or judge live-stock, sing or act, all of our efforts is the least we can give. If we are fortunate enough to be given the opportunity to fill any office in any society or club, there we can be of service to our fellow students, and at the same time, help ourselves; for always we must keep in mind the one unalterable fact that whether we become practical farmers or enter the field of professional endeavour, our whole success depends on the degree in which we are of service to our fellow-men.

We are bidding farewell to a graduating class which the college has been proud to call her students. We know by their achievements in the past that they are entering the wider field of agriculture filled with the real "College Spirit." We will soon be initiating a new Freshmen class. Let us endeavor

to give them from the beginning a full appreciation of the old college and all that it will mean to them later, so that in our next college year we may stand a united student body, with high resolutions and the invincible will to carry them out, that we may forget ourselves in thinking of the old O.A.C.

C. M. F.



Rural Consolidation in Ontario

Editor, The Review,—

IN the last number of the Review we could not help being struck by certain calumnious criticisms that appeared regarding the arguments which the Sophomore debaters used in defeating the Senior Year in the final inter-year debate on "*Rural Consolidation in Ontario*."

It is unfortunately suggestive to note that these acrimonious accusations come from the pen of a fourth year man.

The debater in question was accused of stating that the Macdonald Consolidated School is run in an inefficient manner, and, worst of all, was accused of deliberately mis-quoting the principal of this school in the course of the debate.

While we make allowance for abnormal statements from such a source, we cannot allow them to pass into public print with such indulgence.

Perhaps the most misleading accusation in the whole tirade is the following extract:

"The remarks of the speaker were most derogatory to the school in question, and he mis-quoted its principal as authority for his statements."

That the speaker even questioned the efficiency of this school is, to say the

least, an inexactitude. It is only necessary to quote the following actual words of the speech to dispel any doubt in this matter:

"Now this school is run in a highly efficient manner as all will agree, but as a consolidated school it is a failure. The very fact of its unequalled excellence as a school, is a proof that Consolidation failed from its own weakness."

The speaker showed that rural consolidation had failed in this case, since of the five sections originally forming the consolidation, only two now remained, failure being due chiefly to difficulties of transportation. For these facts the speaker quoted the principal as his authority, and the principal has since acknowledged that he was in no way misquoted.

It is universally acknowledged that the Macdonald Consolidated School is conducted in a highly efficient manner, serving admirably the purpose for which it now stands, although not literally fulfilling the object for which it was originally built. Since it is so close to the City of Guelph and is of such good repute as a school, it draws most of its attendances from the suburban districts.

R. F. J.



We have before us the Christmas number of "The Strafr," a magazine "published every once in a while (D.V.) by the 66th Battery C. F. A." The editor of this very interesting periodical is Sergt E. E. Carncross ('16), and the motto is "Never stand before your O. C. or behind a mule."

When last heard from Carncross was with the 66th Battery at Autre Eglise, Belgium. He and Sergt. W. J. Bird '17, hope to do some studying along the line of Administrative Agriculture at Oxford University while awaiting demobilization.

A. H. White '17 writes from Germany congratulating the Chicago Stock Judging Team. In his own words: "Long may their success in the judging ring continue. I tell you when a fellow reads a thing like that it makes his chest stick out a little further when he knows that he spent four years of varying fortunes in the same old Halls."

T. H. Binnie wrote us recently. He is, as he says, "still farming in Grey Co. and like the dog catching his tail trying to make both ends meet." Binnie is also Secretary-Treasurer of the South Grey Liberal Association, and his address is R. R. No. 2, Priceville, Ont.

He enclosed the following spasm. We have decided to publish it but decline any responsibility:

"There was once a day every day of the week in the Agricultural Department of the O. A. C. Now it is a Day for the Shorthorn Breeders. He was a good Day and we were sorry to see him go.

His place was taken by a Toole. In bygone days the farmers seeded and harvested with "Tools," but of late these have been discarded and we have implements. At a glance it seems funny that the Minister of Agriculture should have gone back to the good old days and selected a Toole as head of the Agricultural Department of the O.A.C. But this Toole is different. He will Wade into anything. One of the first things he did was to Wade through Chicago and bring the O.A.C. boys home as victors in the Judging Competition in the International. And he has been keeping up the good work. Truly this is not a "tool" but an implement of the highest type. We know that this Toole will Wade and will make a worthy successor to his illustrious predecessor."

R. E. Neville '19 has returned to his home in Coltam after nearly two years service in the U. S. Navy as a first-class seaman.

The March into Germany

BY CAPT. GEORGE SPENCER

I will pass to the beginning of the end, after rather a long preface, but what I have told you really leads up to the final stages of the enemy's swift downfall. Of course I am speaking chiefly of our own Brigade, which did its final fighting in stages, up to Elonges, a town not far from the Belgium border. It was quick work, the general advance being held up for not more than 2 or 3 days at a time. In passing from France into Belgium one could tell the difference to a hair's breadth. The Germans seem to have done everything in their power to hurt France and the French, but have spared Belgium, possibly because they intended to keep it for their own. At the border between the countries the last French town is desolate—a few sad quiet civilians around, but most of the inhabitants in exile either voluntarily or compulsorily; whereas the first Belgium village was teeming with people and was as dirty as the French Village was clean. Shortly before this I had gone on leave, so was able to pass once more through Cambrai on my way back and found it very much cleaned up, with French people returning slowly and many French gendarmes there. I spent 24 hours and a month's pay in Valenciennes, and here also as in every other place without exception, that we have passed through, I heard stirring tales of the huns' cruelty and savagery. Besides tales of consistent theft and looting, unnecessary harshness and severity towards civilians, I have heard stories at every halt, of the enemy's ill treatment of prisoners of war—especially British and Italian. The Russian prisoners were always gaunt and

filthy, with matted hair and wretched clothing—working with dull apathy, apparently toned down with suffering to the point of despair. All food offered to prisoners was seized by the German guards or the civilians were forced back with bayonet and rifle butt. One farm woman told me that after being savagely repulsed by the guards she threw the bread amongst the prisoners as they passed and they instantly fell on it like wolves, quarreling and snatching over the pieces regardless of the anger of the huns. All prisoners returning along the roads are collected at our supply dumps and sent back on empty supply lorries going back to rail heads. As I am the officer of this brigade detailed to collect and send back prisoners who pass through our area, I have had ample opportunity to study the poor fellows. Their reports are enough to make one's gorge rise and to wish that the war was still going on in order that we might kill a few more huns. Doubtless, some tales are exaggerated, but all the same one can see from the terrible emaciated faces and the general wretchedness of some of the men, that they have been through infinite suffering. And yet as soon as they are amongst friends, they seem to brighten up wonderfully and forget much—temporarily. Those who were liberated on the 11th and had had some food from civilians on the way back, had picked up a bit in weight and color—though many come dressed in the weirdest clothes. They all, as well as the people around, emphasize the Germans' intense hatred of England. In many places soldiers returning to Germany told the civilians

that this was a little war—in 10 years time they are coming back for a really decent war—a big one, in which they will utterly subdue England and the States. Nice thought, isn't it? It took them 44 years preparation and four years to get beaten, so I don't think the 10 years' effort, especially in their present anaemic condition, will amount to much.

Our march has been punctuated with many incidents, humorous and pathetic. During our last fighting, at Elonges, matters were considerably complicated by the jubilant inhabitants, who dashed out from the cellars, regardless of the odd shell and of flying bullets, to welcome our men. Many came out with glasses and pitchers of beer, and for the few seconds necessary to swallow the beer, the war stopped for our men, who took up the scrap as soon as they had finished! In one of our battalions the scout officer is a regular fire eater, who has led more raids into hun trenches than any other officer in our division, and I should think, in our corps. During the Elonges fight this young chap was tearing down one street, trying to pick off a fleeing hun, with his revolver, when a young thing dashed out, and throwing her arms round his neck, kissed him heartily. This was too much for our fire-eater. So the war had to stop for a second. But the boche was making good his escape, so Scout tried to get free of the girl's arms and couldn't; he therefore embraced the girl with his left arm while he fired over her shoulder with his free right hand. Need I say that he didn't get the hun?

On another occasion the Prince of Wales was expected to lunch at our Brigade H. Q., and our temporary host being duly impressed with the honour, produced some wonderful wine. Then

the Terps (Interpreter) managed to rub the honour in still further, and friend Host went and dug up some wine which he had buried in the garden, pending his postponed wedding—wine calculated to warm the cockles of the heart of a lotem pole. And the Prince didn't turn up! Lest the man be disappointed one of the staff captains, as unlike Albert Edward as anyone could be, was received with due honor by all, even by the Brigadier, and helped consume the wine with much gusto. The poor civilian never knew the truth.

The road from Valenciennes to Mons was always covered with streams of returning civilians—poor people carrying their all in little bundles on their backs, in carts drawn by weary horses or donkeys of Lilliputian dimensions, or by hard working eager dogs, or on small push carts of very recent manufacture. In two cases these poor cheery cheering souls told me that they were going back home to such and such a village, and my heart missed a beat each time because it was years since they had left there, and we had just come through these parts. At the time I couldn't tell the poor people that their homes and their villages were weed-covered wildernesses without any semblance to villages, though I have since thought it would have been kinder to have told them. I hope someone told them before they got there. It was the same sight in Arras one day as I was passing through and saw two old women and one aged man, sitting weeping on the sidewalk in front of what had once been their home.

For reasons of this tragic kind, I earnestly hope that Foche's advice will be followed and that before peace is considered, the plenipotentiaries of all parties pay a thorough visit to the devastated areas of France and Bel-

gium that all may see what appalling damage has been done. One can see all this with one's eyes, my friends, but it is in the heart that the memories remain, of our young, dear and most honourable dead, who lie in the little British cemeteries scattered all over the country—rows and rows of little white crosses marking their last resting places.

I have seen only two hun cemeteries so far, the first at Cagnicourt and the second at St. Sanne, Valenciennes. They were very elaborate affairs, each grave having a very large cross above it, and at St. Sanne the officers' graves had stone crosses and flowers over them, while the men had one black cross for each grave of ten men. I'm afraid I am rather morbid. Emotion is the last thing anyone should have in this war, and stopping to count the cost in lives will never get one anywhere, unless the sacrifice is too great. One day I read a lengthy discourse by some learned minister in England on the much discussed question as to whether a man by dying for his country, saved his soul. My learned friend declared most emphatically that the man did not save his soul—no act of his could save it as the Great Sacrifice performed once for all alone could do that. For my part I don't think this divine ever saw or had any notion of a battlefield, most certainly he never lost the men of his command in the act of going over the top or during a bombardment of his trenches in which one could see men whom one knew intimately, passing away in pain or so swiftly that they did not know they were dying. It pleases and comforts me to think that a soldier by the act of dying for his country, his God and his King has by this most supreme sacrifice of which he was capable, placed himself entirely

beyond our judgment and stands acquitted, whatever may have been his conduct when he was alive. I don't see how it could be otherwise.

This is not the account of our march, I fear; it is a digression by the roadside. However, on all our marches we have to halt sometimes, and I have halted for the moment beside one of our military cemeteries just to express a few of my thoughts.

Our reception by the inhabitants of villages has been most enthusiastic—people dashing up and down the streets crying "Long live the Allies. Long live the English, the Canadians, our brave liberators, etc., etc." The men take off their caps as you pass and the women bow and say good-day. Little children run up to hang on to your fingers or to ask for souvenirs. So many of our men have no badges or Canadas on their shoulders, and I have given away every spare badge I possessed. While we were passing through the densely populated, highly enterprising area all round Mons, our march was halted time after time by women folk hanging on to the necks of the soldiers as they passed, thereby completely disorganizing the ranks. Everybody cheering, everybody happy—and you never saw such thousands of Belgian, French and Allied flags of all sizes as were brought out from every town. Later on when the people had had time, little posters were stuck in all windows or triumphal arches erected over main streets: "Long live our brave liberators," etc., etc. The only people who were unhappy were those who had had any traffic with the hunns or had taken in washing for them—as every evening bands of young civilian men marched through the streets, breaking up the furniture and cutting off the hair of all these women. In one place, after

breaking everything possible, they chased two women down the street at night—having first cut off their hair and undressed them. It was their little party and no one interfered, though of course we had orders to step in in case a riot occurred.

In this area no one ever thought of sleeping anywhere but in a real bed, with real sheets — and the people wouldn't accept a cent for anything. We had some wonderful parties — one very well known millionaire being determined to have us empty one of the 28 cellars of wine he had bricked up. Of course we tried our best, on very fine old wine, valued at pre-war prices at four dollars per bottle.

We were at Petit Wasmes when the Armistice was signed, and at 11 o'clock in the morning the village square was filled with a big crowd—bands playing, everybody shouting or singing—women dancing around with soldiers while their eyes streamed with tears. It was in this town that a party of hun engineers, left behind to blow craters in the roads, were royally entertained by the civilians, and became so very drunk that they forgot all about the mines, and were easily taken prisoners. All along the roads and at every main cross roads the enemy blew large craters to delay our progress, and right up to Mons the railway tracks were mined every 150 yards, and every junction of the rails was sprung. It was said that this was done by some machine which bent each joint about 3 or 4 inches out of line, thus rendering it useless. For a week after the 11th mines were going up at all hours of the day and night, which the huns had left with delay action fuses under roads, houses, bridges and stations. For as long as 10 days after the armistice, the huns exploded cars of ammunition or burnt

military equipment on many large and important sidings, completely wrecking everything all around, and doing very much damage. In some places, though, he hadn't time for this, and was forced to leave very valuable material behind. It always afforded me great pleasure to hunt around these dumps for anything new in the line of shells or fuses, and I found some very interesting things.

Since 1915 the Germans requisitioned all copper and brass, and entered every house in occupied territory in search of it. The people buried all they could get away in time—to bring it out after the 11th, polish it highly, and set it in all windows overlooking the streets—as if to mock the retreating enemy. Here and there one sees notices printed on the walls "Nach Paris," only the arrows are pointing towards Germany. One woman told me that she used to call to the huns as they passed, the cry they themselves had used in 1914, "Three days to Paris," thereby incurring the wrath of the officers. The men, however, were too glad to be going homeward to take much notice.

Even as he retreated, the enemy stole every kind of food, living or dead, and articles of furniture and where he couldn't take it along or use it, he sold it to the highest bidder in the next village, he passed through. Thus in the last town we stopped at one man bought a very nice horse for 25 francs. I've been trying to get hold of a small scale map to mark out our progress to the frontier for you, but haven't succeeded so far. Perhaps you can trace it out for yourself on one—Cambrai, Valenciennes, Omaing, Quivrevain (Frontier) Quiervain, Elonges, Wasmes, Frameries, Mons, Houdaing, Aimeries, Pont-a-celles, Sombieffe. St.

Serlée, Haltaine, Verilé, Bomal and Manhay, where I am now.

In most cases we have had most comfortable billets in some chateau, and have been very courteously received. In Namur alone some of the people were indifferent, and a few even hostile. On the whole we have been very happy—doing 20 to 25 kilometres a day, having a good time at night, and going on next morning. For the 10 or 12 kilos along the banks of the Meuse the scenery was very fine—some-what like the pictures I have seen of the Rhine, with large stone chateaux perched high up on the rocks. We have left the flat or undulating plains of France and have passed through the foothills of the Belgian Ardennes. As I write now—3-12-18—we are well up in the hills. The whole country has changed. To-morrow we will be at the frontier. Namur itself is in a valley surrounded by heights, on which at varying distances from the city lie the ring of eleven forts protecting it. If you remember, Namur fell very easily in 1914, only a few of the forts being bombarded, and the town being hardly touched. Nearly all the soldiers were withdrawn to defend Liege.

We halted for three days in Namur, and I had a very nice time, securing some good souvenirs. My poor batman groans every time I turn up with some trophy or heavy piece of hardware, as he has to pack it up in my kit. I sincerely hope I will be allowed to bring it all home, as my trunk in London is heavy nearly to bursting with shell cases, fuses, bombs, bayonets and all manner of junk I have collected from the boche. Of course it is forbidden to take it out of this country, and last time I went on leave I travelled with a Scotch Major who would insist on calling me Souvenir King.

In fear and trembling of being called on to show my pack and haversack in which was fully 40 lbs. of rubbish, I tried to step jauntily up the gang plank at Boulogne, and to hear the gay Major sing out, "Come on, Souvenir King!"

Fortunately only a few officers turned round to see this animal, and I escaped being stopped.

One evening in Namur I went into a barber shop to have my hair cut, and in my turn sat down in the chair. The wicked barber looked at me for a minute, and then asked, "What do you wish me to do. M'sieur?" However, he made up for it by snipping the scissors fifteen times in the air for every time he found any hair to cut on my head, while I smoked a pipe furiously and filled his eyes with smoke. The same man showed me the list of lives taken by the Boche at Dinant in 1914, when he wished to terrorise the people before burning their town. There were over 600 names on the list, of men, women and infants, from 72 years of age to 3 weeks. The huns lined them up and turned machine guns on them. Curiously enough I was billeted in the house of the Curé at Namur, who was in charge of Dinant Church in 1914, and was lined up with the rest, but who escaped the traverse of the machine guns, only to be deported to Germany for 18 months. When I saw him the poor old fellow—not so old, either—was still broken and pathetic.

In the village we are in now, Manbray, high up in the Ardennes, the huns burnt several houses, killed three young men, and deported the rest to Germany in August 1914. The people protest that it was purely to terrorise, but I fancy there must have been some reason or other, probably the civilians fired on the Uhlans. Instead of pass-

ing this village as at first ordered, we have been here two days owing to rations not coming up. It is not so very comfortable. I have a bed, it is true, but our mess is just next to the kitchen, and in the second half of the kitchen live 2 cows, some calves and some pigs. Before each meal we therefore smoke hard and fill the place with tobacco fumes, or else we couldn't eat our rations. Yesterday I had a glorious time, going out with three others, armed with army rifles and a revolver, to hunt in the fir woods all round. The place teems with game. We were out 1-2 hours and put up 7 pheasants, 2 rabbits, many wild pigeons and a fox. Of course everything escaped our bombardment as it is very hard to hit flying birds with rifles and revolvers. We had quite a weighty broadside of metal, too—especially with the 455 calibre revolver. The place was a swamp, and we came back soaking wet, but very happy. All over the glades are the diggings of wild boars—a sight to gladden the eyes of anyone born in India. I resolved to try pussy-footing the pheasants to-day by myself, but it has been raining hard, so I'm writing this and mixing cocktails of appalling content—equal parts of bitters, cognac, gin and crème de menthe. Added to this doubtful pleasure of cocktails, there came a parcel

for me from the Clan, so I am really happy—if it wasn't for the other half of the kitchen.

We are approaching Germany with a force composed of all arms—cavalry, artillery, cyclists and infantry, with ambulances behind. The armies of occupation are marching in parallel columns on a wide front, and if other routes are the same as ours, the enemy has left motor lorries overturned and burned all along the route—and now he is weeping to the allies for transport. Reports from returned prisoners of war regarding the food supply in Germany are very conflicting—some say conditions are very bad. Others say there is plenty of food, but it needs better distribution. One boche officer, captured just before the armistice, told us that if one only knew what conditions were like behind their lines, we would push on even faster than we were doing.

Our billeting parties have already gone into Germany to locate the units. Speculations are ripe as to the reception we will get. I fancy it will be fairly chilly. Of course a large tract of country is to be evacuated before our arrival, but later on we may have some contact with the people. If any trouble starts it is likely that our men will have enough memories behind them to quell it very abruptly.



J. C. Butler '85 wrote recently to wish the Review the best of success. Butler was Captain of the O.A.C. Rugby Team in '84. His address is Hatfield Peverel, Witham, Essex, England.

Fred O'Dell '19 is now a lecturer on agriculture with rank of Sergeant, at Seaford Camp, Sussex, England, in connection with the Khaki University. He

reports that the work is going well and that there are over 250 men taking the course at the camp.

J. R. Almey '19 was at the college recently. Since receiving his discharge from the R. A. F. "Bob" has been Assistant Agricultural Representative at Petrolia, Ont.

F. C. Donald '15, who has recently returned from overseas, was at the College recently.

D. S. Weld '19, who was for over a year a prisoner of war in Germany, has returned to Canada, and is at his home in London, Ont.

H. R. Wyatt '19, who went overseas early in the war, and has done some very good work as a scout with the 20th Battalion, returned recently on R. M. S. Canada.

John A. Hempson '17 wrote recently, expressing his appreciation of the Review. He also promised us an article, which will no doubt appear in an early issue.

Congratulations to N. A. Dickson '18 on his marriage, which took place on February 19th.

J. B. Allison '99 is farming at Granum, Alta.

D. F. Elderkin '03 is now Secretary of the Provincial Exhibition at Regina, Sask. He was at one time Assistant Secretary of the Ontario Provincial Winter Fair.

D. F. Cohoe is now on the farm at Burgessville, Ont.

N. R. Martin '16, formerly in charge of the agricultural work at the Military Hospital, Guelph, is now farming at Springfield, Ont.

F. E. Millen '13 is now Professor of Agriculture at Ames, Iowa.

A. McMillen '12, formerly Lecturer in Animal Husbandry at Macdonald College, is now on the farm at Dutton, Ont.

J. E. Macroscopic '14 is now on the Feed Division of the Live Stock Branch, Ottawa.

R. M. McKenzie '17 is at New Prague, Minnesota, as a chemist in the plant of the New Prague Milling Company.

J. S. Peart '11 has recently been appointed to the position of seed analyst on the Seed Branch, Department of Agriculture, Ottawa.

J. E. Smith '11 is now on the staff of the Experimental Station at Moscow, Idaho. Smith was at one time editor of "The Farm and Dairy" at Peterboro.

N. M. Ross '98 is Director of the Forestry Station at Indian Head, Sask.

W. J. Price '99, who was the first lecturer in Animal Husbandry at the College, has taken up the practice of dentistry in Orangeville, Ont.

H. McFadyen '05 is making a success of the seed business in Winnipeg, Man.

BIRTH

Born on December 10th, 1918, to Mr. and Mrs. W. Strong, at Guelph, a son.



It's the songs you sing and the smiles you wear that makes the sunshine everywhere.



On the afternoon of March 5th, there seemed to be unwonted scurrying going on in the Hall, especially on the second floor. Chairs and cups and plants were being borrowed and transported to the Students' Sitting Room. The general public were rather mystified but on enquiry it was discovered that the Junior Housekeepers were giving a little tea to their class Seniors and some of the teaching staff. The sitting room was beautified by vases of daffodils and a pot of gorgeous hyacinths greeted the guests at the door. All the Junior Housekeepers assisted in various capacities, not the least important of which was that of fortune-teller. The guests all confessed to having had a very enjoyable time.

On Thursday, March 6th, the Senior Associate Class entertained their Juniors at a tea given in the Students' Sitting Room. The guests were received by Miss Lewis, President of the year, Mrs. Fuller presided at the tea-table and the Seniors proved very able hostesses. After a most enjoyable tea, followed by dancing, the party broke up amid much merriment.

HOCKEY

The long delayed hockey match between the Mac team and the Junior Faculty of the College was finally played on Thursday afternoon, February 27. This game had been looked forward to with much interest and consequently a large crowd of onlookers

was present to cheer the players. The play waxed fast and furious, with the usual number of penalties, for even the Junior Faculty found it hard not to help up a lady in distress and this was strictly forbidden. The men played with only one hand, but, in spite of their handicap, won by a score 3-1.

The poor, hard worked Junior Housekeepers were setting bread in the early morning and feeling very sorry for themselves when one of their number electrified the rest by announcing that she had a pair of "crocheted" rubbers.

"Crocheted!" echoed the class "but what good are they?"

"Well what shade are yours?" asked the one who always knows.

"Oh, crow shade!" groaned the others.

Hattie (in her den)—"Do any of the class happen to have read up on the subject and know when doughnuts were first fried?"

Strong silence in the class.

Hattie—"Well I have heard they were first fried in Greece."

Senior—(speaking from experience)—Beware, my child, "love of money is the root of all evil!"

Junior (earnestly)—"Oh, really, I hardly know Mr. Munro at all!"

Y.W.C.A. NOTICES.

Everyone enjoys the song-service in the Y.W. meetings every Sunday even-

ing after tea. While the girls were gathering for the meeting on Feb. 23rd, several old familiar hymns were sung from the new hymn-books which the society had just purchased. The success of this meeting was due to the inspiring address on "Get a Vision," given by Mrs. Goldie of the city. The speaker said that one must get a vision of the best kind of character to develop, then by studying one's environment, choose from it what will best develop that character. The possession of a vision is only useful when it is obeyed or its requirements fulfilled by work, patience and considerateness for others. Mrs. Goldie gave as an illustration Dr. Barnardo who got a vision of what might be done for the poor street urchins of London. By obeying the vision he was able to place neglected children in good homes where they would be properly cared for and made worthy citizens.

We have indeed appreciated very much the helpful impressions which the various speakers from the city have left with us, and the efficient help they have given in making our meetings successful and enjoyable.

On March 2nd, we had an address from Miss Helen Smith, who is a Travelling Secretary of the Presbyterian Women's Board of Missions. Miss Smith is scheduled to visit all the colleges in the six Western Provinces in connection with the new Forward Movement in the Church. She gave us a very illuminating and timely address on the attitude of the Student to the Church, and after the meeting explained to those who were interested the meaning of the Forward Movement, and the need for trained workers, both at home and abroad, to spread the Gospel among all nations.

During the last year we have received many messages from China and India through the various missionaries, who have visited our college and addressed our meetings, but we have never grown tired of hearing more and more about those people who need our help. So on the evening of March 9th we listened with intent interest to Dr. Margaret Patterson, of Toronto, who has spent ten years as a medical missionary in India. Dr. Patterson spoke of the narrow oppressed lives to which the women of India were subjected, and had with her two dolls dressed to represent the Indian woman's costumes, ornamented with all the family wealth. The speaker presented the many difficulties which surround the natives of India, when adopting Christianity. If they become Christians, they are breaking the laws of their caste, and all the traditions which are very vital to them, and they become outcasts from their family and the society of their caste. Dr. Patterson's urgent appeal for volunteers for service in India, showed that its people and their welfare are of vital importance to her, and that her heart and soul are with India. Such earnestness and sympathy will bear fruit.

The last Y.W.C.A. meeting of the year was held on March 16th, and was an informal gathering in which no one took part but the members of the "Y." Miss Schofield gave a piano solo, and Miss Totten a song, several of the members offered short prayers and Miss Cass read part of Henry Drummond's sermon, "The Greatest Thing in the World." At the close of the meeting, Miss Germain expressed her appreciation of the help she had received as President from the members of the "Y," and Mrs. Smith spoke for the good work that the "Y" has accomplished throughout the year. It is worthy

of note that the meetings have been held regularly every Sunday evening during the two terms, a record of which the executive may be pardonably proud.

CONGRATULATIONS

To Lieut. Bull, M.C., and Mrs. Bull, (Miss Edna Montgomery) a son.

To Lieut. and Mrs. Hertzig (Miss Rene Rocher) a son.

Miss Falconbridge will not be in residence at Macdonald Hall this term as her mother will be spending some time in Guelph. Consequently, she will not be able to fulfil the duties of house-president, which will devolve upon Miss de Guerre, the vice-president.

DAISY IS CONVINCED

Daisy and I were among the last to leave the gym on Sunday evening, and we walked silently to our room. We had been listening with rapt attention to a vivid portrayal of the limitations, the injustice, the suffering and the hopelessness of the lives of the women of India. Before my mental vision was the pathetic image of the despised, oppressed child-widow, wrapped in her coarse, ugly garment, and her dark, sad eyes haunted me with a melancholy persistence. We had heard a great deal about foreign missions since the summer. Men and women who knew had told us of life in India and China, and we had read of the unsatisfying religions of the East and the hunger of human hearts for something higher and more spiritual. We were being impressed. These things were becoming real to us.

"I can't help feeling that I ought to go," said Daisy in the low, level tones that always show she is feeling something intensely. "I know I could be

useful. You see, there was my business course, and then I taught for two years, and now I understand cooking, and I'm sure I could show them how to play games and dance and sing,—and I have my first aid and nursing "certificates,—they do need help so terribly."

"There's no denying that you could be extremely useful, dear," I said, for I have realized that Daisy grows more capable every day.

"I shouldn't hesitate at all," she said, "if it were not for Ronald."

"O-oh. I see.

"He wants me to marry him as soon as I am through," said Daisy, "and go west to his homestead."

"I am pulled two ways at once."

There was a little silence between us. Then I said:

"Do you love Ronald?"

Daisy flushed in that rose petal way of hers that is so delightfully innocent.

"Yes," she said gently, "I do love him. I don't think there is a man in the world to compare with him. I don't feel worthy to be his wife."

I didn't smile. Deep down in my heart I believe that is the way a woman does feel about the man who is really good enough for her.

"Then you ought to marry him," I said. "Ronald has risked life and more than life at the call of duty. He has dared and suffered and fought and endured, and he has a right to be happy. For the last three years the thought of you has been his greatest consolation, the hope of coming back to you has sustained him through danger and misery. You cannot fail him now." Daisy looked very solemn.

"But he is only one man," she objected, "and there are millions of women in India waiting for enlightenment and freedom." "Yes," I said, "and there

are thousands of women here who have no one to welcome back, and who will never have homes of their own. Let them seek healing and consolation in ministering to the heathen abroad. Your mission lies here in Canada, and you need not think it will be a narrow one. There are women on the prairie whose lives are one round of unending toil. You can show them better and easier ways of doing things. There are boys and girls who have few opportunities for development or recreation. You can teach them songs and drills and folk dances, you can get a traveling library for them, and show them how to debate and act. There are little children to whom no one has time to tell stories, and whose mothers feed them on pork and pie. There are windows that won't open, and trap-doors in kitchen doors through which people fall and get killed. There are sick women with no one to nurse them, and babies that are never sterilized. And as for spiritual enlightenment, you can take along all you can find. There are foreigners, too, if Canadians are unworthy of your efforts. Talk about missions. You and Ronald together can do much more good by living among those people than the minister 15 miles away who comes once a week to preach to them!"

It is sometimes extremely hard to persuade people to do the thing they most want to do. Daisy yielded very gracefully.

"Do you really, really think that is my plain duty?" she asked.

"I have no doubt of it whatever," was my answer. "Ronald will be glad," said Daisy. "And of course you will go back to the prairie too!"

"No," I said, "that's your mission. I'm going to India!"

GLUTENIN AND GLIADIN

A Fairy Tale

Out on the prairie miles and miles of green wheat stretched as far as eye could see in the vast circle under the limitless sky. The wind passed over it and whispered, "Grow, grow, for the hungry must be fed." The stalks bent and rose again beneath its caresses and said, "Yes, yes, we must grow." And the rain fell, and the sun shone for long, long days, and the wind came again and whispered, "Ripen, ripen, for the hungry must be fed," and the ears said, "Yes, yes, we must ripen."

One day, as the wind repeated its message two little voices answered.

"What is this about feeding the hungry? "Tell us what you mean."

"There is a great future before you," said the wind. "One of two things will happen to you. "When you are harvested you will be shaken and beaten until you are free from straw and husk. You may then be stored for seed, and next year each grain will be put into the ground and will die, but from the death of each will arise many, many other grains which will go to feed the hungry. That is a great privilege."

The two little voices scolded fretful and dissatisfied as they answered,

"That is not much to look forward to! What is the other thing that may happen?"

"You may travel a long way," said the wind and see the world. You may even go over seas. You will be ground to flour, and the flour will make bread to feed the hungry. "That also is a great privilege."

"But we have our own happiness to think of," said the two little voices.

"Who are you?" asked the wind.

"I am Gliadin," said one. "And I am Glutenin," said the other. "We are

going to be married some day, but we shall not set up housekeeping here on the prairie. It is too dull. We will go and see the world."

"Yes," said Gliadin, "we have our own happiness to think of."

"It is waste of time to argue with some people" said the wind as he flew away.

What he had prophesied came to pass.

Glutenin and Gliadin travelled a long way and had many adventures. Sometimes they were alarmed at the noises and the darkness and the rapid motion, but they were hopeful and looked forward to the day when they should set up housekeeping and be happy. Time would fail to tell of all they went through, but one morning they were taken from the large tin box where they were waiting, and found themselves in a spacious kitchen.

"Our wedding day has arrived, said Glutenin. "See how many people have come to the ceremony!" And indeed, there were 15 ladies in blue dresses and one lady all in white. "That must be the priestess," said Glutenin. "Be happy, Gliadin, we shall soon be united." The priestess spoke.

"Glutenin and Gliadin unite to form Gluten." She was stating a fact, but they thought it was a command in the marriage service and they both said "I will!"

The marriage ceremony was very fascinating, but at last they heard the priestess say:

"See the Gluten!" Then they knew that they were no longer two but one, and they ceased to say, "I," and called themselves "We," like an editor. Then they were put into a hot oven. "This is our wedding journey," said Gliadin.

"I have heard that it is the fashion to visit warm countries."

By and by they were taken out and set on a broad level surface.

"This will make a fine home for us" said Glutenin. "We can keep house very comfortably here and there is a good view." They did not know that it was Miss Roddick's desk.

"Now we can be happy," said Gliadin. The ladies in blue came and looked at them and said, "So that is Gluten!" And they felt proud. Then the ladies broke off little bits and tasted them, and said "How insipid! How bitter! I'm glad I don't have to eat that!" "This is very impolite, said Glutenin, "but at least we shall not have to be eaten! We can live our own life and be happy."

"Yes," said Gliadin, "we have our own happiness to think of."

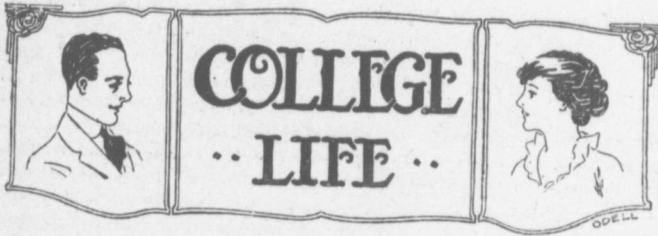
Next day the ladies came again. They were too busy to look at the Gluten pair. They were making bread. Each one made a beautiful little loaf. "That is good bread!" said the priestess. One lady said, "I shall put my loaf on the supper table and all my companions will taste it." Another said, "I will have a tea party in my room and all my neighbours will enjoy it." And a third said, "I will mail my loaf home to Mother, and the family will see what good bread I can make." But nobody looked at the Gluten pair.

"Have we made a mistake?" said Glutenin. "Oh, no," answered Gliadin "we have our own happiness to consider. These people are nothing to us."

So they kept house on Miss Roddick's desk.

A passing student would sometimes break off a little bit and say, "How nasty!"

Continued on page xix.



The Philharmonic Concert

After a rumour around the hall that "Nie" Curtis was working night and day with his company of dramatists, that the College orchestra had been heard wailing out several weird practices, that the quartette had been noticed humming to themselves some new melodies, and that a little bird from the hall had informed us of some preparations from that quarter, we all became suddenly excited and rushed to secure our seats for the annual Philharmonic Concert, which was presented on Friday evening, March 7th.—We were not disappointed.

The whole student body was in best of spirits owing to the recent success of our hockey team. We had as our guests over one hundred "Dentals" who had come down to "root" for their hockey team and everything gave signs of an enjoyable evening.

The college orchestra rendered a number of fine selections. Miss Ferguson with her excellent voice drew a hearty encore from an admiring audience. The College quartette, Messrs. Iveson, Higgins, King and Hopper, delivered in their usual good form three selections which were all heartily enjoyed.

The Farce Comedy "Ici On Parle Francais" was presented in a very interesting style by the following caste:—

Major Regulus Rattan—N. Curtis.
Victor Dubois—A. M. Porter.
Mr. Spriggins—D. G. Stuart.
Mrs. Spriggins—Miss Fouche.
Angelina, their daughter—Miss J. Rogers.

Julia (Mrs. Rattan)—Miss O. Gardner.

Anna Maria (maid)—Miss Van der Merwe.

Manager—N. Curtis.

Stage Manager—E. L. Eaton.

Prompter—C. F. Connor.

Make-up—Kindness of Mr. W. H. Wright.

Major Rattan appealed to the audience as an excited husband who had lost his lately acquired bride, whom he supposed had eloped with Victor Dubois. Mrs. Rattan appeared as a bride worthy of the Major's excitement and of the supposed attention of Victor Dubois, the charming young Frenchman, who had been misjudged by his new acquaintances and who, in reality, was in love with Angelina, the landlord's adorable daughter, whom he had met in Paris. Mr. Spriggins, the landlord, was the source of no small amount of amusement for his audience in his attempt at speaking French which inveighed him into rather serious complications with his new boarders, the supposed elopers. Mrs. Spriggins appeared in excellent form as the critical

housewife, who, aided by Mr. Sprigin's generosity decided to raise the salary of Anna Maria, the maid, who demonstrated in a fiery manner the disposition of the erratic domestic.

Mr. Stillwell, in rendering a vocal solo, appeared in his usual good form. Miss Hopper's solo was heartily applauded.

Two dental students who were guests at the concert presented in fine Hawaiian style a steel guitar solo and duet which were greatly appreciated.

The Junior year put on a short sketch. They portrayed in a very interesting manner a typical 11.00 p.m. meeting in "Grub Alley." The various parodies were typical of their composers and reminded us of the "goings on" which would escape the attention of the casual observer. Bill Fleming attired in bath-robe and turkish towelling represented the studious element in the year. Archie Porter, Frank Tinney, Geo. Hood, and Dick Hurst, the comedian element, while Bert Hopper and San King accompanied by Horace Whillans imposed several musical numbers and "Duke" Mead piloted them through.

The whole performance reflected, a great deal of credit on the Society and on the Executive. A tea was arranged for those who had taken part and spent so much time in making the concert a success.

THE ATHLETIC CONCERT

The Annual Athletic concert held in the college gymnasium on Friday evening, February 21st, was equal, if not superior, to any concert of its nature presented for sometime at the O.A.C.

The various gymnastic numbers by the gym. team were of a high class and consisted in exhibition on high bar, mat pyramids, chair pyramids and exhibition on parallel bars.

The Minuet and Swedish Dances given by the dance team were features of grace and art.

The musical programme which consisted in selections by the Macdonald Hall and the O.A.C. quartette, and vocal solos by Miss Ferguson and Miss Totten were well received by the admiring audience. Miss Totten's solo in which she was assisted in silent drama by Messrs. Stillwell, Allan and Musgrave, was especially good.

The college orchestra in its usual good form, rendered several selections.

"A Peep into Japan" by the Macdonald Hall girls was a combination of music and drama and was expressed by many as one of the most pleasing numbers on the programme, reflecting credit on the performers.

The Statuary by Messrs. Stillwell and Howarth showed various wrestling and boxing attitudes.

The Dutch Dance by Messrs. Brink and Musgrove was an extremely comical number and was received with laughter and applause.

The last item before the National Anthem was the Fourth Year Stunt.

It was entitled "The Sea of examinations" in which they as individual members of the fourth year were voyaging. Some reached port, and were rewarded with a degree, and some did not. Messrs. Stillwell, Mackenzie and Matheson played an important part in this voyage. Several jokes were "pulled off" and a couple of solos rendered.

Mr. A. Musgrave, the Physical Director, Mr. D. A. Kimball the O. A. C. Athletic President and Miss Irene Hyde the Macdonald Hall Athletic President deserve praise for their efforts in making this concert such a decided success.

Public Speaking Contest

The eighteenth Annual Public Speaking Contest held in Massey Hall on Friday evening, March the 14th, was one of the most educative, interesting and entertaining events of the year. The five speakers who took part in the contest deserve great credit in the display of their platform abilities. Messrs. F. W. Stock and Chas. M. Flatt, of '21 and Messrs. R. Alex. Brink, R. E. Begg and R. D. Allan, of '19 were the speakers. The Judges' decision which was given by Prof. W. Toole granted the Creelman Class prize, which consisted in a magnificent dictionary, to Mr. Brink as first in the contest. The second prize of ten dollars in books was granted to Mr. Flatt and the Third prize of five dollars in books to Mr. Stock.

Mr. Brink held the attention of his audience from the start to the end of his address. His matter was timely, interesting and of a high order, his delivery was a model of fluency, clearness, directness and good English. The other four speeches, though not quite equal to that given by Mr. Brink, were a credit to the individuals and the colleges, and were listened to with the best of attention by the large appreciative audience present.

Miss F. Leeming and Miss Grace Totten each rendered a vocal solo of merit and received loud applause. The college orchestra gave the instrumental music of the evening.

Dr. Creelman who ably presided as chairman, announced the new "Farmer's Advocate Scholarship" which will be presented for the first time in 1920 to the man of highest proficiency in Animal and Field Husbandry in the first and second years.

In addition to the presentation of the Creelman class prize to Mr. Brink, Dr. Creelman presented silver medals to C. M. Ferguson, R. F. Jukes, C. M. Flatt and W. H. Grant of year, '21 the winners of the inter-year debating contest.

Also Dr. Creelman presented to Mr. W. Hopper the '05 Scholarship of fifty dollars, as the best "all round" man in Third Year.

The Judges committee consisted of Messrs. Geo. M. Begg, C. L. Robertson and Prof. W. Toole.

The singing of the National Anthem closed this very successful evening.

\$250,000 in Buildings for O.A.C.

Dr. G. C. Creelman, in a statement on the 12th inst., said that new buildings which would cost close to a quarter million of dollars would be erected at the O.A.C. this year.

These include a new boys' dormitory, which will be erected on the Campus, \$150,000; addition to Macdonald Hall to accommodate 50 more girl students, \$25,000; new apiary building, \$15,000, and a Memorial Hall in memory of the students killed during the war. Towards this latter building which will have a public lecture room and chapel, \$40,000 has been granted.

At the recent aquatic meet in the college gymnasium, Henry of the fourth year while swimming under water, became lost and remained under considerable time before the spectators about the tank realized that anything had happened. The presence of mind of "Mike" Stillwell, however, brought many willing hands to the rescue, and after a minute or so of artificial respiration Henry was brought back to consciousness.

ATHLETICS

OPELL

AQUATIC

The Annual Aquatic Meet, held in the College Gymnasium on the afternoon of Saturday, March 8th, was attended by a fairly large number of the students and faculty. All the years were represented in the contest and some excellent swimming was presented.

Allan, Grant and Clemens appeared in their usual good form and the splendid showing made by Sheppard '22, came as a surprise to those who had not seen him in action before.

Some little excitement was caused in the under water swim, when Henry '19 took a cramp and sank unconscious. He was rescued by one of the other contestants and prolonged artificial respiration was necessary before he was finally recuscitated.

It is felt by many of the lovers of swimming that this finest of exercises is worthy of more attention here than it has been accorded in recent years. Surely better use could be made of the tank and greater interest taken in the Annual Aquatic Meet with permanent benefit to all.

Winners of the Aquatic Meet

52 Yards Swim—(Champ.) Allan, 35 4-5 seconds; Clemens, Grant.

52 Yard Novice—Stillwell, 49 4-5 seconds; Henry, Eaton.

104 Yards Swim—(Champ.) Clemens, 1 minute 30 2-5 seconds; Allan, Grant.

Long Plunge—(Champ.) Sheppard, 49 ft. 1 in.; Allan, Ings.

208 Yards Swim—(Champ.) Clemens,

3 minutes, 59 3-5 seconds; Hendrie, Ings.

52 Yard Back Swim—Sheppard, 46 seconds; Clemens, Grant.

Under Water Swim—Sheppard, 115 ft., 11 1-2 in.; Ings, Henry.

Inter-Year Relay (Novice)—Fourth Year, 2 minutes, 13 3-5 seconds; First Year, 2 minutes, 28 4-5 seconds.

Inter Year Relay (Senior)—Fourth Year, 1 minute, 51 1-5 seconds; First Year, 1 minute, 57 3-5 seconds.

Inter Year Standing

Fourth Year	33 points
First Year	29 points
Second Year	16 points
Third Year	1 point

Grand Champion

H. R. Clemens	13 points
-------------------------	-----------

INDOOR MEET

The Annual Indoor Meet was held in the College Gymnasium on the afternoon of Thursday, February 27th. There were a large number of entries in each event and competition was keen. There was, however, little interest shown by the student body in the events. Only a handful of supporters were on hand to cheer the competitors to victory, and it is to be hoped that in future meets the students as a whole will take more interest in an affair which ought to mean more to them than plugging back notes or arranging "bug" collections.

The winners were as follows:—

60 Yard Potato Race—Ripley, Kimball and Stillwell.

Hitch & Kick—Clemens, Begg, Brink.
 Standing Broad Jump — Lindala, Waugh and Gunn.
 440 Yard Potato Race — Stillwell, Grant, Porter.
 Standing Hop, Step and Jump—Begg, Waugh and Matheson.
 Standing High Jump—Waugh, Kimball and Gilbert.
 Fence Vault—Gunn, Begg and Allan.
 Rope Climb—Ripley, Steckle, Young.
 15 Yard Dash—Allan, Gunn, Kimball.
 Shot Put—Gunn, Allan and Waugh.
 Chinning the Bar—Leaver, Ripley and Young.
 Three Standing Jumps—Gunn, Lindala and Begg.
 Running High Dive—Allan, Stillwell and Kimball.
 Running High Jump—H. H. Taylor, Grant, MacMillan.
 Pole Vault—MacMillan, Waugh and Stillwell.
 Rope Vault—Allan, MacMillan and Kimball.
 Inter-Year Relay—1st Class '19; 2nd Class '20; 3rd Class '22.

Grand Champion

W. R. Gunn '19 19 points

Year Standing

Class '19 73 points
 Class '22 43 points
 Class '21 20 points
 Class '20 17 points

BOXING AND WRESTLING

The Annual Boxing and Wrestling Tournament was held in the gymnasium on Saturday, March 1st. Great interest was shown in the event, and some very excellent exhibitions of boxing and wrestling were shown.

The College has entered a team in the Assault-at-Arms, being held at Toronto University on Saturday, March 28th. The great interest shown by those on the team is to be commended and every-

one feels that an excellent showing will be made when our scrappers meet those of other faculties.

The winners in our tournament were as follows:—

Bantam (115 lbs.) — Boxing, Miller '22; Wrestling, no bout.
 Feather (125 lbs.)—Boxing, Waugh '22; Wrestling, Young '21.
 Light (135 lbs.)—Boxing, Stillwell '19; Wrestling, Lindala '21.
 Welter (145 lbs.)—Boxing, Grant '19; Wrestling, Lindala '21.
 Middle (158 lbs.)—Boxing, MacMillan '22; Wrestling, Begg '19.
 Heavy (over 158 lbs.)—Boxing, no bout; Wrestling, Steckle '20.

Year Standing

Class '19 3
 Class '21 3
 Class '22 3
 Class '20 1

HOCKEY

Dental at O. A. C.

On Friday, March 7th, a very close and exciting game of hockey took place on the college rink between Dental College and O. A. C. The play was very fast and exceptionally clean, no penalties being given.

Shoemaker played his usual steady game at centre, making three of the college goals. Sirrs and Taylor back-checked to perfection and had their opponents completely blocked. Musgrave and Alexander on the defence gave an exhibition of checking and blocking that has rarely been equalled, while Allan in goal gave the spectators many a thrill by his marvellous saving of sure goals.

The final score was 5 to 2 in favor of O.A.C.

The College line-up was as follows:—

Goal, Allan; Defence, Musgrave and Alexander; left wing, Taylor; right wing, Sirrs; centre, Shoemaker; spares, Stales and Clemens.



A COINCIDENCE

How many have ever noticed that Doc. Fraser generally finds that there is something upstairs he requires just when a certain class of Co-eds are coming out of chemistry lectures?

When they are in need of a policeman down town, we would take great pleasure in recommending "Chesty" Allan to the Guelph chief. A man who is not afraid to face a Gunn has enough nerve to patrol Guelph's quiet streets.

"In many parts of the country," said Alex. Brink, "silos are concrete things." Yes, and now they tell us that the juice that oozes down through the silage is an abstract possessing concrete properties.

WHOA! NOW.

Since reading the article on Shire horses in the March Review, Matheson has begun to see that those Scotch-originated, substance-lacking, upstanding, very shallow Clydes are not just what he thought they were. We truly believe this is the first example on record of a Scotchman admitting that the Clyde was lacking in any degree.

"So, Bill Currie's to be the big noise around the College next year?"

"So they say."

"And is it true that Bert Hopper will be chief fusser at Mac Hall?"

"Not likely. At least I don't think Bert's a fickle boy."

We would like to suggest to the President of the Lit. that next term a public stenographer be present to take down every word that drops from the mouths of all debaters. In the past there has existed some difference of opinion between the debaters and the audience as to what really was said. Result: Much big talk.

TO WOULD-BE JOKERS

Remember that jokes are sometimes taken seriously.

Watch the Sun rise.

Stewart's favorite song: "It's nice to get up in the morning."

If Jack Steckle would only smoke an enormous quantity of cigarettes every day, drink local option beer for a year, and promise only to use one arm, we wouldn't mind wrestling with him.

You never know how much a man can rave until a truthful local glares him in the eye.

Exams act not only as a stimulant, but as an astringent. At least we would judge this to be true from seeing such a quiet Mike these days.

Gunn was born in the wrong country. Spain should have been his nation, because in that land there are bulls to bait. Here there are only fellow-students.

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I expect to build new barns about..... I expect to equip present barns about.....
I keep.....cows,horses,pigs,

I prefer to deal through.....at.....
My Name.....P. O.....Pro.....

You might as well be cheerful now, Tice, because one never knows what is ahead of him.

Doc Stone lacks e's when calling the role, because he calls Tinney Tiny.

DOUBLE "L."

Tommy (writing)—"O, Bill, 'ow many h'ells in 'Oenzollern?"

Bill—"Two h'ells, same as in 'ell."—Camouflage.

If currency could buy good names as a commodity, if cash could purchase a few clean reputations, then good names and clean reputations would be worth about a dollar a bushel.

Cash can buy the things that temporarily satisfy our desires and passions, but all the money this side of Hellgate can never bring a man to anything more than the common things he can get by stealing.—F. D. Van Amburgh.

Tinney (looking up from Entomology Notes)—"Where do the bugs go to in the winter, Dick?"

Dick Hurst (absent mindedly, scratching among his luxuriant locks)—"Search me."

The chief thing for those men who are elected at the spring elections to remember is that they are not merely being honored, but are supposed to do some work.

Two causes of sore heads are plugging and locals.

Give Archie Porter a part in a play where he is supported by a couple of very pretty girls and he conducts himself in an applaudable manner—because Archie is not self-conscious and he simply acts himself.

Gilbert to Bill Fleming—"You may sing about everything being peaches down in Georgia, but I maintain that everything over at Mac Hall is peaches."

If the railways would only give weekend rates, Bill Carrier, Alvin Hansuld and San King would be able to purchase a great many W. S. Stamps.

No doubt those men who have been heard to knock the co-op will be kicking because they don't get a fifty per cent. rebate. Men of such calibre compose our soap-box orators.

Don Kimball grew so enthusiastic when the Mac Hall Seniors assumed the lead at the girls hockey game recently, that he grabbed two near-by Junior rooters' hats and threw them over on the ice.

"Where's Jack Shales these times? I hardly ever see anything of him."

"Oh, he's got a great thirst for knowledge, and is busy filling up on Bacteria."

To look at Campbell Lamont you'd never suppose he knew more girls down town than any one in the residence. But, say, it's the same old story: quiet waters run deep.

FROM THE POLICE GAZETTE

"Scottie" MacMillan, more popularly known as Knockout MacMillan, added another K. O. to his long list on Saturday, March 1st, when he put away "Kid" Hartley in the first round of a schedule three round bout. "Scottie" displayed an excellent lack of science and left his stomach uncovered beautifully. He possesses lots of spiggerinktum and should add several more scalps to his belt in the near future if someone does not happen to sidestep one of his mad rushes.

HOME BEAUTIFICATION

(Continued from page 257)

and acclimatized ought also be given a place. For example in trees and shrubs, those of foreign origin, Norway Maples, Weeping Birch, Scotch and Austrian Pines, the pleasing Colorado Blue Spruce, Norway Spruce, Named Lilacs, Spiraeas, like the Bridal wreath, and beautiful roses must come in for attention as well as the native species, as elm, hard and soft maples, oak, ash, white spruce, cedars, white pine, dogwoods and many others. In Perennials, the exotics, as peonies, iris and phlox must not be forgotten. In the city or formal garden, exotic or foreign looking types may be given the chief place, as symmetrical looking cedars, junipers, Japanese barberry, iris, tulips and some of the annuals.

Making the home grounds more attractive and home-like will bring pleasure and satisfaction; usually the more effort put forth the more delightful are the results. Hard work, judgment and patience are all necessary. Difficulties and discouragement usually are present in any attempt made to make a more beautiful garden or home surroundings. Vision and courage are needed, but with tenacity in purpose real joy and pleasure result.

Mr. J. A. Neilson (calling role in Hort.)—Where's W. D. Taylor to-day?

Rilett—He was fixing the bird cage and the canary kicked him.

SEED OATS FOR SALE

O. A. C. No. 3 Oats at \$1.00 per bushel

O. A. C. No. 72 Oats at 90c. per bushel

JOHN STECKLE

Rural Route No. 2.

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A Touch of Personality

It has been said that you can judge people better by the letters they write than by their conversation. Certain it is, that the stationery used will play its part—a big part—in any judgment formed.

Good stationery pleases all—it's a compliment to the recipient as well as a key to the taste of the sender.

By all means give your stationery a "touch of personality." Your monogram, your crest, your address, suitably embossed will do it, and our stationery department, our designers have a wealth of experience from which to draw.

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It doesn't pay to experiment with unknown Fertilizers. Your soil's fertility is too important. Stick to Gunns "Shur-Gain" fertilizers—they are known to produce the best selling crops. They are scientifically compounded by our expert chemists who have full knowledge of Canadian field conditions. For any crop—for any soil—we have exactly the Fertilizer you need. You can trust Gunns.

Prices cannot come down this season. Materials and labor absolutely control them. Delay in ordering can only mean risk in being supplied. You need Gunns "Shur-Gain" this Spring. We say write now for discounts, prices and booklet, or see local agent.

**GUNNS
LIMITED
West Toronto**

"Making two blades grow where only one grew before"



FAIRBANKS-MORSE

TYPE Z OIL ENGINES are made in our own factory, that has been specializing on this type of machinery for forty years.

CASE OIL TRACTORS are made by J. I. Case Threshing Machine Co., who have been making Plowing and Threshing Machinery for seventy years.

Why buy experimental machines when you can be absolutely sure of good service and a profitable investment by buying your engine or Tractor from

The Canadian Fairbanks-Morse Co.

26-28 FRONT ST., TORONTO

LIMITED

Continued from page 368.

have become impoverished and no clover growing in them have been given a dressing of Basic Slag in the Fall of the year and the following summer the field has been full of clover. In one field in particular the farmer (for some reason not at present called to mind) was only able to fertilize half his field. The following summer the half to which Basic Slag had been applied was full of a luxurious growth of clover and on the other side to which none had been applied there was no clover at all, and the other growth poor. The two parts of the field could be distinguished a field or more away. No clover was sown and there had been no clover in the field for some years but merely by the application of Basic Slag it came thick with clover. The clover mentioned is almost identical with Dutch white clover. This instance is given to show the wonderful results phosphates sometimes have, and is not intended to convey that merely by the application of Basic Slag, would clover come on any pasture.

Basic Slag is a good phosphate to use in gardens where there is a deficiency of lime and lots of humus, but it must be applied in the fall for results in the spring and summer. Of course no amount of fertilizer will do good unless the soil is well cultivated so that the roots of the plants are healthy and well developed.

Any gardens where peas have podded but the pods have been poorly filled, where the celery is not crisp, where crops have gone too much to leaf and very little root, where the blossoms of Beans, Tomatoes, etc., have not set with fruit, where blooms do not open properly are without doubt in need of phos-

Continued on page xvi.

Please mention the O. A. C. REVIEW when answering advertisements



This Free Book Will Help You Make More Money
It shows you how farming—whether on new land or old—can be made doubly profitable. Get your copy of "Farming with Dynamite" today and learn how C. X. L. Stumping Powder will help that stump lot, remove boulders, dig ditches, and blow holes to plant fruit trees that grow faster and bear earlier and heavier than spade-planted.

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There is money in Agricultural Blasting. Write for proposition

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Six Canadian Agricultural Colleges and fourteen Government Experiment Stations are successfully using EMPIRE MILK-ING MACHINES. Is this not sufficient evidence that the EMPIRE is beneficial to the most highly bred cows as well as profitable to every dairyman milking eight or more cows?

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Prosperity!

HOW much have you saved out of the unusual earnings of the past few years? As a means of saving, what could be more profitable than life Insurance?

Provide adequate protection for your family in case of your death and for your own protection during old age.

Both of these examples of thrift are combined in the Mutual's continuous monthly income policy under the endowment plan. In the event of your death, your

beneficiary would receive a monthly income for life but guaranteed for 20 years.

At the end of the endowment period, if you survive, you would receive a monthly income for your old age. Write for full particulars of policies.

The Mutual Life of Canada

WATERLOO, ONTARIO

GEORGE CHAPMAN, General Agent

GUELPH, ONTARIO

Continued from page xv.

phates of the fertilizer mentioned. Potash is the least worry, because, according to most experts we are told there is in well manured soil, especially,

always plenty of potash, and although gardeners have been unable to get it during the past four years they have not felt the lack greatly.

FARM POWER, Continued from page 376

with the engine going fast.

The gears should not be changed when the tractor is moving. In stopping or changing gears, the clutch should always be pulled first.

It must always be remembered that

the operator is the chief factor in the success of the tractor. If he does not understand his machine, it is going to prove a costly experiment. Therefore, he should study his machine until he thoroughly understands the mechanism.

Improper Hitching Causes Loss of Power and Poor Work.

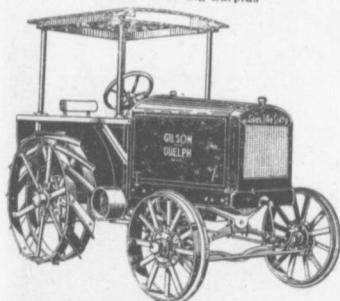
THE correctness with which a plow is hitched to a tractor is a considerable factor in determining the amount of fuel used and the efficiency of work done. Tests have shown that improper hitching will increase the draft as much as 33.05 per cent. When a plow is hitched to the right or left of the proper position there is a great strain on the plow, which is built to be pulled

straight. Moreover, improper hitching causes the plows not to scour. In tests this has been found to run from fifty-five to eighty-five pounds additional draft per bottom. Not only is an extra demand made upon the tractor but the work done is poor.

Thus care should be exercised in hitching the plow and tractor so fuel may be saved and good plowing done.

**THE LATEST & GREATEST
TRACTOR SUCCESS**

11-20 H. P. with Big Surplus



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FOR THE PROGRESSIVE FARMER,
"GOES LIKE SIXTY" ENGINES, GILSON SILO
FILLERS, THE HYLO 'SILO, LIGHT RUNNING
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**Windsor
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Get Good Harness

Any goods put out by this firm and bearing our yellow ticket trade mark are guaranteed. The Imperial Brand Harness is well known as high grade, and the makers stand behind it. We have never adopted any make-shift methods to cheapen our product on account of the high cost of material, but stick

to the good old standards of fifty-two years ago, when this house was established. If there is anything you need in harness, ask your dealer for the Imperial Brand, or write us direct for it. Ship same day order is received.

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Handsome, light road buggy harness, rawhide lined, track style, 56 in. traces. Shaft wrap belly band, beaded lines; folded and padded breeching seat and breast collar; three-quarter inch buckle over-check; track blinds; traces double and stitched throughout; trimmings are finished in genuine hard rubber and near gold. This is the dandiest harness for the price in Canada, strong and reliable, every inch of it. Price only \$35 Special. Ask your dealer or order from factory. Our Guarantee—If it does not satisfy you, return it at our expense.

\$35

**"Best-by-Test"
FERTILIZERS**

This brand of fertilizer is noted for high plant food value and the analyses are guaranteed by us and by Government regulation to be full strength. We have the right Fertilizer for every soil and every crop. Make your farm a good farm; make your yields big on every acre and for every crop. You can do it by judicious use of Best-by-Test Fertilizers. Get your order in early; don't take a chance on a shortage. Farmers should club together and order in car load lots.

Write particulars of your soil and the crop you will plant, and we will give you the best advice we can, as to the kind, quantity and price.

Write For Booklet—FREE
CANADIAN FERTILIZER CO.
LIMITED
20 Market Chambers
CHATHAM, ONT.

CO-OPERATIVE BULL ASSOCIATIONS.

Continued from page 371.

The spirit of co-operation is developed, which is a mighty fine thing in these days of stern and oft-times bitter competition. The members get together and study pedigrees and discuss production records. They learn the value of organization. Petty jealousies give way to a broader, progressive spirit, and each individual in the community is helped. The boys and girls take an added interest in the farm, and especially in the dairy work.

To those wishing to know fuller details upon this subject we cannot do better than recommend the Bulletin entitled: Co-operative Bull Association, No. 993, from the U. S. Department of Agriculture, Washington. This bulletin

is one of the best on the subject, besides giving examples of where Co-operative Bull Associations have proved their efficiency and value ten times over. It also tells how to organize such an association, with suggestions for constitutional by-laws to govern such a body, and it covers the subject fully and very comprehensively.

Clarky (during his speech) — Care should be taken not to sow wheat too thickly.

Fergie (proudly stroking his pubescent upper lip)—That's what I must have done with mine.

Shorty (copying out locals)—What do you know about locals, 'Dutch.'

Dutch—Well, up in our country they go so fast they have to back up to whistle for the next crossing.

MACDONALD.

Continued from page 396.

They began to feel dull as the days
went by and nothing happened.

At last Miss Roddick said:

"Put this Gluten in the garbage pail!
It's of no use to anyone!"

So that was the end of their house-
keeping!

AN IRREPARABLE ERROR

(vers libre).

Just one half teaspoon of soda

Just one half teaspoon too much—

Would it had been sugar,

Butter, flour or milk.

Oh, why did not these

Cry out to tell

Of the foe in their midst?

But the batter, smooth and yellow

Perfect in texture and looks

Gave no sign of the fray,

Waiting only for beat to break out

And spoil the delectable mixture,

To ruin it beyond repair—

Shall we draw the curtain

On the wreckage brought to pass

By just one half teaspoon of soda

Just one half teaspoon too much?

For woe to us lest we forget

That a little leaven, leaveneth the whole.



The Style Cycle

BY AGGIE.

"LOOK at the rube," snickered a well-dressed young man of the town, as they passed a youth from the farm. "Some cut to his suit, eh? I truly believe he must've had it pressed two years ago. And, say, does he look green? Well, I guess."

A block farther down the street a lady and gentleman brushed by the two town lads. The striking contrast between them and the other pedestrians quite prepared one for the fact that they were from New York.

The gentleman turned to his wife and said with a smile: "Small town sports. I was one myself once, and I used to think then that I was dressed in the latest styles, too."

Some time later the flashy American and his wife had occasion to be presented to a European prince. After they had moved on, the prince turned to his companion and uttered, with a broad, meaningful smile: "Americans."

The farm youth, one Sunday afternoon, lay under a big apple tree, his attention concentrated upon the illustrated pages of a Sunday supplement. He came upon the picture of the European prince in full robes of office. Turning to his younger brother he, with a hearty laugh, exclaimed: "Gosh! Bill, look ahere. Wouldn't you hate to be a prince and have to dress in duds like that?"

LANDS WANTED



FOR... SOLDIER SETTLERS

POWERS have been granted to the Soldier Settlement Board of Canada by Order in Council of the 11th of February, 1919, to purchase land to be re-sold to qualified returned soldiers who desire to make farming their permanent vocation.

To assist soldiers in settling in any suitable district in which they may wish to locate, the Soldier Settlement Board desires to have filed in each of their Provincial Offices a select list of farm lands available for purchase in each district of the Eastern Provinces, with full description and lowest cash prices of the same. Purchases by the Board will be paid for in cash.

The public are informed that this land is for purchase by returned soldiers, and must be of good agricultural quality, and reasonable price, making possible the success of the soldier as a farmer. It should be within seven miles of a railway, open, free from weeds, water supply assured, and of moderate price. In giving particulars, mention nearest market and school. In comparison with the vast supply of vacant lands, the number of farms immediately required will be very limited. Officers, therefore, will kindly assist the Board by offering for the present only land which fills the above requirements.

No commission will be charged or paid. No offers to sell will be binding on the person offering, unless a sale is effected, and no obligation will be on the Board to accept any offer.

If application from a returned soldier be received for the purchase of land, an inspection and valuation of such land may be made by the Board, as soon as free from snow. If approved, negotiations may be entered into for the purchase and sale thereof. An approved list is desired for each suitable district throughout Canada.

All communications concerning land in the Eastern Provinces should be addressed to the Provincial Supervisor of the Soldier Settlement Board for the province in which the land offered for sale is situated, a list of whom is given below:—

ONTARIO:
Mr. W. M. Jones, 32 Adelaide St. E.,
Toronto.

QUEBEC:
Lt.-Col. Bruce F. Campbell,
Drummond Bldg., Montreal.

NEW BRUNSWICK:
Mr. Wm. Kerr, Post Office Bldg.,
St. John.

NOVA SCOTIA:
Mr. R. H. Congdon, 529 Barrington St.,
Halifax.

PRINCE EDWARD ISLAND:
Soldier Settlement Board, Riley Bldg.,
Charlottetown.

SOLDIER SETTLEMENT BOARD, Canada.

Ontario Sheep Breeders' Wool Sale

THE success of co-operative marketing of wool has been proved beyond all doubt. In order to handle the increasing amount of wool, arrangements have been made with the various District Representatives of the Department of Agriculture throughout the Province to handle application forms and supplies. Since the grading of wool commences

on May 1st, all farmers who intend shipping their wool to Guelph should make application to the District Representative in their country and supplies will be forwarded at once. Application should be made early so that all supplies may be distributed before May 1st, when wool grading begins.