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The O. A. C. Review

Published monthly during the College Year by the Students
of the Ontario Agricultural College, Guelph.

THE DIGNITY OF A CALLING IS ITS UTILITY.

VOL. XVI.

Ontario Agricultural College, October, 1903.

No. 1.

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THE CLASS OF '03.

English, Irish, Scotch, and Dutch,
French and Argent., Yankee, Greek,
Canucks, Jamaicans—here you see
The cream of the earth in naughty three.

F. W. BRODERICK, B.S.A.,

who successfully completed the B.S.A. course in June last, was brought up on his father's fruit farm near St. Catharines. Mr. Broderick is a splendid specimen of Canadian manhood, tall and broad shouldered, holding his own with equal ability on the field of sport and in the class-room. Mr. Broderick made Horticulture his special line of work, paying particular attention to fruit growing. His early training stamped him from the first as a thoroughly practical man. On finishing his examinations in May,



F. W. Broderick, B.S.A.

Mr. Broderick was one of two appointed to conduct a series of mustard spraying demonstrations throughout the Province. Though handicapped by unfavorable weather, his work was so satisfactory that he was sent again this Fall to give similar demonstrations at some of the fall fairs. Mr. Broderick is, for the present, making fruit-growing and farming his occupation at his home, near St. Catharines.



E. G. DE CORIOLIS, B.S.A.

The year of '03 numbered within its ranks men of many climes and countries. The Island of Mauritius, far to the east of South Africa, and no less than fifty-three days' journey from the city of Guelph, sent in the person of E. G. de Coriolis, B. S. A., a worthy representative. Though entering the College a year later than his class, he was able to combine the work of the first two years. Mr. de Coriolis graduated as a specialist in chemistry and physics, and his thesis,

"Analysis of Humus Soils," was one of the best, if not the best, that has been prepared by a graduate for some years. During his course Mr. de Coriolis created a most favorable impression as a public speaker. Mr. de Coriolis' native tongue is French, but he possesses a perfect command of English, and on two occasions he won prizes in the annual oratorical contests. On the 1st of September last Mr. de Coriolis was appointed Demonstrator in Chemistry in his *Alma Mater*, in place of W. C. Good, B. A., who resigned to take up other work.

B. M. EFTYHITHES, B.S.A.

Scholar and orator was this true son of Greece. Though opposed by almost insurmountable difficulties in



D. T. Elderkin, B.S.A.

leaving his own land, Asiatic Greece, then under the domination of Turkish influence, Mr. Eftyhithes persevered in his determination to come to America to study agriculture, till success

finally crowned his efforts. He entered this institution in 1898, and for three years pursued his studies with the class of '02. Then, on account of trouble with his eyes, brought on through overstudy, Mr. Eftyhithes was compelled to rest for a year and complete his course with the '03 class.



L. S. Kl'nick, B.S.A.

He took the agricultural option. During his course Mr. Eftyhithes distinguished himself as a public speaker. In his final year he won first place in the annual oratorical contest, and his oration, "Some Fundamental Defects of Modern Society," was generally conceded to be the best ever delivered on such an occasion at the O. A. C. During his sojourn in America Mr. Eftyhithes has travelled widely throughout the Province and the United States. He will spend another year or two studying American agricultural methods before returning to his native land. Mr. Eftyhithes is

now at the Experiment Station, Kingston, R. I.

NOTE.—We are sorry we were unable to obtain Mr. Eftyhithes' photograph for this issue, but will try to get it for our November number.—ED.

D. T. ELDERKIN, B.S.A.

It seldom happens that a class graduates from the O. A. C. without its representative from the Maritime Provinces. D. T. Elderkin, B.S.A., hails from Amherst, N. S. His father, Mr. E. B. Elderkin, is the well known president of the Live Stock Association of Nova Scotia. Naturally Mr.



A. P. Ketchen, B.S.A.

Elderkin has been closely associated with live stock work, and, though his intention on entering the College was to pursue horticultural lines, he decided later to specialize in agriculture. Before coming here Mr. Elderkin spent two years at the Central Experimental Farm, under the direction of Dr. Saunders. During the summer of 1901 he had charge, under

his father's direction, of the Canadian live stock exhibit at the Pan-American Exposition. His excellent work there, together with his college training, secured for him a position in the live stock work under the Department of Agriculture of Ontario. As a student Mr. Elderkin took a prominent



L. A. LaPierre, B.S.A.

part in all the student organizations. THE O. A. C. REVIEW grew under his direction as editor-in-chief, which position he held during his fourth year, into a publication of which the institution may well be proud. Mr. Elderkin enjoys the distinction of being the first benedict of his class. On the 23rd of September, 1903, Mr. Elderkin was united in the holy bonds of matrimony to Miss Florence Black, of Amherst, N. S. Mr. and Mrs. Elderkin will make Toronto their home.

L. S. KLINCK, B.S.A.,

was born in the County of York. His early life was spent on his father's

farm near Victoria Square. A school teacher for some time previous to his entrance into the college, Mr. Klinck commenced his course equipped with an intimate knowledge of farm life and an excellent academic training. Mr. Klinck was one of the all-round men of his year. While a consistent student, he still found time to devote to the work of the Literary Society and to take his part in field sports. During his third year he filled the responsible position of President of the Y. M. C. A. Mr. Klinck specialized in Biology. On graduation he left for the Minnesota College of Agriculture to take a short course in Plant Breeding, and later went to the Agricultural College at Ames, Iowa, to take post graduate work.



W. T. McDonald.

D. H. GALBRAITH, B.S.A.,

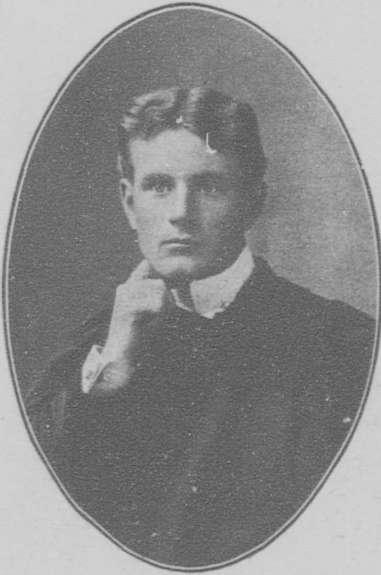
was born on his father's farm in Markham Township, in the County of York. Having followed the prac-

tice of agriculture all his life in so famous a farming district, Mr. Galbraith is a thoroughly practical man. In 1898 he took the Dairy School Course at this Institution, and in the following year he registered for the general course. During the whole four years of the course he showed

career. Mr. Galbraith is farming at Ellismere, in York County.

A. P. KETCHEN, B.S.A.,

is one of the best known of the graduates of '03. For some years before entering his *alma mater*, he was deeply interested in the science and practice of agriculture. At this time he gained for himself an enviable reputation as a speaker at Farmers' Institutes, and as a successful farmer at his home in Bruce County. Entering the O. A. C. in September of 1900, he covered the work of the first two



L. H. Newman, B.S.A.

himself to be an energetic, hard working, and with-all, obliging student. During his course, Mr. Galbraith held several important offices, both in the Literary Society and in the Athletic Association, and during his final year he proved his executive ability by his excellent management of the latter association. Mr. Galbraith's strongest point as a student was Live Stock. He was a particularly good judge of horses. In 1902, he was one of the class sent to compete at the International Judging Contest in Chicago. We predict, for one of Mr. Galbraith's ability and energy, a very successful



J. B. Rivara, B.S.A.

years in one year. Mr. Ketchen took a particularly strong course in Live Stock, his option in the final year being agriculture. He was a member of the team representing the College in the International Live Stock Judging contest held last December in Chicago. Throughout his college career Mr. Ketchen entered with enthusiasm into the various student enterprises, and in his final year he presided most

acceptably over the Literary Society. Immediately on graduation Mr. Ketchen was appointed assistant to the Dominion Live Stock Commissioner. His many friends will expect great things of him in his new and broad field for work. His address is, Department of Agriculture, Ottawa, Ont.



T. H. Sharp, B.S.A.

L. A. LAPIERRE, B.S.A., comes from the Town of Paris, in Brant County. He entered the College in 1899, beginning at once with the work of the second year. In 1902 he tried the degree examination with the '02 class, but failing to reach the required standard, he entered the class of 1903, and completed his course successfully in June last. Mr. LaPierre was noted as an excellent judge of live stock. In December of 1901, he was a member of the team which so nearly captured the Spoor Trophy in the judging competition at the International Live Stock Show

in Chicago. Mr. LaPierre is farming at his home in Paris.

W. T. McDONALD, B.S.A.

Like Mr. Ketchen, Mr. Macdonald is another boy from Bruce. Like Mr. Ketchen, he was born and brought up on the farm. He entered with his class in 1899 equipped to make the best use of a training at this college, and from entrance to graduation the story of his work is one of steady progress. A consistent student, an enthusiastic member of the Literary Society, allied with the work of the



F. H. Silcox, B.S.A.

Y. M. C. A., and a member of the Athletic, Mac. succeeded in getting the most out of student life, and the prospect of a midnight feed in the experimental barn would take him even from his books.

Mr. Macdonald is comfortably situated now as assistant editor of the *Farmer*, of St. Paul, Minn. We are sorry to lose Mr. Macdonald from

Canada, but are glad to know that he is under the direction of Prof. Thomas Shaw, a Canadian, and one of the best known agriculturists in the West.

L. H. NEWMAN, B.S.A.

Is one of the most thorough college men of his year. Entering with his



H. Rive, B.S.A.

class in 1899, with the usual practical qualifications and with a fair academic standing, Mr. Newman took a strong course throughout. In his final year Mr. Newman took first class honors in his special, Biology, and, along with Mr. Ketchen of the agricultural option, was ranked as first man in the year. Mr. Newman believed in all around culture for the college man. He never neglected social, literary or athletic duties, and the result is Mr. Newman is looked upon as a young man whose future success is assured. After graduating Mr. Newman spent a few weeks in

the experimental department at his *Alma Mater*. Here he gained considerable experience as a lecturer, part of his work being to conduct parties of excursionists over the plots during the month of June. In the month of July he accepted an appointment on the staff of the Seed Division in the Dominion Department of Agriculture.

J. B. RIVARA, B.S.A.

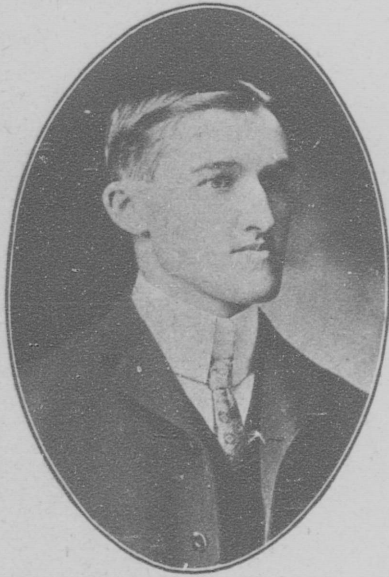
Four years ago a number of students from the Argentine Republic came to the O.A.C. to take courses in agriculture. Among the number was Mr. J. B. Rivara. Mr. Rivara proved himself one of our most clever



W. J. Rutherford, B.S.A.

students. Though at a considerable disadvantage in his lack of acquaintance with the English language, he succeeded in taking the full course in three years. Mr. Rivara took the agricultural option. After convocation in June last Mr. Rivara left for his own country, where he will en-

deavor to apply the principles of agriculture learned in Canada to agricultural conditions in the Argentine Republic. Live stock work will probably be his principal line. The REVIEW extends to Mr. Rivara, the first graduate from Argentine, its best wishes for continued success.



H. S. Peart, B.S.A.

T. H. SHARP, B.S.A.

The Island of Jamaica is the home of T. H. Sharp, B. S. A. Though rather meteoric in his career as a student, Mr. Sharp took a very successful course, graduating with honors in the option of chemistry and physics. During his course Mr. Sharp distinguished himself as an athlete of no mean ability. He holds the college record for the quarter mile, and in the shorter distances he was seldom beaten.

Mr. Sharp has returned to Jamaica to apply the principles of agriculture as taught here to Jamaican methods.

His address is Spanishtown. Rumor has it that Mr. Sharp may pay, ere long, another visit to this country, and that he will not return to his own home unaccompanied.

F. H. SILCOX.

Mr. F. H. Silcox, B. S. A., entered the O. A. C. with the class of '02. He attained the Associate Diploma in 1900, returning a year later to take up B.S.A. work. In his final year Mr. Silcox took the agricultural option. Though not having spent all his life on a farm, Mr. Silcox has always been in intimate touch with agriculture in his native county, Elgin, and has spent several years at farm work. We are glad to see that his love for the calling has not abated, and that his enthusiasm is stronger than ever. Mr. Silcox is farming at Iona, in Elgin county.

H. RIVE, B.S.A.

Like Mr. Silcox, Mr. Rive entered the College in 1898, graduating as an Associate in 1900. With the object of following dairying as a vocation, Mr. Rive then dropped out of his class for a year in order to gain practical knowledge of cheese factory and creamery work, and to take the Dairy School course during the winter of 1900-1. With two seasons of factory and creamery experience and a very successful Dairy School course as preparation, Mr. Rive entered the third and fourth years well equipped for the work of his chosen option, dairying. Mr. Rive was known among his fellows as a most obliging student, a man of wide reading and of good mental attainment. He took a uniformly high standing in all his classes from the beginning of his col-

lege career to the end. He is now foreman in the butter department of the College dairy.

W. J. RUTHERFORD, B.S.A.,

Needs no introduction to many of the readers of the REVIEW. Previous to his entrance into this institution he taught school in the eastern part of the Province. Though registering a year later than his class, he succeeded in combining successfully the work of the first two years. In the fall of 1901, however, he accepted the position of Dean in the Residence of his *Alma Mater*. His rare tact, his scholarly attainments and his strong moral character enabled him to handle that difficult post with great success, and won for him the respect of staff and students alike. By hard study he succeeded in working off most of his third year course along with his class in 1902. In December of that year he resigned his position to complete his studies, thus obtaining his degree along with his class in June last. Mr. Rutherford received several flattering offers of positions in various agricultural colleges immediately on his graduation.

Finally, however, he settled on one from Ames, Ohio, a position as assistant professor of animal husbandry in the Agricultural College of that State.

HARVEY S. PEART, B. S. A.,

entered the College with his class in 1899. In 1901, after two years of successful work, he received his Associate Diploma, and decided to complete the course for the B.S.A. Degree, specializing in horticulture. Mr. Peart's training on his father's fruit farm in the famous Burlington fruit district, now stood him in good stead, and he received his degree in June with honors. Mr. Peart's thorough practical training and his ability as a student secured for him a Fellow's appointment in the Department of Horticulture at the O. A. C. Mr. Peart is still in the Department, and is doing good work under the direction of Prof. Hutt. Mr. Peart's thesis on the "Fertilization of the Apple Blossom," is deserving of special notice on account of its practical and original nature.

B. S. P.

NATURE STUDY No. I.

With the consent of Prof. Lochhead we are publishing one of the original Studies made last spring by the Third Year Nature-Study Class. We purpose inserting a Study in each number of the *O. A. C. Review* to show the character of the valuable observational work done by the class.

THE CURRANT SAW-FLY
(*Nematus ribessi*).

BY D. BUCHANAN.

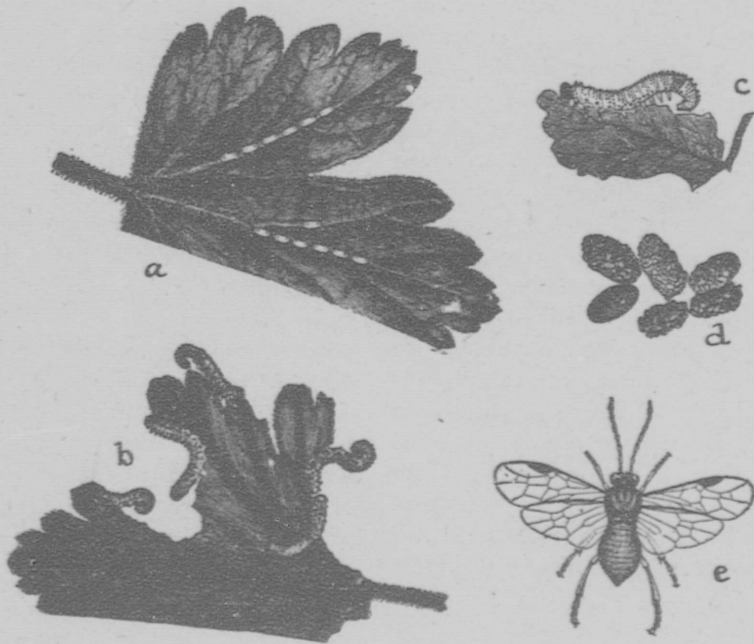
The adult is a small four-winged fly, about 2½ of an inch long. The

male has a black head and a black thorax; the abdomen is steel-blue above and orange below; and in each fore wing near the upper margin is a stigma or spot. The abdomen is joined broadly to the thorax. The female is slightly larger than the male, and the abdomen is orange both above and below. They can fly quite rapidly, but usually they hover about the bushes in a lazy

manner. The first adult I saw this Spring on the 17th of April; it was a female, but both males and females were quite numerous on the 21st of April.

The first eggs I saw on the 5th of May, but eggs could still be found up to the present time (May 20th). The eggs are laid on the under side of the leaf, along the veins. They are usually laid end to end in rows; usually

somewhat larger than one would expect, from the size of the egg. It begins to feed in a short time after it is hatched. It eats a small hole in the leaf and continues to feed around the edge of this hole, gradually making it larger till the edge of the leaf is reached. After this it feeds on the edge of the leaf. When the larva is young it leaves the coarse veins of the leaf; but when it becomes older it



Stages in Life-History of Currant Worm.

(a) eggs along the veins of a leaf, x2; (b) young worms about the 3rd molt on a leaf; (c) full grown worm; (d) pupae taken from the ground; (e) adult female sand-fly.

two to seven in a row, and placed on their sides. They are of a whitish color, almost transparent. As they become older they become whiter and more opaque. They hatch when they are about 5 days old.

The newly hatched larva is a whitish green worm about 1/10 inch long;

leaves nothing but the petiole.

When one day old the larva molts for the first time. After molting it is of a deep green color; the head, which was of a dark brown color, becomes a light green after the molt, but in a few hours it becomes brown. Very small black spots could be seen on the

sides with the lens. Growth is quite rapid, for it is now $1\frac{1}{5}$ of an inch in length. Two days later, or when it is three days old, the second molt is cast. The ground color is now green; the black spots on the sides have become much larger, and with the aid of the lens five bristles can be seen in each spot. Small black spots appear on the back, in each of which there is one bristle. The length is now about $3\frac{1}{10}$ of an inch long. When five days old the third molt is shed. The black spots on the sides are larger than before; a faint yellow band has appeared near each end; and its length is $3\frac{1}{5}$ of an inch. The fourth molt takes place seven days after hatching. There is no particular change in appearance, except an increase in size, for it is now $7\frac{1}{10}$ of an inch long. When it is ten days old it casts off the fifth and last molt. With this molt it leaves behind all its spots and bristles, and appears as a light colored worm with an orange band near each end. It has now reached its full size, and is $4\frac{1}{5}$ of an inch long. After this molt, moreover, it becomes restless, and,

apparently blind:—wandering over the plant, for a few hours, during which time it does not feed. It then drops to the ground and buries itself about $1\frac{1}{2}$ an inch deep in moist sand.

In the case of a larva which I had under examination, it descended into the ground in the evening, but by morning all that could be seen of it was a leathery pupa, with sand woven into the walls of the case. This was about the size and shape of a small bean, and was placed on its end.

When the larva is ready to molt it becomes restless and uneasy, turning first this way and then that. Presently the molt splits along the back over the head and true legs. It then jerks its head upwards till the head and legs are free from the molt, which is fastened to the leaf at the back end. The larva now wriggles upwards, downwards, and forwards till it is free from the molt. After the molt the larva has a clear, bright color, instead of the dull color before the molt is cast.

Agricultural Department.

EDITED BY J. C. READEY.

Agriculture and Agricultural Education.

That business in which a man is engaged appears to him to be one of the most important, provided he is meeting with a fair degree of success. Such at any rate should be the attitude of every person towards the calling which he follows. It matters not how humble a calling may be, that calling can be made noble by the noble and faithful performance of whole-hearted votaries. Until late years the work of the agriculturist has been looked upon as something akin to begging, a state of affairs due largely to the apologetic methods of an illiterate portion of the agricultural community. Thanks to the perseverance and faithfulness of men who felt the dignity of their profession, such, is no longer the case, and the pursuit of agriculture has taken its proper place among the great pursuits of the nations.

A brief comparison of our work with the work of other professions always results in stimulation to pride and to greater effort. Looking at it first from a numerical standpoint, the number of men engaged in agricultural pursuits is greater than that engaged in any other. Financially, no other industry can boast of such an immense amount of invested capital, for in the hands of the farmer rests the wealth of the nation—past, present, and future. As a scientific vocation none other is more complicated; as a business none other

requires more careful management or stricter personal attention. Comparison, therefore, proves that no profession requires a higher degree of skill or better intellectual or business qualifications. These facts have given rise to a steadily increasing demand for an education which will place the tiller of the soil on an equal footing with his professional friends.

The education which will meet the requirements must, from the very nature of things, be wide and complex, and the further the study is continued the more apparent does this fact become. It is sometimes argued that the tendency in many agricultural colleges is towards too broad a course. Many of the sciences, because they are but little understood by ordinary men, are thought to be unnecessary. To the student, however, the overlapping of the various sciences, and the relation which they bear to each other, is apparent. A knowledge of chemistry would be incomplete without the knowledge of physics, and this interdependence is equally true of all the sciences which bear on agriculture. The broader and more thorough the knowledge of the principles which underlie the work of the farm the more intelligently may that work be carried on. Take, for instance, the study of the work of bacteria, that wonderful but little-understood class of organisms. How many of our farmers think of the myriads of infinitely minute, but busy little workers upon which his season's crop depends? As little do we consider the conditions

under which these organisms do their best work, though these conditions, many of them at least, are within the power of the farmer to provide. The same is true of biology, chemistry and physics. The more thorough the understanding of these branches of study possessed by the farmer the better qualified he is to make a success of his work. Let no man think that agriculture is a simple pursuit which any man with a liberal reserve of brute force can follow successfully. He who thinks so and ventures to express himself to that effect makes a pitiful exposure of his own ignorance. Let us have a broad, deep, and thorough education. We need it.

The first and foremost object of our agricultural education should be to make men more intelligent farmers and more useful citizens. True success does not lie altogether in great financial success. Farmers must be able to take their places in the affairs of the nation, to compete legitimately and successfully with other professions, to see and think for themselves. Of course, progress in private affairs should be looked for. Results of an agricultural education should be evidenced by tidiness of buildings and surroundings, cleanness of fields, quality of crops, improvement of stock and a happier and broader-minded citizen. It should give rise to a high ideal founded on good sound principles. Men never rise higher than their ideals, in fact seldom reach them, but the higher those ideals are placed the higher the point to which a man may attain. In the advance towards that ideal the steps should be carefully and judiciously chosen, suited to the person's financial and

business ability. With the right material upon which to work, an agricultural training cannot fail to tend to produce these results.

"Will it pay," is a question which confronts every young man as he considers the advisability of entering upon his college course. How is he to decide that question? The channels of revenue are varied and many of them indirect, and statistics hard to secure. Perhaps no better answer could be given than that found in an article in the *Farmers' Advocate* on Financial Benefits from the Agricultural College, by Prof. Shaw. He says, "It is not easy to measure the financial gains to any Province or State which accrue to the same from having within its border a well-equipped and well-conducted agricultural college. It would not, perhaps, be possible to measure these gains, since no measure can be applied which will exactly cover the whole ground and give all the results. That it should be so, is very apparent from the nature of those gains. They come in successive instalments. They grow out of all the avenues of agriculture. They are cumulative in character. They multiply as the agriculture of the country extends. Like the good seed which good men sow, they continue to increase and multiply down through all the years that are yet to be, until that borderland is reached when time shall be no more." What is true of the "Province or State," is true of the individual. The results are hard to estimate, but they are sure to come.

The fact that there has been, and still is to some extent, a popular prejudice against scientific agricultural

education may be due to several causes. Narrow-mindedness, due to lack of acquaintance with up-to-date literature, or lack of contact with progressive farmers, probably accounts partially for this regrettable state of affairs. For the first-stated reason there is now no excuse. Practical and scientific agricultural journals are now within the reach of every farmer, and yet it is amazing how many farmers of this Province, who, through negligence, have not provided themselves with this cheap but fertile source of financial and intellectual improvement. It is, also, now possible for the farmers to keep in touch with each other through Institute work, and in most cases it is not hard to tell those communities where active "Institute" work is being carried on. A very popular cry against agricultural education is based on isolated cases of failure, or seeming failure, of graduates of Agricultural Colleges. To such, we would say that an education adds nothing to a man; it simply develops what is latent in him. It is impossible to make gold from quartz, and if the faculty at any college do not get the material to begin with no amount of training can make a successful man. The failure of graduates is not due to what they are taught, but to the misapplication of those principles which they have studied. No agricultural college can lay down a set of rules for farm operations that will hold good in every locality. It rests with the individual to study the peculiarities of his own conditions and then to set about the application of his scientific

knowledge to those particular conditions. The failure is due, therefore, not to the application, but to the misapplication of scientific education, and the degree in which a man is successful depends upon his ability to apply that knowledge which he has gained by study. It may well be repeated, and it cannot be successfully refuted, that the more thoroughly a man understands the materials with which he works, the more intelligently he is able to set about that work.

We do not claim perfection for college curriculums; they have their defects, but those curriculums are arranged by men of ability and experience, and it is usually beyond the power of most men, who presume to criticize, to provide a better. Such criticisms, however, are beneficial in pointing out defects, and in rousing up those who have the matter under control to remedy the defects. Let those who condemn the college training of farmers, because some graduate has failed, be careful to place the blame where it properly belongs.

Rapid advances are being made on every side. New colleges are being built and old ones are being improved and enlarged. The spirit of the times is upon us. It is expected of students and ex-students, that they do much to aid in the forward movement. These are the men upon whom the responsibility rests. The best advocate will be a careful, intelligent, and telling application of the knowledge which they have acquired.

J. C. READEY.

The Tendency to Larger Farms.

Any observant person driving along the country roads of Ontario, especially Western Ontario, is struck with the large number of empty farm houses to be seen on every hand. In some districts nearly one-third of the homesteads are unoccupied; the houses and outbuildings woefully lonesome and neglected looking, but the farms themselves apparently well cared for, the fences in tolerably good repair, and the area under crop evidently in a high state of cultivation. The greater part of the land is probably under grass, most of the interior fences have been removed, and these large "runs" are dotted over with cattle; perhaps a dairy herd, but more often a drove of fattening bullocks getting ready for the English market.

One who has had occasion to drive much, in the counties of, say, Huron or Middlesex, which may be taken as fairly representative, is not surprised at the figures of the recent census, which revealed the fact that, although our towns and cities have grown rapidly during the past decade, there has been a decrease of 34,538 in the rural population of Ontario.

Now what do these things mean? If increased population in the city means prosperity, what is the import of decreased population in the country? Do these empty homesteads mean abandoned farms? Has the land been so exhausted that it will no longer repay cultivation, nor support so large a population as before? Is the history of New England being repeated in Ontario? Do these larger holdings by fewer families indicate increasing wealth or encroaching pover-

ty? These are some of the questions that force themselves on the attention of the thoughtful observer?

If we consult the report of the Bureau of Industries for 1901, we find that during the ten years from 1892 to 1901, inclusive, there has been an increase of \$17,763,156, in the total value of the field crops produced in Ontario, an increase of \$14,148,486 in the value of the live stock sold, and an increase of \$21,346,052 in the total value of farm property, including land, buildings, implements, and live stock. These increases are not due to higher prices but to larger production; there has been a falling off in the production of wheat, but a very large increase in the amount of hay and coarse grains raised, and, naturally, in the numbers of horses, cattle, sheep and swine reared. In addition to the increases above enumerated, we find that there has been a decrease of \$207,590 in the chattel mortgages registered against Ontario farmers. Surely these figures denote prosperity as plainly as figures can. They not only indicate that the farmers of Ontario have larger assets and smaller liabilities than they had ten years ago, but they also show that more wealth is being produced annually by fewer people.

Then, if this be true, if the farms of Ontario are yielding larger profits per unit of population than formerly, why so many empty homesteads? Because in agriculture, as in every other industry, there is a growing tendency towards more extensive operation, and the land is slowly but surely drifting into fewer hands. In these strenuous times, our old ideals of intensive agriculture and maximum

yields are being forced aside, and men are striving after optimum yields with maximum profits. Farmers are becoming keener and shrewder financiers, and recognize that a farm of two hundred acres can be worked with a relatively smaller investment of labor and capital than one of half that area. Improved machinery and better management have made it possible to work the larger farm with about the same expenditure for machinery and labor as was formerly required on the smaller; the cost of living remains the same; and even if we grant for the sake of argument that the land is not forced to its maximum productive power because a larger part of it is given up to grass, a net profit of \$3.00 per acre from two hundred acres is better than a net profit of \$5.00 per acre from one hundred acres.

As a result of this or a similar line of reasoning, when a farm is offered for sale in the older settled districts of Ontario, instead of a new family moving in to take the place of those who are leaving, the farm is often bought by one of the more well-to-do neighbors, who works it in conjunction with his own; and hence,—“The old familiar farm house is falling to decay.”

A. P. K.

Natural Flesh in Beef Cattle.

One of the most puzzling problems which the student of stock judging encounters, is to recognize the thickly fleshed animal, and to know just how much value to attach to this quality when making awards in the showing.

We frequently hear the term “natural flesh,” and a great many

people who use the term would experience difficulty in defining it, and in explaining how they recognize natural flesh when they find it. Perhaps it will help to explain what is meant by “natural flesh” if we refer to the differences which are found to exist in different carcasses of beef. In order to secure the most palatable beef, the animal must be well fattened. Everybody knows that lean meat is more palatable than fat, but, in the process of fattening, particles of fat are deposited in the tissues of the lean, which makes the lean meat tender and juicy. The lean meat from a thin animal is dry, hard, and comparatively flavorless, so that while lean meat is a desirable thing, the animal must be fattened to give the best quality of lean. The main object in fattening, therefore, is to improve the quality of the lean meat. But, in cutting up the carcasses of animals that have been equally fattened, it will be found that some possess much more fat, in proportion to lean, than do others. In other words, while the amount of fat on one carcass may be equal to that of another, the amount of lean in one carcass may be much greater than that of the other, and, consequently, the carcass with the larger amount of lean is more valuable from a consumer's standpoint. Therefore, paradoxical though it may be, while the market calls for a fat animal, it also calls for a lean animal, which means that it wants an animal which furnishes a large amount of lean along with the fat. Now, lean meat is muscle, and while it is true that the amount of muscle can be influenced to a certain extent by feeding and management, still the tendency

to develop muscle is fixed in the animal by nature. Hence, when we find an animal which shows indications of possessing this desirable muscular development, we speak of it as possessing an abundance or wealth of "natural flesh." The term "natural flesh," therefore, does not refer to the mere amount of fat which an animal carries, but to the thickness of covering and the character of handling, which indicate the presence of an abundance of lean along with the fat. Such an animal is also said to be thickly-fleshed.

The ability to detect natural flesh is acquired only by long practice, and many people never seem to acquire it. Even among the most expert judges, it is difficult to find one who is infallible in this matter. While such is the case, it is quite possible for the careful observer to become so proficient that he seldom makes mistakes, especially in the case of young animals, or animals that have been recently fattened. In the case of animals that have been kept in high condition for a number of years, it is frequently impossible to detect evidence of the presence of muscle. In fact, in most of such cases, fatty degeneration of the muscle has taken place to a greater or less extent, and the carcass is bound to possess a superabundance of fat. In such cases, therefore, about all the judge has to guide him is the thickness of covering over all parts; because this thickness of covering is an indication that the animal possesses a natural tendency towards thickness of flesh, though its utility from a consumer's standpoint has been seriously injured by continuous high fitting. In judging a class of breeding animals, due allowance must be made for this condition.

The thickly-fleshed animal is not necessarily the smoothest. In fact, the thinly-fleshed animal will frequently carry its smoothness under high fitting for a much longer period than the thickly-fleshed one. The thickly-fleshed beast fattens readily, and its very thrift, so desirable in a beef animal, is sometimes its undoing in the show ring, because, when fed too long, it frequently develops rolls of fat on the rib, and bunches at the pin bones. Its thinly-fleshed, slow feeding competitor, on the other hand, may exhibit a smoothness that is very attractive. It is cases of this kind which test the ability of the judge, and he frequently finds it difficult to satisfy himself, to say nothing of exhibitors and on-lookers. It is purely a matter of degree, and calls for careful consideration and sound reasoning. It must not be inferred, however, that the thickly-fleshed animal lacks smoothness, and that unevenness is a thing to be commended. The case cited above is merely an illustration of where a judge sometimes has to choose between two evils, and of how necessary it is to be careful lest in striving to avoid one evil, he may give preference to a worse. Fortunately, many thickly-fleshed cattle are also very smooth, and we not infrequently find the thinly-fleshed type extremely lumpy. Needless to say, the latter type require scant consideration from the judge.

This article does not pretend to deal with the question of judging, but is intended to bring into prominence one of the most important desirable qualities of the beef animal, and one which is frequently overlooked in judging. Let the student of stock judging never rest content until he learns to recognize "natural flesh" in cattle.

G. E. DAY.

Horticultural Department.

EDITED BY T. C. BARBER.

The Surplus—and By-Product of the Peach Industry.

In Ontario, the development of the peach industry has been and is an important factor in the agricultural economics of the Province. The growth of the industry is confined, however, to the Niagara District and to that portion of the province fringing on the Great Lakes. Outside of these districts the growing of peaches has many drawbacks, probably the most serious of which is the winter killing of the fruit buds. To overcome this difficulty the grower must acquaint himself with the best methods of protecting the tree in winter. In a previous number of the REVIEW the writer contributed an article that discussed this question of winter protection for peach trees, so it is scarcely necessary to repeat or continue the discussion here.

The purpose of this article is to offer a few suggestions that may help the orchardist to overcome another serious cause of loss in successful peach culture, a drawback that affects in seasons of abundant crops, the entire peach growing region of the Province: viz, the occasional demoralizing "gluts" or "slumps" in the market that break down prices and discourage growers, old and new alike. Naturally, the question might arise, what is the cause of such gluts in the market? Are they the result of overproduction? Economists say that there is no overproduction of any article so long as there is a person in the world in need of such article.

Such is a rather broad view of the situation; yet, when we follow their argument further and attribute the fault to the lack of proper distribution, rather than consider it the result of overproduction, the force of the thought is apparent. The crying need of the fruit industry is for a system of distribution that will insure a greater demand for our produce and, as a consequence, better prices. To appreciate fully the ruinous state of affairs brought about by gluts, we have only to consider the fruit market of the past season, when Ontario plums were selling for 10 and 15 cents per basket—the best of them scarcely paying for transportation, picking, packing and the package, to say nothing of the expenses of running the orchard. Such low prices also prevailed, to a less extent, in the peach market.

Just how to establish a well organized system of distribution is a difficult problem to solve. It is a noticeable fact that, when slumps occur in large cities, there often are smaller towns where peaches cannot be bought at any price. Probably the key-note of the problem lies in co-operation. Some arrangement with dealers in small towns by which they may communicate their needs to the larger dealers of the cities, and through the latter to the peach growing centres, would certainly tend to lessen the difficulty. By this means, the empty and full markets could be located and shipments consigned accordingly.

Another way to avoid gluts in the market lies in co-operation with the railway lines. To place peaches on distant markets in good condition we require a better system of refrigerator cars and quicker transportation than are now at our command. There are many different types of refrigerator cars now in use, some with the ice chambers on the ends, some iced over head and others iced in various ways. The objection to them lies not in the method of icing alone, but in the lack of proper ventilation, and, as a consequence, it is difficult to maintain an even temperature. Investigations show that different temperatures are formed in different styles of cars and in cars of the same style. As a rule the temperature in the bottom of the car is about 38 or 40 degrees, with top 10 degrees higher. This, aided by the moisture thrown off from the fresh peaches, is favorable to the spread of monilia (brown rot) in the car, and should be remedied. Quick refrigeration is essential to prevent the spread of monilia, which can do so much damage in 24 hours. No refrigerator car yet constructed can give quick refrigeration. For this reason, it is advisable, when possible, to have the fruit cooled before it enters the car. Furthermore, the fruit can be picked in better condition, riper and more mature. A local cold storage plant, into which the fruit could be placed and cooled before it goes into the car, is practicable only on large plantations or where a community of small growers would unite and operate such jointly. Where such is impracticable, the railway lines should be asked to supply a class of cars adapted in all respects to the requirements of the perishable peach. A fast sched-

ule for such cars should also be asked for, or rather it should be demanded, as peaches cannot be handled as ordinary freight and reach the market in prime condition.

An apparent local over-production of peaches is due sometimes to faulty methods of marketing. A good article, true to name and grade, and put up in clean and uniform packages, always brings a good price in any market. Poor fruit, dishonestly graded and packed in packages scarcely fit for potatoes, is difficult to sell at any time. As a rule, the grower who offers for sale a class of peaches that is a little better than the other fellow's, will find a ready market for the product of his pains in even those markets that are over-stocked with inferior peaches in inferior packages. As space is limited, we shall leave the details of packing and marketing for a future article.

When all resources fail to bring good prices for the peach crop in the fresh state, it is necessary to find other means for its disposal. Eating when ripe is certainly the most agreeable way of using peaches; probably nine-tenths of all grown are eaten in their uncooked states. But large quantities are also canned, evaporated, distilled or disposed of in other ways. The question of handling to advantage the surplus and by-products of the peach industry is a most important one to all orchardists. There is no necessity for the grower to suffer loss in years of abundance, when there are so many ways in which the surplus fruit, both good and bad, may be saved from the hog pen and the compost. To attain the same end, with regard to the various

uses to which the surplus may be put, numerous and varied systems are practiced. It is not our purpose to discuss them all in detail, nor to intimate that the systems noted in the following paragraphs are the ones *par excellence*. What we do present for the reader's consideration is the result of some observations made in certain peach sections during the past season.

A. B. C.

(TO BE CONTINUED).

Seasonable Raspberry Pruning.

There is considerable controversy as to the most favorable season for raspberry pruning, one man preferring to prune his patch in the spring-time, another favoring the fall, and each advancing strong arguments in favor of his own selection of season. Locality and local conditions, however, govern the time of pruning generally, fall pruning in some districts being more advantageous than spring pruning, and *vice versa*. Nevertheless, there are certain conditions that may be said to equally affect all localities, and it would be well to see what comparative advantages can be derived from pruning in these respective seasons under ordinary conditions.

To examine first the advantages of Fall Pruning, we generally find that we are not so overrun with work in the Fall as in the Spring, and consequently there are plenty of opportunities for doing the pruning during spare hours when nothing else is pressing to be done. This is not the case in the Spring, when the other work is being rushed on as rapidly as possible; and therefore the work can be done in

a leisurely and more effective manner in the Fall than in the Spring. The ground is also drier and firmer in the Fall than in the Spring, and thus is more comfortable under foot for working.

Another advantage of Fall pruning is that the canes are not so dry as they will be if left on the plant all winter, and consequently they cut much more easily. That this is no small consideration can be testified to by many who have worked with aching hand and wrist, cutting the old and dried canes toughened by a winter's exposure. And again, canes infected by injurious insects or fungi can be cut out and burnt in the Fall, thus checking to a large extent the further spreading of these pests.

The chief advantages of Fall pruning, then, are (1) greater convenience of time and greater comfort in working; (2) less actual labor in the pruning, and (3) the checking to a certain extent of the ravages of injurious insects and plant diseases. We will now consider some of the advantages of Spring pruning.

When the maturing canes are left on the plant all winter, the root has the opportunity of receiving the benefit of the ripening wood. The nutriment contained in the green stem tends to pass into and strengthen the underground portion of the plant, and when the cane is finally removed, there is not nearly so much loss of plant food to the plant itself as would occur if the cane were removed the previous Fall. Also, during the winter, the old canes help to hold the snow, thereby acting as a winter protection and tending to lessen the amount of damage done by

the frost in winter—killing the tenderer canes. And finally, those canes that have been frozen and winter-killed can be cut out and removed in the Spring without injuring the fruitfulness of the plant, as there will be plenty of material to replace them; while if these plants had been pruned the Fall before, the winter-killed canes would be useless to the plant and could not be replaced.

Of course, as first stated, these results may be modified and changed by local conditions, but we will find, generally speaking, that Fall pruning is more convenient for the man, while Spring pruning possesses the most advantages for the plant. The comparative value of the fruit crop should, therefore, to a large extent govern the time of pruning. If the fruit crop is merely a small item in the general revenue of the farm, it should be attended to when it is most convenient with regard to the rest of the farm work; on the other hand, if the fruit crop is important enough to justify complete attention to the needs of the plant itself, the pruning should be done at the most beneficial time for the plant, which in most cases will be in the Springtime.

T. C. B.

Propagating the Grape.

Hard or mature wood grape cuttings should be taken in the Fall from wood of the same season's growth. It is best to choose vines that are well matured and rather short jointed.

Cuttings of one, two, or three bud lengths may be taken, as desired. Single bud cuttings are often used to propagate new and scarce varieties. Two bud lengths are desired by most growers. Those of three buds are more clumsy to handle, but give stronger plants, as roots start from both underground joints. Mallet cuttings are sometimes used, but as only one can be made from a cane they are seldom adopted.

Tie the cuttings in bunches and store, with the butts uppermost, in sand, moss, or sawdust until spring. When danger from frost is passed, they should be started in a nursery row, preferably in light, sandy soil.

Some growers prefer one year old vines for transplanting to permanent quarters in the vineyard; while others prefer those of two years' growth. The proper time to transplant, depends not only upon personal preference; but also, upon the strength of the plant and upon existing local conditions as effected by climate and location. When transplanting, it is customary to set the plants every ten or twelve feet, in rows ten feet apart.

Two seasons after transplanting they are usually ready to be trellised. The number of posts for the trellis is governed by the distance apart of the vines—usually one post for two vines. The number of wires depends upon the method of training to be adopted.

A. B. C.

The O. A. C. Review.

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OCTOBER, 1903.

Editorial.

O. A. C. 1903—04.

* * *

The College work is again in full swing.

* * *

Sounds of mirth and good fellowship once more ring through the corridors, after a period of quiet and solitude.

* * *

The REVIEW extends a hearty welcome to all students—to the innocent freshman, the frisky sophomore, the dignified junior, and the — senior; and we are all glad.

* * *

Yes, we are all glad because of the large enrollment, and because of the representative character and vigorous spirit so far shown. This makes us feel that we have already the solid support of the students behind THE REVIEW, and know that such support must needs encourage the staff to do their full duty in making the periodical better than it ever was.

* * *

This is not an idle statement, for all old students know what rapid strides

our paper has been making in the last few years, and it is not our intention to stop this march of improvement if we are made to feel that our work is at all worth while.

* * *

Subscribe to THE REVIEW, contribute to our columns, and help us in any way you can. We lack a college song, our columns are dry without a bright piece of poetry or an occasional etching. Now is the time to test your originality.

* * *

Permit us to give a word of advice to the freshman. If you have come here to work you can do it, if you have come to play you can do it, if you have come to do nothing you can do it. You will find exemplars in all these modes of life, but our advice is to try a mixture of all. It won't hurt you to work a little, to play a little, and to do nothing for a short time each day. To be a strenuous man, one does not need to make life a tragedy; let us look upon it in part as a comedy. A short time given to recreation and meditation each day cannot be lost.

There is one thing that our college is badly in need of, and that is some musical organization in the form of a "Glee Club" or a "Mandolin and Guitar Club." There is nothing like good music to help along the Literary Society, to supply entertainment in the different meetings held at the college, and incidentally to give greater inspiration to a person and freshen a depressed spirit. Certainly we have the talent, and surely we have the ambition. Last year steps were taken to form a Glee Club, but the effort failed, mainly because it became more of a singing school. Why does not some good musician take hold of this matter and push it to a success? Only accept those who are musically capable of taking an active part in the Club, and most of those who are not qualified to take part would be willing to support it. The young ladies of the MacDonald Institute might be interested in such an undertaking, and then everything would become much easier, and the club much improved. Try it right away.

* * *

If you want anything done ask the busy fellow to do it—the other won't be able to find time.

* * *

It must be very gratifying to the officers of our College to watch its fast development and to note how wide-spread its name has become. From all quarters of the globe come demands for instructors and instruction, and from nearly every country has come, at least, one student to share our educational advantages. General Gould Adams, Lieutenant Governor of the Orange Colony, South Africa, was here recently, and

it is an open secret that as much as £1,200 has been offered for an O.A.C. man, competent to manage a similar college in that country. Most of our last year graduates are now filling important and remunerative positions, as will be seen by reading the first article in this paper. Inquiries have lately come from the far distant countries of Beluchistan and Mysore, India, with regard to the seed and the growing of lucerne. We have at present with us students from Australia, Austria, Sweden, Great Britain, several from Jamaica and the United States, and over twenty from the Argentine Republic. So great has become the demand for an agricultural education that there is not nearly sufficient accommodation in our Residence building for all the students who desire to take the regular course. 220 in all have made application for the year. This makes 47 more than there is accommodation for, and so great is the demand for boarding houses in Guelph that these can scarcely get accommodation in the city. This lack of accommodation concerns every farmer of Ontario, for, to a great extent, it has been the young men from this Province who are sent out to search for whatever board they can get outside of the College. Even inside the residence many of the rooms are too small and not properly equipped with ventilating and heating systems, the baths are not sufficient, the dining hall is too small, the lavatory is small, and everything around the Residence shows a lack of any aesthetic taste. How can this state of affairs be corrected? To demand that all non-residents of Ontario be turned out, would be within

our rights, but, then, what a narrow spirit and poor policy it would show. The success of our College depends a great deal on its international fame, and the trend of events in this century is towards a more cosmopolitan spirit. So, then, let us find a more just and equable remedy. We shall not have far to look. It has long been advocated that the Dominion Government should help the College in some way, and this question of providing living apartments for the students is as much a Dominion one as a Provincial one. If a student from another province is given equal rights with an Ontario student, then, it is fair and right that all provinces should help, to some extent, to support the College, and in what better way could they start than by enlarging and improving our Residence building, or building a new one for senior students. We ought to have buildings capable of holding from 500 to 1000 students, and when these were filled our influence would be increased ten-fold, or more, and the O. A. C. would be beginning to attain its proper place as an educational factor in Canada.

* * *

The MacDonald Institute is now a reality. Through the generosity and liberality of Sir Wm. MacDonald, the keen and loyal spirit of Mrs. Hoodless of Hamilton, and the untiring energy of Dr. Mills, an imposing structure is being erected on College Heights, which proclaims to all passers-by that nothing is too good for our Miss Canada. Here we cannot and must not overlook the good work done by Mrs. Hoodless towards establishing this school of Domestic Science. She

has spent years of incessant toil, in the face of many hindrances, to make her dream a reality, and all Canadian women should be grateful to her and rejoice with her in the final success of her task.

Over twenty young ladies constitute the first MacDonald class, and we are quick to agree with Lally Bernard when she writes in the *Globe* that, "The class is composed of such pretty, intelligent, and trim-looking students; there was not the slightest suspicion of the 'bas bleu.' Gibson would have been delighted to have sketched the types that were arranged on either side of a long table." And, in all seriousness, let us add to this that frivolity and shallowness seem to be entirely absent; graceful gaiety is the prevailing spirit. Surely a broad, strong foundation for the building of co-education at the O. A. C.

* * *

Girls, send your photographs to the Business Managers. We are determined that before long a Gibson shall have the chance to give to our readers "The MacDonald Girl."—Who's first?

* * *

The work of the MacDonald Institute is so well described in the *Toronto Globe* of Oct. 3, by that gifted writer who contributes weekly under the name of Lally Bernard, that we take the liberty of clipping two paragraphs, which show her quick understanding of the influences that should emanate from this institution.

* * *

"Personally, I shall watch with intense interest the effort of those who believe in Nature study to bring Canadians as a people back to the contemplation of Divine beneficence,

rather than the building-up of trusts and combines, of political strategy, and social ambitions, which seem to have so little in common with the very personal relation of Divine precepts and individual life. To me, while the buildings at the Ontario College of Agriculture are imposing and beautiful, while the library is something which it is a pleasure to spend one's time in, yet the influence of the wonderful sweep of campus and farm land, the garden and park-like vista, means a very great deal more in the struggle that is being made to make agriculture, nature study and household science the highest forms of education in this country. All three may very well go hand-in-hand; they form the very crux of existence in this great Dominion of ours. Where older nations express their degree of cultivated taste upon pictures, statuary, and magnificent monuments of public and private liberality, we can best express it in the manner in which we are able to appreciate the benefits of well-conducted homes and beautifully-kept farms."

* * *

"I recognize that the world is not to be run on successful lines unless intelligent co-operation between the two sexes is encouraged. The average woman and the average man have little knowledge of the peculiarities of the opposite sex, unless they are purely sentimental. Under conditions such as those which regulate the working of the two institutions under one head at Guelph, the co-operative value of the man and the woman in practical problems of a practical value has a good chance of being tested. There is never any danger of sentiment being obliterated; it will possibly be better

regulated and less apt to lead to disaster, but when the growing men of the country hear household science discussed as a science, and when women hear economic principles of farming brought daily into conversation, then there is a good chance of raising the general status of the community in which such students take up their abode."

* * *

It has been rumored around the College this Term that a team would not be sent to compete in the International Judging Competition at Chicago this year. There is little doubt but that the withdrawal of our team from this contest could be well justified on account of the unfair treatment which they have received in former years, but still, would this course be the best for the interests of the individual and of the College. The REVIEW voices the expressions of the senior students when it says that this would not be the best course. It has become nearly an established trip, which many students look forward to, and to a greater extent than might be supposed a tacit agreement is understood by the students entering upon their third and fourth year work that this trip shall be forthcoming. To withdraw a team this Fall would spoil the expectations and aspirations of many. As regards the interests of the College, to withdraw now might seem to acknowledge defeat, unless a combined action of all unsatisfied colleges were made.

In answer to inquiries, we have obtained from three prominent members of last year's team, written statements expressing their opinion of the matter, which we print practically word for word as received.

"There can be only one opinion concerning the Judging Contest at Chicago, as to the personal advantages to be gained. It was more than compensation to each of us individually for time and money spent, especially to those interested in live stock. Of course, it means more or less neglect of other studies for a month or two, and the question arises now would it not be better for a man in his college year to devote all his time to other studies and take in the International the winter after graduation. In this way he would get just as much out of the International itself but would miss the preparatory training, which in itself is an excellent thing. Nothing helps a man to concentrate his mind on any given study more than the prospect of competition afterwards. Again, unless a person takes in the International with the class during his college year, it is questionable if he would do so the next season; and I do not think that any graduate of the College can well afford to miss the International. It certainly broadens one out wonderfully, and enlarges his ideas particularly of the live stock industry and its possibilities as nothing else can. It gives him a proper conception of the ideal type; for if the ideal type in all classes of live stock is not to be seen at the International, I question if it can be seen any place. Then too, it stimulates one's ambition, and helps to give him a greater incentive to effort. So much for the individual gain to be acquired.

"As to the advantages accruing to the College, which I see you also ask me to include, you touch me in a sore place. The College could not well be

much of a gainer from our work at Chicago last year. It was humiliating to us in the extreme that we should have taken so low a standing, coming in, as we did, fourth place. I am not sure whether the College would be better to send a team representing the College, or to encourage a number of the boys to enter the contest on their own account. For the College to drop out of the contest by not sending a team, seems almost like acknowledging defeat, and yet, I am satisfied that under the present management you cannot send one there that can win. I believe, with Prof. Day, that some steps should be taken, by a number of the colleges, by which all of them would drop out of the competition unless it is conducted in a manner which will leave the results beyond suspicion. This, I think, would bring them to time better than any other method, and I am satisfied that most of the other colleges, particularly Wisconsin, Illinois, and Michigan, would gladly co-operate. However, that is a matter beyond our jurisdiction and must be left with the powers that be. For the College to send a team year after year only to be turned down by men whom they know to be, or at least believe to be, inferior, is, to say the least of it, provoking, and cannot very well contribute to the best interests of the College.

Whether or not the College sends a team to the International, I hope a number of the senior boys will undertake to go, on their own responsibility. I am sure that Prof. Day, or Mr. Cummings, will spare no pains to give the class the necessary training."

KETCHEN.

"I am confident that, for any student who is interested in live stock and who contemplates entering the live stock industry in any line, a trip to Chicago will amply repay the required expenditure of time and money. Last year there were thirteen O. A. C. men at Chicago, and all expressed themselves as well satisfied with the results of the trip. At the International are gathered all the prize winners of the great State Fairs of the United States, and many of the prize winners of the great shows of England and Scotland. A knowledge of type is perhaps the hardest thing for a young stockman to acquire, and at this show the best types in the different breeds are present in such large numbers that the student mind carries away a lasting impression.

"It has now become a custom for the senior class in agriculture to spend a month visiting the best stock farms within a reasonable distance of the College, in order to study the best types in the different classes and breeds of live stock. If during this course the incentive of being a probable member of the Chicago judging team is present in the student's mind, it induces him to take a deeper interest in his work. Although, until the judging contest is placed in the hands of a committee of college men, we cannot even hope to obtain first place, yet I consider it would be decidedly a backward move not to enter a team. The sending of the team interests the whole student body in the International, and induces a number of our students to visit Chicago. The American Agricultural Colleges, appreciating its advantages, offer special inducements to their students

to visit the International, and I believe we should continue to send a judging team, if only as a means of interesting our students in this great live-stock exhibit."

F. H. REED.

"Regarding last year's Judging Contest at Chicago, I must say that to me it was the most valuable lesson I ever expect to receive along the line of live stock matters. Personally, I gained a great deal of very valuable information.

"As to whether the College gained anything, I am not in a position to say, but I firmly believe that the O. A. C. team was beaten before the contest began, and I further believe that had the contest been conducted on perfectly honorable principles, our team would have stood a few places higher in the list of competing colleges.

"The experience gained was certainly worth many times the amount of time and money spent. In fact, to anyone interested in live stock, the privilege of competing in the International Judging Contest is a privilege of a life-time, as far as valuable educational experience is concerned."

J. M. McCALLUM.

EXPERIMENTAL UNION ANNUAL
MEETING.

The three thousand three hundred and forty-five (3345) ex-students and other farmers who have been conducting experiments in Agriculture, as well as those who have been conducting experiments in Horticulture, throughout On-

tario, during the past year, are now sending the reports of their work to the College. The good reports of successfully conducted experiments will be summarised, and the summaries will be presented and discussed at the Annual Meeting of the Union to be held at the Agricultural College, Guelph, on Monday and Tuesday, the 7th and 8th of December next, starting at 1.30 p.m., on the afternoon of the 7th.

Besides the presentation of the reports of the co-operative work of the Union, addresses will be delivered by ex-students of the College and other leading Canadian and American authorities in Agriculture, Nature Study, Domestic Science, etc.

The Ladies' Sessions this year will occupy two days. An exceedingly interesting and instructive programme for these Sessions is being arranged.

A public meeting will be held in the Gymnasium on Monday evening, and the Ex-students, Students, and Officers' Annual Supper will take place on the evening following.

Arrangements have been made for excursion rates to Guelph from points in Ontario West of and from Kingston and Sharbot Lake for single fare for the round-trip, starting on Saturday, December 5th. Arrangements have also been made for a single fare for the round-trip on the certificate plan, from those places in Ontario, East of Sharbot Lake and Kingston. The excursion tickets will also permit visitors to visit the Fat Stock Show, which is to be held in Guelph, immediately after the Union meeting.

The Officers of the Union, and of the College unite in cordially inviting all persons interested in the advancement of Agriculture and of Household Economics, to be present at all of the Sessions of the Experimental Union Meeting.

For fuller particulars, address C. A. Zavitz, Secretary, Agricultural College, Guelph, Ont.

* * *

With this issue, the first of the College year, the O. A. C. REVIEW goes forward to renew its acquaintance with our old friends, the ex-students. Once more a new staff and new management appeals to you for support. We are not a wealthy corporation, we are not backed by trusts and syndicates; and it is only by the unaided efforts of the students and ex-students of the College that this paper can be made an enduring success. We know that your old love for your *alma mater* is still a dominant sentiment in your lives, and that you will not hesitate by voice, and pen, and money, to give us your heartiest support. We want you to subscribe for the O. A. C. REVIEW. It is not your subscription money we are after, though we need that badly enough, but we want to know where you are, to hear from you, and feel throughout this great body of students and ex-students of the O. A. C. that bond of sympathy that makes the whole world kin.

* * *

Students, support the advertisers in the O. A. C. REVIEW. These "ads." were not written for fun or glory—there is business in them. Business men who advertise are the most progressive. They know their business and are therefore able to supply your

wants with a bright, clean, modern, up-to-the-minute stock in every line. Business is business, and the man who advertises sells more goods, and is therefore able to handle at a lower profit than the unenterprising fossil who probably knows nothing of either business or advertising. "Small profits and quick sales" is the motto of the progressive business man of today, and smaller profits and quicker sales is what the students of this College would like to see. The above is from a strictly business standpoint; but there is another side to the question. Support the people who support us. This is only reciprocity, and reciprocity is the keynote of the em-

pire nowadays. The merchants and business men who advertise with us are the people who rejoice when we rejoice, and weep when we weep; they back us in our sports, and heart and soul are with us in our every move. For that reason, if for no other, they deserve our support and patronage in every way. Therefore, go through the "ads." in this number, look them over carefully, and we venture to assert your careful investigation will be amply repaid. From the business standpoint, from the standpoint of sentiment, and for the prosperity of the O. A. C. REVIEW, and all interested therein, patronize the advertisers in the REVIEW and—grow rich.

Our Old Boys Page.

A. Fairweather, '03, visited the O. A. C. recently.

R. Wilson, '00, is farming in Manitoba, and is now married.

Chas. Stagg, '91, also of Brockville, is farming outside of the town and is doing well.

G. H. Hadwin, a former student, is an enterprising live stock agent in the West.

Mr. J. D. Murphy, '05, is now working on his farm at home in Sussex, N. B.

Mr. E. Leofgren, '06, has gone to Rocton, Ill., to take a good situation in a large dairy there.

John Derbyshire, '91, of Brockville, is in the dairy business with his father. He is town councillor at present.

Herb MacCrae, '91, formerly of Brockville, is now an architect in Washington D. C., U. S. A.

R. H. Henderson, '95, who is farming at home near Rockton, Ont., visited the O. A. C. this summer.

W. Linklater, '00, has been appointed manager of the Correspondence Agricultural College, Sioux City, Iowa.

C. W. Forbes, '99, is solving the mysteries of scientific agriculture at Grand Coulee, Assa. He wishes to be remembered to the boys.

A. Lehman, B. S. A., Ph.D., '85, has just been appointed, for a second term of five years, as chemist for a firm in Mysore, India, and has just built a fine new laboratory.

A. M. Soule, '93, who is now director of the Experimental Station at Knoxville, Tennessee, was here on a visit lately.

A. J. MacKay, '04, and A. W. Mason, '03, have returned after two years' absence, to take up second and third year work respectively.

F. A. Wilkin, '92, who has since graduated in engineering at McGill, is employed in the construction department of the C. P. R. out West.

T. G. Raynor is now in the Maritime Provinces, working in the interest of the Farmers' Institutes. His tour will extend over three months.

A. C. Wilson, '97, was married recently. He has a fine position at Aurora, Ill., in connection with the C. B. and I. railroad.

R. D. Craig, '98, B. S. A., F. E., is wrestling with the problems of forestry among the mountains of California. He will likely remain there through the winter.

Mr. R. H. Reynolds, '04, is now head poultry manager at Dentonia Park. "Buck" is an Associate of the O. A. C., and is fast gaining a reputation as a poultry man. The boys wish him success.

R. J. Phin, '82, is at Moosomin, Assa., and is one of the most progressive farmers in the district. A representative of the REVIEW had the pleasure of staying all night at his ranch this Summer.

M. Geddes, '02, who was married this Spring to Miss Waters, of Guelph, has moved from Winnipeg to Calgary, to take charge of the branch office of the *Farmer's Advocate* at that place.

Dr. Hans Streit, who, for a short while, filled the office of Assistant Bacteriologist at the O. A. C., has now returned to his home at Zimmerwald, Switzerland, where he is practicing veterinary surgery in partnership with his father.

Mr. T. D. Jarvis, '00, B. S. A., Fellow in Biology at the O. A. C., made a tour of New Ontario this Summer, as biological expert in a party of Government employes who were sent up to report on the possibilities of that region.

Malcolm Ross, B. S. A., '98, who is assistant manager of the Biltmore Estate, North Carolina, is just putting in a small bacteriological laboratory in connection with the dairy at that place.

Mr. W. D. Albright, '05, has been recently appointed to the position of assistant editor of the *Maritime Farmer*. Mr. Albright had the honor of heading the examination list in his first year, and has already proven himself a journalist of no mean ability.

Mr. G. I. Christie, B. S. A., of the '02 class, is now assistant in Agronomy at the Iowa State College, and also business manager of the *Iowa Agriculturist*, a monthly periodical published by the Agricultural Club of

that College. He writes:—"All is going well with the boys here. Rutherford likes his work well. Klinck and Atkinson are taking the course here this year.

R. MacDonald, another ex-student, is mining near New Denver, B. C. He is one of the heroes who surreptitiously dug up the hated "silage plant" under cover of darkness, and threw it all over the garden fence, judging that it held too prominent a place in their bill of fare.

Bert Eddy, a former student of the O. A. C., is farming at Hilton, St. Joseph's Island. He supplies the steamboats with cream, milk, ice, and chickens. He has the finest farm and residence on the island, and is secretary of Farmers' Institutes in that district.

J. C. Harris, '92, of Silvertown, B. C., took up a tract of land which he named the "Bosun" Ranch. While working it, he accidentally stumbled onto a silver-lead mine, which he has since sold to an English company at a good figure. He is married and has two children.

Mr. W. B. McCallum, of the University of Chicago, son of the late Bursar McCallum, of the O. A. C., is spending a few days visiting his mother and other relatives in the city. He has just returned from New Mexico and Southern Arizona, where he has been conducting an investigation into the distribution of forests, having been sent there by the Department of Botany, of the University of Chicago, on that mission.—*Guelph Mercury*, Sept. 18th.

R. E. Gunn, '04, of Beaverton, Ont., the first one to take the Certificate in Agriculture at the O. A. C., intends to take a course at the Veterinary College, Toronto, this winter. He is fast pushing ahead into the rank of breeders of pure-bred stock. He writes, "I have three horses now that are winners, and one old cow that also has a record and a bad reputation."

To the following happy couples the REVIEW extends the best wishes for the future:—

CASSIDY—DOHERTY.

The marriage of Miss Antoinette Dolores Cassidy, eldest daughter of Dr. and Mrs. J. J. Cassidy, of Toronto, and Mr. Manning William Doherty, manager of the Guelph Foundry Co., and second son of Mr. William F. Doherty, of Eglinton, was celebrated by Rev. Father L. Brennan in St. Basil's Church, Toronto, this morning, at half past ten.

Mr. Julio Panelo, of Buenos Ayres, but at present a student at the Guelph Agricultural College, was best man.—*Guelph Mercury*, Sept. 9.

Mr. M. W. Doherty, M. A., B. S. A., '95, who is better known to the boys as Prof. Doherty, was, for the past few years, until recently, Assistant Professor of Biology at the O. A. C., a favorite of the students, and a staunch champion of single blessedness. His views have changed. May they never change again.

ELDERKIN—BLACK.

One of the prettiest weddings of the season took place at 5.30 Wednesday afternoon at "Elmwood," the residence of Mr. and Mrs. G. Rupert Black, when their eldest daughter,

Florence, was united in marriage with Mr. DeWitt T. Elderkin, by the Rev. Arthur Hockin, assisted by Rev. Dr. Douglas Chapman.—*Amherst Daily News*, Sept. 24.

Mr. D. T. Elderkin, '03, is one of last term's graduates, and has been in turn Business Manager of the REVIEW, Agricultural Editor, and Editor-in-chief. He now holds a high position in the office of the *Live Stock Commissioner*, Toronto.

CARROLL—JULL.

The home of Mr. Ed Jull, Ranelagh, was, on Sept. 2nd, the scene of a very pretty home wedding, when Miss Rosena Jull, eldest daughter of Mr. and Mrs. Ed. Jull, was married to Mr. Wm. Roy Carroll, son of Mr. and Mrs. Jas. Carroll, of Norwich. The ceremony was performed by Rev. G. W. Calvert, of Welland. After refreshments, the bride and groom left for Hamilton and Toronto, where they will spend some time, after which they will return to their future home, near Norwich.—*Norwich Gazette*.

Mr. Carroll is also a well-remembered member of the class of '03, and is the recipient of an O. A. C. Associate Diploma.

Watch out for good plays at the Opera House this season. Manager Higgins is making an effort to supply only the best kind of amusement and instruction, and so far has certainly made a success in his efforts. A few plays in a season will do a person no harm, but possibly a lot of good.

On entering our new duties as Personal Editor of the O. A. C. REVIEW, we extend hearty greetings to all the ex-students, and all those who have, in the past, been officers or instructors

in this institution. We hope that in these pages much will be found of interest to those who have been in connection with the College in days gone by; and expect their co-operation in sending to us from time to time, any items of news which prove of value to their fellow ex-officers and ex-students.

We have decided, for several reasons, to depart from the time-honored custom, when making mention of any ex-student of the O. A. C., of giving the year in which they entered College, instead of giving the year in which their class graduated. In these days of class pins, class yells, and class caps which particularly emphasize the date of the year of graduation, we have thought it advisable to change from the old practice, and give the date of class graduation instead of the date of entrance into the College.

Exchanges.

We take great pleasure in sending this, our first issue of the season, to all our contemporaries which we have exchanged with in the past, and hope that we may continue to do so in the future. To all those who exchange with us, and to those who have not done so, but would like to, the REVIEW extends a hearty welcome.

A communication has been received from Cornell University, Ithaca, N. Y., stating that the students there are starting an agricultural magazine. We are sure that it will prove a welcome addition to our exchange list.

College Reporter.

On September 15th the College year of 1903-04 opened, and another session of College life began. As usual, students came from far and wide, and this term the O. A. C. enjoys the largest enrolment in its history. Men are present from all parts of the world, giving to the College a cosmopolitan nature, unlike that of most similar institutions.

There are a number of reasons for the growing popularity of the O. A. C. The principle one is found in the excellent class of men who go out from here each year, and who are the best criterion of the institution's worth. Institutions, as well as individuals, are judged by what they do, not by what they say. However, our efficiency is only one of the reasons. A second one is found in the fact, that politicians recognize that the awakened people of Ontario will not allow the O. A. C. to be made a political football. A third reason will be found in the better and more extensive equipment. Not only has the regular course been benefited by government grants and private donations, but through the generosity of Sir Wm. MacDonald an additional course has been instituted. Ladies now may receive an excellent education in Domestic Science and Household Economy, and Nature Study. The MacDonald Institute satisfies a long-felt want, and will usher in a new era of prosperity and happiness for the whole institution.

Our College is now enjoying, and is likely in the future to enjoy, increased prosperity. It is a matter of pride for

the people of Ontario and for O. A. C. men especially, that such is the case. Let us, as students, discard undue year spirit, and develop a deeper and stronger college spirit. Let us bend our energies toward raising our institution, and our profession, to a higher place in the estimation of the world at large.

Our Literary Society is again in working order, and under able management gives promise of doing good and efficient work.

Last year, after considerable discussion, the constitution was changed to allow of the formation of a fourth sub-society, consisting of those members eligible for advancement, but not voted into the two senior societies, whose members were limited in number to thirty-five. The plan was an experimental one, and would have met the requirements had sufficient interest been taken.

This year, it was thought wise to follow a different course. At a meeting of the society, held Sept. 29th, it was decided that the Junior Society should consist of first year students only, and that all other members be enrolled in one or other of the two Senior sub-societies, which will now have about fifty-five members each. With this arrangement the average attendance of these societies will be increased, and it is hoped that all members will obtain the maximum benefit.

We should like to impress upon the students, the new men especially, the advantages which the Literary So-

ciety affords. In order to make the best of one's college course in after life, it is necessary that we be able to express our thoughts clearly and forcibly upon the platform. To accomplish this end, we must at some time receive training. The best time is now, and the best *place* is in the Literary Society, among sympathetic fellow-students. Do not neglect it, fellows. It is an opportunity you will not have again.

The officers for the term are:

FOR THE GENERAL SOCIETY.

Hon.-President.....Prof. Lochhead
 President.....J. C. Readey
 Secretary.....H. Stayner
 TreasurerD. Jones

FOR THE ALPHA SOCIETY.

PresidentT. B. Henderson
 Vice-President.....C. C. Thom
 Secretary-Treasurer.....G. G. Whyte

FOR THE DELPHI SOCIETY.

President.....H. L. Fulmer
 Vice-President.....J. E. Howitt
 Secretary-Treasurer.....C. A. Marshall

FOR THE MAPLE LEAF SOCIETY.

President.....J. W. Kennedy
 Vice-President.....H. A. Culham
 Secretary-Treasurer.....A. W. Barrett

THE Y. M. C. A. OF O. A. C.

The enthusiastic progress that has marked the advance of Young Men's Christian Associations throughout the past year has demanded the attention of the thinking world. Beside the increase in the total number of societies in Canadian and American colleges, there has been a marked increase in the enrolment of the old societies, due to the energy expended in

developing the several departments of the societies.

In this progress the Y. M. C. A. of the Ontario Agricultural College has kept apace with its sister associations in other institutions, and has even outstripped many of them. The enrolment for 1903 promises a substantial increase on that of last year. This increase in numbers is a certain evidence of the increased interest in religious matters that is characteristic of our College men of this year. We have often heard the summary of human development quoted by many of our best writers and thinkers, viz., that true and perfect development includes physical, intellectual, and religious or spiritual growth. It is precisely this three-fold development that characterizes the ideal of nearly every O. A. C. man, hence the interest manifest in our society, as well as in our routine work and recreation.

The work of the several departments, in the past year, has met with gratifying success. Increased interest bespeaks the appreciation on the part of the students of the efforts of all departments. The Sunday morning Bible class, led by Prof. J. B. Reynolds, has been very helpful. In fact, praise falls far short of conveying to the Professor our thanks and assurance of our hearty appreciation of his untiring preparation and explanation of each Sunday's lesson. The music committee, too, is trying to make this meeting more attractive, by supplying special music for each service. The studies for the ensuing year are, "Studies in the Life of Christ," by H. B. Sharman, based on "A Harmony of the Gospels," by Stevens & Burton.

This study is intended to give the faithful student a comprehensive view of the Gospels. Another interesting phase of the Society's work is its Bible classes held Sunday morning at 9 o'clock in different rooms throughout the residence. This department of College work is receiving special attention in all the College societies this year, since it is felt that the department of Bible study is so important to spiritual growth. The missionary department, under the able management of J. C. Readey and his committee, is doing good work. It is through the work of this department of Christian work that we are enabled to more clearly discover the principles of Christianity, viz.: "Love to our God, and proper relationship to our fellow-men." At present great interest is being taken in India College missions.

In all these departments, our efforts have been repaid with a good share of success, but still we press toward a higher standard. The day has passed when Y. M. C. A. work was supposed to furnish employment for a few harmless "innocents" among the students. College men see that spiritual growth is a vital issue of college life; therefore, our strongest men are taking a deep interest in it. Three potent circumstances that have facilitated the progress of our association, during the past year, in this institution might be noted here. Our meetings are now held in the comfortable auditorium of Massey Hall, instead of in our incommodious meeting room previously used. Our Y. M. C. A. work is carried on in perfect harmony and good feeling, and to a great extent, co-operation with the

Athletic Association. In fact, to differentiate the societies into Y. M. C. A. men and members of other societies would be almost impossible, since most of our leading athletes and literary men are leaders of the Y. M. C. A. Besides, with the encouragement gained from the hearty co-operation of all other college societies goes the ever-cheering fact that we are an integral part of that mighty body of college students that has as its aim the highest development of its members.

"Nor can it suit us to forget
The mighty hopes that make us men."

We are pleased to note the success of the students and ex-students of this College in the different Live Stock Judging Contests which took place during the past season. This unvarying success testifies more eloquently than argument that the training received here is thorough and practical. Let the ignorant cant; the facts will tell.

AT TORONTO.

The successful competitors in bacon hogs were:—1. C. I. Bray; 2. R. E. Gunn; 3. C. M. MacRae; 4. C. I. Bailey. In sheep—2. J. Gunn; 3. H. S. Arkell; 4. R. E. Gunn. In beef cattle—3. R. H. Mayberry. In dairy cattle—1. C. I. Bray; 2. C. F. Bailey; 3. R. K. Monkman; 4. H. H. LeDrew. In horses—1. A. S. Guardhouse; 4. C. M. MacRae. Not bad for the O. A. C.

AT LONDON.

Not so many of our boys had entered in the competition. J. O. Laird got first place in sheep and third in beef cattle; and D. F. Stewart, third in dairy cattle.

AT OTTAWA.

Horses—2. H. Barton; 3. H. S. Arkell; 4. J. H. Stark. Beef cattle—2. J. H. Stark; 3. J. Ferguson; 4. W. C. McKillican. Dairy cattle—1. J. Ferguson; 2. H. S. Arkell; 3. H. Barton; 4. G. B. Rothwell. Sheep—2. H. Barton; 3. W. C. McKillican; 4. J. Ferguson. Swine—1. J. Ferguson; 2. G. B. Rothwell; 3. H. S. Arkell; 4. H. Barton.

Even away out in the West our boys made themselves known as expert judges. At Winnipeg, C. L. Strachan captured first place in Bacon Swine and second in Dairy Cattle. At Brandon, Mr. J. C. Readey nearly swept the list of first places, getting first in Heavy Horses, Light Horses, and Dairy Cattle, and being beaten only in Beef Cattle. For securing the highest number of points Mr. Readey received the *Farmer's Advocate* gold medal, valued at \$25.00.

MACDONALD GIRLS' NOTES.

The prosperity of a nation depends upon the health and the morals of its citizens; the health and morals of the citizens depend mainly upon the food they eat and the homes they live in. Realizing this, courses in Domestic Science have been started in many of the agricultural colleges in the States, and have been found to be very successful. So in 1901, Sir William Macdonald, of Montreal, with characteristic liberality and public spirit, gave one hundred and seventy-five thousand dollars to provide buildings and equipments for instruction and practice in Nature Study, Domestic Science,

and Manual Training at the Ontario Agricultural College. The course is intended for teachers, farmers' daughters, and others.

The Domestic Science course opened September the 14th, with an attendance of nearly twenty girls. As yet the Macdonald Buildings are not completed, so classes are held for the greater part in Massey Hall. The staff of teachers is not large, but it is evident that quality was aimed at in the selection. W. H. Muldrew, B. A., D. Paed., is the Dean. Dr. Muldrew is instructor in Psychology, Pedagogics, etc. Miss Watson, Lady Principal, is a graduate of Teachers' College, Columbia University. She is, the girls all agree, certainly the right person in the right place. Miss Lyman, graduate of Vassar, and also of McGill, is instructor in Science—lectures and laboratory work in Chemistry and Biology. Miss Given, instructor in Domestic Science, etc., is a graduate of the Ontario Normal School of Domestic Science and Art.

This Science of Housekeeping and Cooking is a comparatively new one, and until recently was not looked upon with much favor by even those it is intended to help. However, lately it has met with great approval, and soon no school or college will be complete without a course in these subjects. At this College two courses are being given, one for those who wish to train for teachers, and one for those who do not intend to teach, but who wish to have a thorough training in the theory and practice of Housekeeping.

The subjects taken up are numerous. The sceptical say that some of them

are unnecessary, but if these people would but attend a lecture or so on the criticized subjects, they would soon see the bearing each has on Domestic Science or Housekeeping. Only that branch which bears specially on these subjects is taken up. For example, chemistry is taken up in its relation to food, laundry work, cleaning, fuels, dyeing, ventilation, etc. The aim is

to give each student a broad and thorough training in Domestic Science, so in order to do this, some outside subjects must be taken.

The girls are taking up the work earnestly and enthusiastically, and will no doubt make this, the first year of the Macdonald Institute, an historic and successful one.

Athletics.

SUMMER SPORTS.

During the summer a Cricket Club was formed, which played five games, winning all. The first game was with the town, and resulted in a victory for the College by a score of 73 to 49.

The next game with the town team resulted in an easy win for the College.

A few weeks later the College went to Galt, and in a close game defeated that town by a score of 79 to 69. The following represented the College:— T. B. Rivett; Prof. Harrison; A. J. Logsdail (captain); R. G. Baker; A. G. Wheelwright; Percy; R. Howitt; McLaughlin; N. Rudolf; R. E. Sneyd; H. S. Stayner.

Galt was again defeated on the College Campus a few weeks later; while the fifth victory was accomplished in a game with the Sons of England, of Hamilton.

A good Association football team was also formed. The G. C. I. were challenged and beaten by a score of 1 to 0. And the City team were also beaten 4 to 1.

The officers of the Athletic Association for 1903 are as follows:

Hon. President—W. P. Gamble, B. S. A.

Hon. Vice-President—S. S. Springer, Esq.

President—A. B. Cutting, '04.

Vice-President—W. C. McKillican, '05.

Secretary-Treasurer—H. R. MacMillan, '06.

Executive Committee—Carpenter, '04; Fansher, '04; Granel, '05; Bracken, '06; Weir, '06.

Hockey Manager—F. H. Reed, '05.

Football Manager—W. G. Milligan.

Football Captain—J. Bracken, '06.

FIELD DAY.

The success of the Annual Sports has been the constant aim of the executive of the Athletic Association; and this year they are to be congratulated upon the prompt manner in which the events of the day were proceeded with.

Following is a list of the events, with the winners:—

Standing Broad Jump: MacRae, 9 ft. 4 in.; Broderick; Granel.

Half Mile Run: Lennox, 2 min. 24 sec.; Reed; A. Smith.

Putting 21 lb. Shot: Granel, 28 ft. 2½ in.; Bracken; F. Panelo.

Running Hop, Step, and Jump: Dewar, 38 ft. 2½ in.; Broderick, Middleton.

One Mile Walk: Crane, 9 min. 45 sec.; Twigg.

Running Broad Jump: Dewar, 18 ft. 8½ in.; Hutcheson, Middleton.

100 Yards Dash: Dewar, 11 sec.; MacRae; M. Baker.

Running High Jump: Rudolf, 4 ft. 8½ in.; Avila; Middleton.

Quarter Mile Run: Lennox, 60¾ sec.; Hutcheson; Rivett.

Hurdle Race: McKillican, 19¾ sec.; Middleton; Rudolf.

220 Yards Dash: Dewar, 26 sec.; MacRae; Rivett.

One Mile Run: Lennox, 5 min. 40½ sec.; Smith.

Putting 16 lb. Shot: Granel, 32 ft. 4 in.; Bracken; F. Panelo.

Putting 10 lb. Shot (under 140 lbs.): Barber, 27 ft. 6½ in.; Middleton; Bustamante.

Three-legged Race: Lennox and Reed; Hutcheson and Duncan; Broderick and Culhan.

Jockey Race: Hutcheson and Duncan; Tucker and Tennant; Bracken and MacKenzie.

Sack Race: Smith; Reed; Duncan.

Obstacle Race: Scott.

Team Race: Fourth Year; Second Year.

Slow Bicycle Race: McCormick; Mulloy; Colwell.

Kicking Football: Stewart, 149 ft. 8 in.; McMillan; MacRae.

Hose Reel Race: Fourth Year.

Tug-of-War: Second Year.

Consolation Race: Butler.

The gold medal, awarded for the championship, was won by W. R. Dewar, who secured 21 points. W. J. Lennox was second place with 15 points; while A. D. Broderick was First Year champion. The non-championship events were well contested. The Hose Reel teams, by dint of frequent practice, worked fast and systematically, all proving to be competent firemen. The Tug-of-War between the Juniors and Sophomores, although won by the latter by two straight pulls, was close and exciting. Both teams fought strenuously, the result practically being determined in the "drop." To stimulate interest in this event, the Sophs. donated a challenge cup for annual competition.

The Tug-of-War settled, an adjournment was made by everybody to the Gymnasium. Here President Cutting read out the names of the winners, each of which was heartily cheered by the men of his year. The prizes were awarded by Dr. Mills, whose remarks were suitable to the occasion, while Mrs. Mills gracefully presented the badges.

ATHLETIC SUPPER.

The Annual Athletic Supper, which took place in the College dining hall in the evening, brought to a fitting conclusion a most successful and pleasant day. The chair was taken by A. B. Cutting, President of the Association. The toast list, to which ample justice was done, follows:—

The King, A. B. Cutting; the O. A. C. A. A., Dr. Mills, W. C. McKillican; the Staff, J. C. Readey, W. P. Gamble, B. S. A.; the Ex-students, H. R. MacMillan; L. H. Newman,

B. S. A.; the Macdonald Institute; C. I. Bray; Dr. Muldrew; the Ladies: J. Pabelo; J. B. Fairbairn; the Press: Prof. Lochhead; H. K. Cockin, Esq.

The musical programme was contributed to by Miss A. S. [unclear] and Messrs. D. Weir, M. C. [unclear], V. Aleman, and Stayner; while Miss Georgia Mills presided at the piano. The singing of the National Anthem concluded the evening's entertainment.

The thanks of the Athletic Association are due to Mrs. Craig for the excellent repast which she had prepared, and for the able manner in which she carried out all the details connected with the supper.

— VARSITY SPORTS.

Several from the College attended the University of Toronto sports held on Oct. 9th, but there was only one competitor from the College. This was Granel, who entered for the putting of the 16 lb. shot. Although beaten, he made a strong throw—33 ft. 3½ in.—and should be commended for his pluck in entering against such strong competitors.

— FOOTBALL.

Following last year's policy, the executive committee of the Athletic Association decided to enter a team in the Junior Series of the O. R. F. U. Two games are to be played with Galt, the winner, determined by the greatest number of points scored, to play the winner in the Hamilton district. There are very bright prospects of a successful season. All those who want to play the game should turn out regularly on the field. This will give the team the practice they need; while for the Inter-year games more

men will be required than at present don Rugby uniform.

GALT VS. O. A. C.

The O. A. C. played an exhibition game with Galt on the latter's ground on Saturday, Sept. 26th, which resulted in a victory for the College by a score of 15 to 10 points, which of course will not affect the final standing of these clubs.

Both teams showed a considerable lack of familiarity with the new Burnside rules.

Galt kicked off, and by fast following up managed to score off a muff by the College back division. The goal was not converted. Score: Galt, 4—O. A. C., 0.

After this the College team got down to work and by fast work and quick judgment carried the "red and blue" to victory. We had good right to feel proud, for had we not beaten that famous football town on its own grounds, that had not often seen defeat from a visiting team?

GALT VS. O. A. C. AT GALT, OCT. 10TH.

The first game of the O. R. F. U. Junior Series between Galt and the O. A. C. resulted in a tie, the score being 14—14. It proved to be an exciting game, both teams showing better form than in the exhibition game of Sept. 26th. The score at the end of time was 14—14; and the referee decided that extra time should be played. O. A. C. played under protest, since Rule 18 of the Constitution states that, "When two clubs only are in a district, two games shall be played, the aggregate number of points scored by both teams, the winner shall be the team scoring the most points in the two games."

In the first ten minutes of extra play, no score resulted; in the last ten minutes Galt scored a touch-down, which Egan converted; the final score being 20-14 in favor of Galt.

Galt kicked off, the kick being returned by Bracken well into Galt territory. A down followed, Galt's kick being returned and muffed, and in the mix-up, McKillican secured the ball and went over the line. Bracken converted. Score O. A. C. 6-Galt, 0.

Galt got the ball on the return of their kick-off, and tried a series of runs and bucks in the centre of the field with very little gain. They were finally forced to kick, McFayden got the ball, kicked over Galt goal-line, where on a muff by Galt, Warner fell on the ball, the goal being converted. Score, O. A. C., 12-Galt, 0. Cooper returned the kick-off, and McKillican got in a splendid tackle, keeping the ball in Galt territory. Bracken got the ball a moment later and punted over the dead ball line. Score, O. A. C., 13-Galt, 0. A few minutes later Bracken dropped the ball over the dead ball line again. This ended the scoring in the first half, Galt keeping possession of the ball as much as possible. Score at halftime: O. A. C., 14-Galt, 0.

After the O. A. C. kick-off, Galt tried to keep possession of the ball in spite of the strong wind blowing in their favor. On a run around the end they carried the ball into College territory and Ducker kicked over the O. A. C. dead ball line. Score, 14-1. Baker kicked the drop well up the field against the wind; it was returned by Ducker to Bracken, who in a beautiful run carried the ball out of danger.

The College lost ground in the open play which followed, and Bracken was finally forced to rouge. Baker got yards in the return of the drop and punted well up the field. Galt again tried the running and bucking game, this time successfully and succeeded at last in forcing O. A. C. to make a safety touch. Score, 14-4. Open play followed, Galt gaining on the exchange of punts and securing another safety touch. Galt again gradually forced the play and forced O. A. C. to rouge. On a muff by the College, Galt held the ball ten yards from their opponents line, and by persistent bucking succeeded in scoring. The goal was converted. Score, 14-13. A few minutes later the College rouged again, making the score 14-14 at end of time.

The teams lined up as follows:—

| O. A. C. | | GALT. | |
|------------------|----------------|-----------------|--|
| Fairbairn..... | Full Back..... | Robarts | |
| McFayden..... | |Ducker | |
| Bracken..... | } Half Backs |Whitney | |
| Cooper..... | |Christman | |
| Baker..... | Quarter..... |Egan | |
| Elderkin..... | Snap Back..... |Kempthorne | |
| McKillican..... | |McFarlane | |
| Dewar..... | } Forwards |Hunt | |
| Warner..... | |Lyons | |
| Bartman..... | |Jackson | |
| Carpenter..... | |Clarke | |
| Nancekivell..... | |Twaits | |

Referee—Geo. Ballard, of Varsity.
Umpire—Max. Yeates, of Varsity.

Christman and Egan did excellent work for Galt; while Bracken and Warner played star games for College.

At a meeting of the sub-committee of the O. R. F. U. held in Toronto, the O. A. C. protest was sustained.

O. A. C. VS. GALT.

On Thanksgiving afternoon the College team put it all over Galt in the second match of the O. R. F. U. junior series to the tune of 27-2.

The College men outdid their own good play at Galt, and showed up both business-like and good-natured all through the game. The play was in Galt's ground for the first half, and Bracken made a beautiful punt over the bar, which Warner touched, and Bracken converted for 6, all in five or six minutes after the start. For the rest of the half, the fight was hot around Galt's goal. The Burnside rule showed up to great advantage in the excitement afforded the spectators. The chief feature of these rules is the lining up of the men and the snapping back of the ball after it is downed, which prevents the endless scrimmaging and body work which made the old game so tedious. When half time was called the O. A. C. had 12 points to an egg for Galt. In the game at Galt the O. A. C. had 14 to the good in the first half. When the whistle blew for the second half, Galt changed ends with some confidence that good fortune would come their way in the second half, as it did at home. Disappointment was handed out by our men, however, who assumed the aggressive and kept them busy defending their own touch line. Little Cooper and Warner were each put among the rooters to cool, but Galt's hopes even then were vain, and 15 points were added to the 12. Galt's hard work and splendid pluck were rewarded by one ball over the bar, scoring 2.

The Galts show a good combination and are perhaps a better averaged team, but they are too apt to watch for the other fellow and lose their chances. The tackling on both sides was good, but the College boys were quicker in times of need. The way Captain Bracken was twice carried

over the line for a try, and the work of Dewar in wriggling over a similar score at the end, are instances of this. Galt got a try at the end of the first half, but it was disallowed for offside. In some instances Galt showed better combination after the snapback than the O. A. C. backs, who could have got in more runs by more extended combination, instead of leaving nearly everything to Bracken's kicking. Squirrell gave the captain able assistance.

The best spirit was shown on both sides, especially by the losers on their departure. Both sides speak highly of the umpire and referee, and their quickness, coolness, and impartiality were warmly commended. The O. R. F. U. have left nothing undone to ensure good management of the games.

| O. A. C. | | GALT. | |
|-----------------|--------------|-------|------------|
| Bartman..... | Back | ..... | Dietrich |
| Baker..... | } Halves | ..... | Christman |
| Bracken..... |  | ..... | Egan |
| Squirrell..... |  | ..... | Ducker |
| Fansher..... | Quarter..... | ..... | Twaits |
| Elderkin..... | Centre..... | ..... | Hunt |
| Warner..... | } Wings | ..... | Buchland |
| Carpenter..... |  | ..... | Lyons |
| Cooper..... |  | ..... | MacFarlane |
| Dewar..... |  | ..... | Jackson |
| McKillican..... |  | ..... | Whitney |
| McFayden..... |  | ..... | Kempthouse |

Referee—Geo. Ballard, Varsity, Toronto.
Umpire—Max Yeates, Varsity.

Stratford and Guelph O. A. C. are winners in their districts respectively. It is likely these two teams will be drawn against one another in home and home games.

In the races held in Guelph on Thanksgiving Day, the College was not so successful as in previous years, possibly because of the little training that our men did, and because the time made in all the races was nearly up

to the record. The best that we were able to do was to get fifth place in the 10-mile cross-country run. This place B. S. Pickett captured, going the distance in about ten minutes less than the winner did last year. C. I. Bray also ran in this race, T. C. Barber in the 5-mile open, and R. U. Crane and A. Aleman in the 10-mile walk.

The following is a list of Guelph merchants who kindly gave donations, prizes, and cash towards obtaining prizes for our Field Day:—

J. A. McCrae, Jackson & Son, Savage & Co., J. Pequegnat, Thornton &

Douglas, Neil the Shoeman, Wood's Fair, Waters Bros., Pringle, W. H. Beattie, Anderson & Co., J. M. Duff, R. Hackney, C. Burgess, Lee Wing, W. C. Goetz, G. L. Higgins, George Williams, F. Hurndall, Law, the Druggist, W. A. Clarke, Dr. D. M. Foster, Chas. Nelles, Hugh Guthrie, H. Lochwood, Dr. Coghlan, John Davison, A. F. H. Jones, Geo. Chapman, The Mercury, C. W. Kelly, J. A. Scott, Kandy Kitchen, G. B. Morris, L. N. LaFontaine. MacLaren & Co., R. E. Nelson, Jeffries & Roberts, W. O. Young, C. Kloepfer, Alex. Stewart, A. B. Petrie, J. E. McElderry, D. E. Macdonald, Law, the Knitter.

Locals.



"The Biological Professor
To seek for frogs and fungi goes,
Successful (?) is he in his search,
As, indeed, our artist shows.

But microscope and key reveal
Great changes by the load-full,
The frogs are botanized as toads,
The fungus as a toadstool.

The moral you can plainly see :—
Always use old Spotton's key.

A Senior's description of a tamarack:

"A deciduous evergreen."

"Reflections on Religion," by Raby, being a reliable study of the "Jewish Law."

The Ornithological Society expressed great surprise when the Crane beat the Gander in the one-mile walk.

On Field Day one of the M-c-o-a-d G-r-s was heard to remark:—"Broderick," "who is he,—is he engaged."

What does the Isthmus of Panama join?

Answer:—"The Mediterranean and Red Seas.

Prof. Dean—"Where did the first cow hale from that came to America?"

Mr. Alleman—"I do come from the Argentine Republic."

Prof. of Agriculture—"What kind of an egg is a queen bee hatched from."

"A double-yoked one."

"Hutchy" entered himself for the three-legged race. He is to be congratulated on his originality; we hope he may win.

Prof. of Agriculture—"Tell me what would happen if you opened a hive in early spring."

McKinnon—"It would be apt to sweat."

Overheard on Sport's Day:

Announcer—"The next event will be the quarter-mile run."

Freshman—"Is it a bicycle or a running race?"

Another "Didn't know it was loaded" fatality.

The absolute failure of the class in German to express in idiomatic English, what "geladenen" was intended to mean.

Prof. of Decimals—"Explain the contracted method for multiplying decimals."

Greenshields—"That's when I get all balled up."

The Macdonald girl of the future will be in as great demand as the O. A. C. grad. of to-day—for Dr. Muldrew pictures them in after life walking hand in hand.

Our illustrious Seniors of the Horticultural Option have indeed a conglomeration of names. We have a Baker and a Barber, a Pickett, a Rivett and a Cutting.

Herr Pohnl's reasons for placing No. 3 pig in first place:—"I place that pig first because of its beautiful face, its fine hair, its soft pink skin, and its white teeth."

Prof. Harcourt—"We obtain alcohol from starch, rags, and sugar. From what other source do we obtain it."

Mr. Lubeaur—"From Sleeman's."

Prof. Cummings, during a lecture on "Swine of Beacon Type:—"Now, boys, will you please make a ring round these animals."

Herr P-h-l, with his opera-glasses, remained in the middle.

President Mills' delight at seeing the boys all back on the morning of the first roll-call was very apparent by his initial remark:—"Now, boys, answer your names whether you are present or absent."

Prof. Lochhead, in Entomology:—"Mr. Murray-Wilson, how do your jaws move?"

Murray-Hyphen-Wilson:—"Down."

Prof. Lochhead:—"And up occasionally, eh?"

The bold attempts of the Freshies to make themselves heard at the Y. M. C. A. Reception resembled very realistically the volume of sound (?) made by a group of young goslings.

1st Year Entrance Examinations.

EXTRACTS.

In English—Question, compare the following:—Ill, etc.

Answer, by bright Freshie:—"Ill, dying, dead."

It is rumoured that our Potent, Grave, and Reverend Seniors have decided upon the walking stick as a class emblem of "the Dignity of their Calling."

Some who are deeply interested advise a hoe, because of its greater "utility," and it is not so horribly English.

"Early bacteriologists had a very crude idea of nomenclature; hence they described the different forms of bacteria as billiard balls, cigarettes, and cork-screws; from the use of which terms we might easily infer the habits of many bacteriologists."—Exit Prof. of Bacteriology.

New Books.

(1) "The latest Styles in Headgear and how to wear Them."—by Raby.

(2) "The mute study of Junior Years."—by Rothwell.

(3) "Hints on Housekeeping."—by Tommy Atkins.

(4) "Third Year 'Brag' and how to obtain it."—by Hoodless.

(5) "Sticks and how to carry them"—by Buchanan.

(6) "Rapid muscular development"—by Rudolf.

Our College Euclid.

Definitions:—

(1) All flats are not the same flat.

(2) Boarders on the same flat are equal to one another.

(3) A double room is that which hath existence, but no magnitude.

(4) All other rooms being taken, a double-room may be further divided.

(5) The Resident master has magnitude, but neither position nor new shoes.

(6) To one coming home late at night, a curve is the straightest line from car to residence.

(7) Any two meals are less than one square feed.

(8) A Macdonald girl and College Boy will go side by side any distance and may not meet.

(9) If the dispute between one student and the Bursar be equal to the dispute between another student and the Bursar, then shall the monthly bills of the students be equal. For, if one bill be the greater, then the other bill is less than it might have been, which is absurd.

(10) A straight line for the kitchen is terminated at one end by the Resident Master, but if the line be produced it will meet our Lady Matron.

Prop. 1. With the Macdonald girl still an unknown quantity, to describe a square meal on any given table.

To be done for next lecture.

List of New Books received at the Library during July and September, 1903.

Timber Physics and Timber Pines, B. E. Fernow; The Chemical Changes and Products of Fermentations, Plimmer; British Lepidoptera, 3 vols., Tutt; R. L. Stevenson, Cornford; Thomas Henry Huxley, Clodd; Alfred Tennyson, Lang; Colonial and Camp Sanitation, Poore; The Book of Corn, Myrick; Alpine Flowers for Gardens, Robinson; Irrigation Institution, Mead; Applications of Physical Forces, Guillemin; The Scientific Memoirs of Huxley, Foster and Lankester; The New Book of Poultry, Wright; Economic Entomology, Smith; The Hog in