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The O. A. C. Review

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The dignity of a calling is its utility.

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EDITORS.

B. S. PICKETT, Managing.

JAMES MURRAY, Asst. Managing.

W. J. BLACK and L. A. MOORHOUSE, Agricultural.

H. M. WEEKES, Local.

F. S. JACOBS, Personal. E. C. HALLMAN, Athletic.

G. I. CHRISTIE, College Reporter. J. O. LAIRD, Exchange.

Some Points in which Agriculture has been Aided by Chemistry,



THE advancement made in the study of chemistry has rendered possible the wonderful progress of agriculture during the past century. Today, as a result of the work of such men as Lavoisier, Priestley, Davy, De Saussure, Boussingault, Leibig, Laws, Gilbert, Warrington, Atwater and a host of others, the science of chemistry has opened up many of the secrets of nature. The practice of agriculture is not now a groping in the dark but is placed upon a scientific basis, facts taking the place of mere conjecture.

While it is not claimed that the fullest possible information has been obtained on many points, yet we have a fairly definite knowledge of the true composition of soils and their relation to plant growth. The methods of utilizing plant food and conserving it for use in coming years have been established. The principles of plant growth, and some of the chemical changes attending it, are understood. The laws of animal nutrition have been experimentally explained, and by their application great economy

in the use of nutrients is effected. The methods whereby organic nitrogen is prepared for plant food have been revealed, and some of the ways in which atmospheric nitrogen enters into organic combination have been explained. True, a hundred years hence scientists may laugh at some of our present theories, as we do at the ideas advanced by the scientific men in the beginning of last century. For instance, fat was thought to be food for plants but not for animals. Sugar was also looked upon as a manerial substance, while it was not even suspected that potash and phosphoric acid had any fertilizing power whatever, silica being considered of far greater value.

It is not surprising that greater advancement should be made along some lines than others. Naturally the points which offered the least resistance to research work of the chemist would be the first developed. The subject of animal nutrition has received much study, and we have a fairly clear idea of the laws governing the production of fat, flesh and bone; the composition and digestibility of the foods fed, and the amounts and style of ration to feed for whatever purpose we may have in view. Yet it is only in comparatively recent years that the subject of human nutrition has received any attention. Human foods and their adulterations have been receiving considerable attention of late years, but the fact remains that we have much clearer ideas of how a calf should be fed to make a strong, robust, healthy animal, than we have with reference to the child in the home.

Another point on which the advancement of scientific knowledge is slow is in relation to milk. Although milk has been used through all the ages of the past, we have very contradictory accounts of its composition. True, we can tell accurately the amount of fat, sugar, nitrogenous matter and ash contained in it, but we know very little of how these different constituents, especially the nitrogenous matter, are made up. Cheese is still made according to the same general principles that it was hundreds of years ago, yet we have scarcely any exact information regarding the changes in composition that take place in the different constituents during the process of manufacturing and curing. Even the exact composition of casein itself has not been fully proven. Indeed the whole subject of the relation of chemistry to dairying is as yet in its infancy.

But chemistry has done much to advance agriculture besides the help it has given in increasing the productiveness of the soil and the light it has thrown on the proper methods of preserving and feeding the crops of the farm. The application of the principles of chemical technology to the working up of raw agricultural products has added a new value to the fruits of the farm, opened up new avenues of prosperity, and developed new crops. The principal agricultural chemical industries are starch and glucose manufacture, sugar manufacture, wine making, brewing, distilling, tanning and fertilizer manufacture. In all these industries chemistry holds an important position.

On this continent practically all the starch is made from corn. The presence of nitrogenous matter in starch is considerable. By chemical processes, joined with mechanical ingenuity, the separation of the nitrogenous matter is effected in such a state that it is suitable for animal food. The germs of the corn are composed chiefly of oil and protein matter. These are separated in the process of manufacture, the protein making an extremely valuable substance either for food or for a fertilizer. The oil is largely used for the manufacture of a material resembling rubber. Thus by the application of chemical technology to the manufacture of starch a purer article is obtained and valuable by-products secured which more than pay for the making of the starch. This fact enables the producers to put the starch upon the market at a price far below what would be possible if chemistry had not come to the aid of the industry.

By means of chemical studies the sugar beet has been developed from the common garden beet, containing 5 to 6 per cent of sugar, to its present condition of a root containing from 12 to 16 per cent. This great improvement has been secured solely by the aid of chemical science working together with the highest skill in practical agriculture. In the process of manufacture, however, chemical science has been even more successful. Thus through the exertions of chemistry an industry has been established which is fast assuming very large proportions in the country to the south of us, and which may in the near future become an important one here in Ontario. The culture of sugar beets implies the application of those principles of agricultural chemistry which secure an increase of soil fertility, and,

as all succeeding crops must be benefitted by this high culture, the general welfare of the agricultural interests of the community must be improved.

Through the science of chemistry, practically inexhaustible stores of plant food, which a few years ago were inaccessible and useless, have been brought into general use. The earths saturated with nitrates in South America are treated chemically and the fertilizing principles obtained in a condensed form. The compounds of potash obtained in the Strassfurt mines are subjected to chemical treatment whereby the potash salts are concentrated and obtained chiefly in the form of sulphate and chloride. The vast deposits of mineral phosphates, after treatment with sulphuric acid, furnish an abundant supply of phosphoric acid in a soluble form. The waste and offal of slaughter houses, fish canneries, etc., are collected and treated chemically and their fertilizing materials secured in a merchantable form. Bones are subjected to mechanical and chemical treatment in order to render their phosphoric acid quickly soluble. Iron ores that a few years ago were totally unfit for use by reason of the large amount of phosphorus they contained are now converted into the finest steel by chemical processes which at the same time secure phosphoric acid in the form of basic phosphatic slags, considered one of the most valuable phosphatic manures in use.

In brewing, distilling, tanning and many other industries, applied chemistry has been a leading factor not only in improving the quality of the manufactured article and thus increasing the demand for raw agricultural products, but in creating a demand for new farm crops.

The Province of an Agricultural College Paper.

The sphere of action for an Agricultural College paper is somewhat restricted. College news, notes in reference to ex-students, together with original articles bearing on some phase of agricultural life make up the bulk of the columns of such a paper.

An agricultural college ought to be the centre of agricultural learning and influence in the state. The ex-students of the college ought to be the most progressive farmers, the students

the most would-be progressive farmers, and the staff of the college should be leaders of agricultural thought. How to bring the influence of these classes to bear upon the farmers of the whole state is a very important question. The college paper ought to be a very valuable aid in bringing this about. At present, the College reaches but a very small proportion of the agricultural community. 'Tis true that the Farmers' Institutes, College extension work, the agricultural journals, and the agricultural columns of weekly papers are reaching a great many people, but the harvest is great and the laborers are few, who are properly equipped for the work. A great deal of the matter published and given to the farmers as the truth is so mixed with errors that none but the discerning man can sift the wheat from the tares.

WHAT CAN THE COLLEGE PAPER DO?

In the college course, now extended to four years, there are men who are specialists in Live Stock, Dairying, Horticulture, Poultry, and Agricultural Science. If the brightest of these men were placed in charge of special departments and were paid to give attention to the very latest facts relating to his specialty, it would bring readers of influence, and influence readers to a greater extent than can now be accomplished by any paper published, as very few papers or journals employ experts to edit the different departments of an agricultural journal.

The College paper should also make use of illustrations. This is a marked feature of all modern successful papers. Pictures appeal to old and young, learned and illiterate, to the man of leisure and to the tired farmer, to the modest maiden and to the majestic matron. These illustrations are expensive, but with an increased number of readers and advertisers, more funds would be available for improving the paper and remunerating the editors.

Reviews of books, bulletins and journals, would be helpful to the readers. The College library is a mine of wealth which is explored to a very limited extent, even by the students and staff. A department in charge of a bright reviewer would call attention to the nuggets discovered each month in Library mine. Very few know what books, journals, etc., are received at the College library, because there is no popular way of calling attention to works of interest and value.

Lessons on "Nature Study" should be published monthly. No doubt arrangements could be made with the Department of Education to distribute these to teachers of rural schools. In this way the College and College work together with valuable information, would be brought directly before those who must form the body of future students. It is well known that the work of the Agricultural College is but imperfectly understood by the mass of farmers. By giving the children useful hints, which should be elaborated by the teachers, the children are made acquainted with nature, and thus a desire for greater knowledge is created. In this way the attention of the younger people would be directed to nature, to farming, and to the College through the College paper. The parents, as a result of this reading, are also more likely to view their own work and the College work more favorably.

In connection with every rural school there should be a small plot of land with a neat house for the use of the teacher, where needed. On this land plants, insects, etc., could be studied for a portion of each week with advantage to all children of rural schools. Work of this character is needed much more than technical training in city schools, because "Agriculture is the foundation of Canadian prosperity," so politicians tell us; yet they are apt to neglect the foundation and give attention to the ornamental. Monthly articles directing the thought of teacher and pupils to timely topics during the season, might form part of the province of an agricultural paper; and at the same time, these articles should be helpful for the bulk of readers who take more or less interest in studies of plants, animals, insects, fungi and bacteria.

A summary of the investigational work in the departments of the College would be a useful branch. The annual report is a slow method of distributing information. Bright, newsy, crisp, condensed articles relating to experiments to be made, in progress, or completed would be valuable for the College and for farmers.

A department of questions and answers would prove a beneficial feature. Similar questions come to all the departments day after day and week after week. If a general answer were framed and published in the College paper to meet these ques-

tions, a great deal of time could be saved members of the staff, as they would simply mail a copy of the paper containing an answer to the questions sent.

In a word, the province of an agricultural college paper is, to give college news, news of ex-students, latest information in the different branches of agriculture, reviews of books, bulletins, etc., lessons on nature study, for pupils in rural schools and on the farm, together with original articles by the students, ex-students and staff. To accomplish the greatest amount of good, an Agricultural College paper should reach 100,000 homes in Canada. This can be done by good editorial work, first-class business management, and co-operation among students, ex-students, staff, farmers, rural school teachers, and Departments of Agriculture and Education.

H. H. DEAN.

The Farmer and Good Roads.

The earliest history of road improvement takes us back more than two thousand years to the days when the Roman Empire was at its zenith. Of such a high character was the work of those early times that some of these old roadways are said to exist still in good condition. To farmers whose knowledge of road construction is limited to those made of clay or sand, such records may seem almost incredible. The fact remains, nevertheless, that where roads are built in the proper manner, and of the right material, they continue for ages an ornament to a country and a source of pleasure to those who travel.

That the farmers of this province who are alive to their own and their country's welfare should be deeply interested in road improvement, is beyond question. Bad roads constitute the greatest drawback to rural life, and from the lack of good roads the farmers suffer more than any other class. Of the benefits to be derived from improved highways there are many. A noted authority has said that good roads and the schoolmaster were the two most important agents in advancing civilization. The increased value given to adjoining farms is of great importance. In this connection statistics give us the important fact that those

sections which have gone in for road improvement are those in which the value of farm property is increasing, while the price is even declining in localities where poor roads continue to exist.

Apart from the direct financial benefit which good roads give to the farmer, they add to other important factors of agricultural progress. They economize time and force, and reduce wear and tear on horses, harness and vehicles. The cost of placing the products of the soil upon the market is quite an important item; and the condition of the roads at this stage often decides whether a profit or loss is to be had from, it may be, the chief effort of a season.

The Statute Labor system of maintaining roads, which has been in existence throughout this province, since the time of the earliest settler, has virtually outlived its usefulness in most of the older settled townships. This is evidenced by the fact that many progressive municipalities have abandoned it, and have adopted newer methods which are giving better results. For the old system, it must be said it had a place in the early days when the country was but sparsely settled, and the value of property was comparatively low. Then outlets were desirable in the direction in which the pioneers were obliged to travel.

However, as it is practised in many townships today, too much time is undoubtedly spent for the amount of labor performed. Many rural property owners look upon the road-making season as one of physical ease. While this sentiment prevails in one section another may be blessed with a higher type of citizen who takes pleasure in keeping the highways near his home in good repair. Thus inequalities exist to rectify which is utterly impossible under such a system.

Since the introduction of improved road-making machinery into the country the agitation in favor of better roads has gained way rapidly. People, generally, are beginning to realize that road building is a public matter, and that the best interests of Canadian agriculture and the Canadian people as a whole, demand the construction of good roads, and that money wisely expended for this purpose is sure to give good returns.

As to how road construction should be managed, various suggestions have been made by those interested. The majority, however, agree that they should be under the direction of a

capable person, one who has a knowledge of mechanical engineering sufficient to guide him in choosing directions, in leveling grades and in building bridges. Such an officer might be appointed by the council of any township or county whose rate-payers were contributing towards the expense. He could be instructed to give employment to laborers or farmers in the vicinity of his operations, as far as possible, and thus distribute the money to be earned among those who would have claimed their share under the old system.

The proper method of construction is another question upon which many men have many ideas. After all has been said this will likely be found to depend upon the particular location in which the road is to be built, the material available, and the amount of money at the disposal of the constructor. The roads that will best suit the farmers must not be too costly, but they should be of such a character that farmers could do their heavy hauling when their fields were too wet to work. Such a road may be built with nine feet of stone in the centre and with firm earth on both sides. The cost will thereby be much less than a wider one, and the charges for repairs reduced in proportion.

W. J. B.

Bob Burdett's advice to the young men of the country:
"My son, follow not in the steps of the loafer, and make no example of them born tired, for verily I say unto you, their business is overstocked, the seats on the corner are all taken, and the whittling places are all occupied. It is better to saw wood at two bits a cord than to whittle wood in a loafing match and cuss the government. My son, whilst thou hast left in thy skull the sense of a jay bird, break away from the cigarette habit, for thy breath stinketh like a glue factory, and thy whole appearance is less intelligent than a stone dummy. Yea! thou art a cipher with the rim knocked off."

Nothing gains more respect from the students than to feel that their instructors sympathize strongly with them in their endeavors to sustain the place held by their Alma Mater in every sphere of college life."—*The Varsity*.

The above is a good representation of the group of seven Argentine students at present in attendance at the O. A. C. The cut for the above was kindly loaned by the *Farmers' Advocate*.



The O. A. C. Review.

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D. T. ELDERKIN, Secretary. L. S. KLINCK, Treasurer.

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Ex-students are requested to contribute to our columns.

MARCH, 1901.

Editorial.

AMONG the Literary treats which it has been our good fortune to receive, that given by Prof. Alexander at the Literary meeting on March 8th, was certainly one of the most appreciated. His subject, "The Novel," is one of interest to all, and it was dealt with logically and thoroughly, and many hints were thrown out which should prove of much benefit to those of us who are none too particular about our class of reading.

An argument which has been frequently put forth against country communities is that the amount of literature is somewhat restricted; that it consists to too great an extent of the local newspapers, whose matter is usually of none too high a character, and whose news is from a very limited sphere. It has been said that a case analagous to this in many respects is that of our college specialist. Let this be as it may, it is very apparent that many of us specialize in too many directions, and that we live too independently of what is going on around us: we seem to forget that there are events occurring daily which will be recorded as history, that we are not acquainted with the lines of present investigation or of recent scientific discovery. Different reasons are given for this condition of affairs and various means recommended for its remedy, but we will be content to mention one much neglected source of information.

Every month there comes into our reading room many of the best periodicals that our language affords, carefully selected to meet our requirements. It is remarkable how many of our

students never trouble themselves to look inside the covers of these magazines. It is not for want of variety. Surely no person says it is for lack of time! We would not advise any person to read all of any one magazine, or some of all, but a little systematic reading in a few of the best would accomplish a great deal in keeping one in touch with the great moving world about us.

We publish this month an article by Prof. Dean on the sphere of an Agricultural College paper, and it is not until reading such an article as this that we are in a position to see to advantage the menial position we occupy. Possibly THE REVIEW has as great a future as is here outlined for it. We at least hope so, though at present such a future seems indeed to be very far away. With an extended subscription list, our paper, as it is at present conducted, could do much better work, but when those who were but lately its editors refuse their support, how can strangers be expected to give it their aid? If our paper does not suit ex-students they are welcome at any time to suggest improvements.

None but the initiated know the accuracy required in the printing office. The average reader who detects a misspelled word or a letter upside down, feels that his mission on earth will not be fully accomplished till he has called the attention of the over-worked editor to the glaring defect. He does not notice the thousands and tens of thousands of letters in the right place, nor the multitude of words correctly spelled, but his eagle eye (?) is glued to the one that is out of place. So it is with our deeds. Man does a thousand good deeds and no attention is paid to them, but he makes one mistake and that flashes over the world. A life time may be spent in building up a reputation that may be wrecked in a moment. The world is harsh and critical, exacting to a fact, and if the Father of all does not temper justice with mercy we all may fail of Heaven.—*Canon City Clipper*. The above applies very well to our situation, and those who would fain raise the roof of THE REVIEW by their criticisms may profit by reading this.

J. M.

Athletic Notes.**W. O. H. A. Series—Berlin vs. O. A. C.-Vic's.**

On Thursday, Feb. 28th, the O. A. C.-Vic's went to Berlin to cross sticks with the Berlin hockey team. A large crowd of spectators fringed the rink, and considerable enthusiasm was aroused, as the game was certainly fast and interesting. Our boys played a splendid game, but could not hold their own with Berlin's speedy aggregation, who have been exceptionally successful in all the league contests. Weir, at cover point, and Irvine, at point, proved an effective defence, checking their opponents and lifting the puck out of danger. Berlin made a great effort to prevent a single score against them, but Pope and Young scored two well-earned goals to our credit. The final score was 9 to 2 in favor of Berlin. The Berlin team has thereby won the championship of the W. O. H. A. with an unbroken record of victories.

The inter-year series of hockey games has created great interest, and the O. A. C. may be proud of having in its halls so many creditable stick-handlers. For the first time since the inter-year hockey games have been inaugurated all three year classes were contestants in the games. The plucky Third Year, though few in number, entered a team—a *precedent* which, we hope, will be followed in the future.

On February 26th, the First and Third Years played off, and though we do not boast of brilliant hockey, it may be said that the game was a creditable one to the year teams. LaPierre put up a splendid defence for the Third Year, while Pope on the forward line and Yerex at cover point for the First Year, played excellent hockey. The First Year team won the game by a score of 8 to 0.

But on March 2nd, when the First Year met the Second Year, the former had a harder battie to fight. Dryden's rushes and Weir's splendid lifts from cover point proved very effective in running up a high score, and Pope and Lewis on the First Year forward line found themselves closely checked. The score was 6 to 1 in favor of the Second Year.

The final, and most interesting game was played on Saturday, March 9th, between the First and Second Years. Each team entered the match fired with a determination to win, and their supporters placed all their confidence in those who were to uphold the honor of their years. The Second Year found their work better prepared for them than in the former game, and it was by a much smaller margin that they succeeded in gaining another victory. The game was fast and exciting to the finish. The final score gave the Second Year the victory by 6 to 3. The Second Year will have its name engraved upon the Marshall-Harris cup, as champions of the O.A.C. in hockey for 1901.

O. A. C. vs. U. C. C.

For the first time this season did the O. A. C. put a purely college team on the ice. They played the Upper Canada College team on the Petrie rink, on Tuesday evening, March 12th. A large number of spectators enthusiastically cheered a game which was fast and interesting throughout. It was easily seen that the U. C. C. team was in good training, and that it was their splendid combination that won them the game. The players for the teams were as follows:

| O. A. C. | | U. C. C. |
|-------------|-------------|--------------|
| Fairweather | Goal | Lash |
| Yerex | Point | (Capt.) Keys |
| Weir | Cover Point | Constantine |
| Dryden | Forwards | Gills |
| Pope | " | Colson |
| Hallman | " | Kingstone |
| Prettie | " | Morrison |

Weir did his duty as usual, while Constantine for the U. C. C. played a brilliant game at cover point; his lifting and shooting were remarkable features. Keys, formerly an O. A. C. student of '98, played a star game in his usual reserved and clever manner. The game was entirely free from roughness, and was an exhibition of good hockey. The score was 9 to 6 in favor of U. C. C. Why may we not make this an annual event?

The third annual exhibition of indoor sports will be held in the gymnasium on the evening of March 22nd. All the contestants entering the competition have acquired practically all of

their gymnastic skill while at this College, so that the exhibition of athletics will be the result of regular and systematic training. The object of this competition is two-fold, viz: (1) To stimulate a greater athletic spirit among the students by showing them the results of careful training, and (2), to reward, by means of prizes, and the honor which is the outcome of victory, those who have reached the highest degree of proficiency. Let the students see to it that they judge correctly the benefits of athletics and systematic exercise.

Your attention is invited to a little investigation: Who are the students on the sick list? What class supplies the candidates for the hospital? Who form the class of students that are physically weak? Are they those who are engaged in daily exercise and physical training? Again I ask, who are the best fitted to grapple with the problems of life in these days of keen competition? Is it those who are physically beneath the standard? Is it those who make it their object during college life to concentrate *all* their energies to study, and ignore the equally important functions of the body? I candidly answer, "No.", I claim that it is those who cultivate the body as well as the mind. Perhaps we, as students, have been slow to realize the importance of athletics, but I claim that the time has come when athletics should receive more attention from the students, and a practical recognition by the staff, as forming an indispensable department of a college education.

Someone has explained the significance of the editorial "we." It may have a variety of meanings. For example, when you read, "we expect our wife home to-day," "we" refers to the editor; we are a little late with our work, includes the whole office force, even the devil and the towel; in we are having a boom, the town is meant; we received over 100,000 emigrants last year, embraces the nation; but we have hog cholera in our midst, means that the man who takes our paper and does not pay for it is ill.

"What are you doing?" inquired the African explorer of the dusky savage, whom he perceived climbing a palm tree.

"Getting up to date," answered the barbarian, reaching for the nearest bunch.

Personals.

C. E. Bain, '98, has returned from a two months' visit to the Old Sod. During the first week of the new year he sailed from Boston for Liverpool. Being in London for two weeks he was fortunate enough to be an eye-witness to the Royal Funeral procession. He visited various ancient places of note as well as prominent cattle markets, and other departments pertaining to agriculture.

F. R. Marshall, who graduated with the class of '99, has since then taken a two years' course at the Iowa Agricultural College. He graduated from same in Dec., '00, and has been appointed sub-professor of Animal Husbandry, under Prof. John A. Craig of that institution. THE REVIEW extends congratulations.

During the last week in February Prof. Day attended the meeting of the Pure Bred Cattle, Sheep and Swine Breeders' Association of Manitoba. While in Winnipeg he delivered three addresses before the convention.

Mrs. A. James and two children sailed on the 20th inst., for England by S.S. Dominion. They will visit relatives in Kent County and will be gone about six months.

Mr. Norman M. Ross, '95, spent a few days at the College last week. Since leaving the College Mr. Ross has taken a course in Forestry at Biltmore, North Carolina. During his course he was required to spend some time in Germany, examining the system adopted in that country and inquiring into the methods of handling and re-planting their forests. Through the recommendation of Dr. Mills, Mr. Ross has obtained a place under the head of the Forestry Division, Department of the Interior, Ottawa, and will now be employed in active work in the forests in the north and northwest portions of the Dominion, including British Columbia. Mr. Ross is a good artist and a first class student. He gave evidence of exceptional ability during his College course, taking the Biological option; he will, no doubt, give a good account of himself in his new position.

C. E. Mortureux, '97, called at the College during the time of the Provincial Stock Sale. Mr. Mortureux has been employed in connection with the dairying interests of Quebec for a portion of the past summer, and is now preparing himself to do institute

work in that Province, under the direction of Mr. F. W. Hodson. Superintendent Creelman has given Mr. Mortureux all the information and assistance possible regarding the Institutes of Ontario, and the latter is now attending some of the meetings which are being held throughout Ontario. Mr. Mortureux's knowledge of the French language and his thorough training in agriculture should make him of valuable assistance in institute work in the Lower Province.

Ferguson Kidd, B.S.A., is now a progressive farmer at Cookstown, Simcoe Co. He has recently added 200 acres to his estates.

J. Fitzgerald, '91, attended the Provincial Sale held here on the 27th and 28th ult. He and his brothers are building up a very fine herd of Shorthorns at their farm, Mt. St. Louis.

J. R. Hutchison, '97, paid the College a short visit a few days ago. Mr. Hutchison has charge of the co-operative cheese and butter factory at St. George.

Among the visitors to the college during the time of the Provincial Sale were: Ketchen '97, Semple '97, Wagg '96, Gardhouse '99, and W. Harris.

H. J. Keys, '98, accompanied the St. George hockey team to Guelph on the 2nd inst. and remained the following day renewing acquaintances. He is now attending U. C. C.

Fred Sissons, '94, is now married, and is a hustling farmer. His neighbors at Thornton hold "Fred" in high esteem as a shrewd, up-to-date farmer, although he was at one time the despair of the college staff.

H. A. McCullough, '91, is now engaged in farming at Nantyr, Simcoe Co. In connection with his large general farm, he has been following as a side line the growing of strawberries, and now he has one of the finest patches in the Province.

W. J. Thompson, B. S. A., '95, has recently made a tour of the counties of Peterboro and Simcoe in the interests of the Consolidated Phosphates Co., Limited. He reports a keen interest on the part of the farmers in his line of business.

We regret to note that Messrs. Sloan and Laird have been compelled to give up study on account of sickness,

College Reporter.

The Modern Novel.

On Friday evening, March 8th, Professor Alexander, of Toronto University, gave a very interesting lecture on the subject of "The Novel, its Origin, and Use." The lecture was under the auspices of the Literary Society and the Professor's remarks were listened to with interest by about three hundred people.

On opening the lecture the speaker gave a definition of the novel. It is prose written on a subject of every day life, not necessarily true in detail, and in which events and people are given a prominence and characterization sufficient to make them appear as real. The novel has become popular only during the last two hundred years. The reason given by the speaker for the comparatively recent birth of the novel was that an advanced culture and knowledge were required in such a mental effort as characterization.

Prior to the time of Elizabeth, the novel was unknown, but later on in the time of Charles I. and Charles II. we find writings which form the germ of modern fiction. Bunyan's *Pilgrim's Progress* may be cited as one of the first works in which a successful attempt was made to represent human life as it was at the time of writing. Yet this could not be called a novel, for such was not the author's intention; it was merely a chance which then nearly reached our present fiction. In the *Spectator* appeared a number of sketches by Addison written at the beginning of the eighteenth century, the most notable of which were the stories of Sir Roger de Coverly. These were simply germs indicating a tendency to the modern novel. The credit of producing the first novel is due to a Spanish writer.

From this point it became easier to trace the growth of the novel. Still the old form does not come near the modern writings, as they were realistic, not presenting the problem and plot of the novel of to-day. In this connection Prof. Alexander made mention of *Gil Blas* and *Robinson Crusoe*, written by Defoe, the latter in 1719. His writings were extremely realistic, so much so that they were taken by many for the truth.

The drama, which preceded the novel by many centuries, has been replaced by the modern novel, due to the lack of dramatic reproductions, the introduction of the printing art, and the spread of education amongst the people. Prof. Alexander stated a true novel was an artistic representation of human life, and by choosing well and reading only the good, the result should be the same as from extensive travel "seeing the world," and broadening our ideas and mental views.

The speakers last point was the use and abuse of the novel. On this he dwelt for some time showing the harmfulness of reading the lighter works and recommended that by reading something a little above one's mental plane the novel would be a "positive benefit."

Oratorical Contest.

The third annual Oratorical Contest took place in the gymnasium Friday evening, March 15th. The subjects chosen by the speakers were mostly along moral and political lines, and the contest may be looked upon as the result of the work done by the Literary Society during the past year. Thus it is encouraging to the Society to note the number who entered the contest. Some eleven synopses were handed in, but eight only were accepted. Owing to illness one of the speakers on the programme withdrew and the remaining seven addresses were given. The following were the speakers, the first five being the prize winners, arranged in order of merit:

W. J. Rutherford, "The Anglo-Saxon"; L. S. Klinck, "Success"; B. M. Eftyhithes, "Political Development of the 19th Century"; H. W. Houser, "A High Ideal and Self Control as the First Essentials of Success in Life"; J. C. Ready, "The Progress of Agriculture"; J. M. McCallum, "The Influence of Youthful Surroundings on National Welfare"; and B. S. Pickett, "The Manhood Suffrage." The monotony of the evening was broken by vocal and instrumental music, the vocal talent being supplied by Mrs. Wilcocks, Hon. C. N. Daly, and Messrs. N. Macdonald and J. H. Heffernan, of the city, and R. E. Gunn, of the College. All the selections rendered were highly appreciated by the audience. The accompaniments of the evening were played by Miss Hill, of the city, and Miss G. Mills and Mr. R. Sutton, of the College.

Locals.

Milk, one dollar a cup.—Willie Wilson.

Then how much should it cost Cowle for removing a whole laundry-bag full of stuff from the dining hall.

Gilpin would like to know what century this is.

The President says its the nineteenth, Gilpin.

Question in poultry class: "What color should Aylsworth's beak be, Mr. Graham?"

"Supposing —." Ask Metcalf about that.

The keys to the "Rocky Road to Dublin" are said to be afloat among the students. Kindly return to A. B. C.

Mr. Jacobs—"I don't think its right to put in a local on an editor." We agree with Mr. Jacobs in this, and therefore will not mention his name in this issue.

Prof.—What is the motion of molecules in a solid?"

Russell—"Stationary."

Prof. (later)—"How is it that one body of the same size and temperature as another may contain more total heat?"

Russell—"On account of being larger."

H. A. Craig at the telephone the evening before the "Oratorical."—"Is Miss D—— in?" "Could I see her, please?"

Alf. is looking rather Brown these days.

When turning out to farm cattle the other morning, the boys were surprised to meet Mr. B. just getting in from a five o'clock tea.

Dentist, to Klink, who has his mouth open for the extraction of six teeth.—"My, but you are an open-faced young man!"

Last Sunday at church, Goodchild chanced unfortunately to get into the seat regularly occupied by Mrs. L—— and her seven daughters. As the family entered he saw that he was intruding, and somewhat embarrassed exclaimed, "Pardon me, do you *occupew this py.*"

Reed was looking out the window at some young ladies, when he should have been examining grasses. Prof. Doherty, seeing this, remarked, "That seems to be more interesting than the grasses, Reed.....but they'll never be of half so much use to you."

Did sleighing parties cause Jumbo to forget to trim his nails, or was he preparing for the wrestling competition !

A few evenings ago the fellows of Upper Hunt collected tin cans, horns, and other similar instruments and with them attempted to rival Sousa's Band. A generous application of *agua pura*, administered by the residents of the street below, quickly put a *dampner* on their musical aspirations.

Lower Hunt.

Why didn't those Lower Hunt fellows tap us when they came up for that purpose !

Upper Hunt.

We have been told that the First Year intend to protest the last hockey game. Their ground is that the Second Year played two "ringers," Eason of Peterboro and Dryden of Toronto. Their opponents claim that the First year is equally guilty, having played R. Baker of Philadelphia in their team.

Contributions for the "Sick Children's Hospital" thankfully received. Hunt St.

A mystery solved.—Ketchen: "Well, they are a *little* off." We understand the whole load was off—the road.

Exchanges.

THE YOUNG QUEEN.

Some of us may have been unaware to what perfection those fruits have been already matured in the virgin soil of Australia, but if there was surprise in any quarter it was pleasurable surprise. The whole country felt a thrill of pride as the work of her sons was revealed to her, and revealed to her at a time when the ties between her and them had been newly consecrated by common effort and by common sacrifice in a righteous cause.—*The Times*.

Her hand was still on her sword-hilt—the spur was still on her heel—
She had not cast her harness of grey war-dinted steel:
High on her red-splashed charger, beautiful, bold and browned,
Bright-eyed out of the battle, the Young Queen rode to be crowned.

And she came to the Old Queen's presence, in the Hall of Our Thousand
Years—

In the Hall of the Five Free Nations that are peers among their peers:
Royal she gave the greeting, loyal she bowed the head,
Crying: "Crown me, my Mother!" And the Old Queen stood and said—

"How can I crown thee further? I know whose standard flies
"Where the clean surge takes the Leeuwin or the notched Kaikouras rise.
"Blood of our foes on thy bridle and speech of our friends in thy mouth—
"How can I crown thee further, O Queen of the Sovereign South?

"Let the Five Free Nations witness!" But the Young Queen answered
swift—

"It shall be crown of Our crowning to hold Our crown for a gift.
"In the days when Our folk were feeble thy sword made sure Our lands—
"Wherefore we come in power to beg Our crown at thy hands."

And the Old Queen raised and kissed her, and the jealous circlet prest,
Roped with the pearls of the Northland and red with the gold of the West—
Lit with her land's own opals, levin-hearted, alive,
And the five-starred cross above them, for sign of the Nations Five.

So it was done in the Presence—In the Hall of Our Thousand Years—
In the face of the Five Free Nations that have no peer but their peers;
And the Young Queen out of the Southland kneeled down at the Old
Queen's knee
And asked for a mother's blessing on the excellent years to be.

And the Old Queen stooped in the stillness where the jewelled head
drooped low:

"Daughter no more but Sister, and doubly Daughter so—
"Mother of many princes, and child of the child I bore,
"What good thing shall I wish thee that I have not wished before?

"Shall I give thee delight in dominion—rash pride of thy setting forth?
"Nay, we be women together—we know what that lust is worth.
"Peace on thy utmost borders and strength on a road untrod?
"These are dealt or diminished at the secret will of God.

"I have sway'd troublous councils—I am wise in terrible things—
"Father and son and grandson I have known the heart of the Kings.
"Shall I give thee my sleepless wisdom or the gift all wisdom above?
"Ay, we be women together—I give thee thy people's love:

"Tempered, august, abiding, reluctant of prayers or vows,
"Eager in face of peril as thine for thy mother's house:—
"God requite thee, my Sister, through the strenuous years to be,
"And make thy people to love thee as thou hast loved me!"
—RUDYARD KIPLING.

"Juddy and I got into a terrible tangle shopping to-day."
"How?"
"I owed her ten cents, and borrowed five cents and then fifty cents."
"Well?"
"Then I paid thirty cents for something she bought—"
"Yes?"
"And she paid forty cents for something I bought, and then we treated each other to ice cream soda."
"Well?"
"She says I still owe her a nickel."

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Agents for the
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THE CANADIAN DAIRY SUPPLY CO.,
MONTREAL, P. Q.

Arnprior, Dec. 14th, 1900

GENTLEMEN,—Now that we have our creamery in operation and all the 30 Baby Separators placed, we thought perhaps you would like to hear from us.

It is with pleasure we say that the Creamery outfit is most satisfactory, and to add that our patrons are "delighted" with the Baby Separators, is using a mild term, more particularly as the majority of our Dairymen looked upon the promised results as the "Stock in Trade" of the talkative agents. They have, however, got over that stage and have now settled down to solid work, which has given us encouragement and confidence in the enterprise that will be of great advantage to stock raisers, who will have their own milk fed in a normal condition without artificial heating. The expert assistance you gave us was of the utmost importance to the success of the undertaking in explaining and creating confidence in the minds of our Patrons, who are with us solid now.

We have the proof already of the uniformity and smoothness of the cream from the Alphas as compared with that from another make, which is quite lumpy and unsatisfactory.

Yours faithfully

ARNPRIOR CREAMERY ASSOCIATION.

Arch. Russell.

BABIES

30

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Creamery Course opens for Buttermakers on December 3rd, 1900.

Courses for Cheese and Buttermakers open on January 2nd, 1901.

Farm Dairy Course, January 2nd, to March, 22nd, 1901.

A thorough training is given in farm dairy work, including the running of hand cream separators, of which five different makes are kept in the dairy. Instruction is also given in setting milk, churning, and preparing butter for market.

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