

Pages Missing

The O. A. C. Review.

The Dignity of a Calling is Its Utility.

VOL. VII.

ONTARIO AGRICULTURAL COLLEGE, GUELPH, NOVEMBER, 1895.

No. 2

Editorial.

THE burning question, at the present time, among the officers and student body, now in attendance at the College, together with some of the prominent of its graduates is: how is it that with a staff of officers and equipment of every department second to none in any similar College on the continent, that we have not a larger attendance. It can be claimed, and claimed justly, that instead of the two or three hundred who attend this institution yearly there should be more than double that number. This year shows a slight decrease in the number of students in attendance but we certainly do not take this as a proof that the College is not doing better work than ever done in the past.

The present student body, although below the average in numbers, certainly makes up for it in other respects. The great majority—in fact over five-sixths—are Ontario farmer's sons who are here for good hard work and will no doubt make a success of the course. The foreign element is all that could be desired and the students comprising it will no doubt be a credit to the College wherever their lot may be cast.

In the last issue J. F. C. gave some valuable hints as to how the attendance might be increased. In this issue L. W. L., a well known Associate, makes a few more valuable suggestions, which the authorities might follow with profit. The main thought in each of the articles is, that if the farming community only knew what advantages are to be derived by a course at an institution of this kind, the great problem of increasing the attendance would be solved. The imparting of such knowledge would no doubt have a tendency in that direction, and it is pleasing to note that in the course of lectures to be delivered at the Farmers' Institutes during the coming year, the subject, "The Ontario Agricultural College" is made one of the prominent ones. These lectures will no doubt have an influence in enlightening the people on this question.

Now, the next question is: would there be a very marked increase in the attendance after all the various means propounded by J. F. C. and L. W. L. have been used? It would certainly have some influence, but the great majority would give them but a passing thought. Why the reason of this deplorable state of affairs? It is simply, that the great majority of farmer's think that if "Bill has

skulin enough to read, write and cipher a little it's all he requires for farming"; hence they advocate the idea of sending their sons to an agricultural college. On the other hand, "John," who has an ardent desire to swell the already too large list of preachers, lawyers, and doctors requires the most of his father's spare cash in order to complete his course.

Another reason for the comparatively small attendance at agricultural colleges generally, is the prevalent idea among the farming classes that a course at an institution of this kind has a tendency to develop in the boy a distaste for manual labor. In some colleges, where no practical work is required of the students, this is to some extent true. After he has served some two or three years gathering theories which he has not been constantly asked to put into practice, he becomes imbued with the idea that it is his life work to instil these scientific theories into others and becomes very desirous of their putting them into practice. But we are pleased to say that at this college a student, during the first and second years, is compelled to do a certain amount of practical work. In this way the great difficulty of developing a distaste for manual labor is overcome.

Throughout the Province of Ontario there is the erroneous feeling that this is a political institution—a "Reform hot-bed," fostered by the present Reform Government. This is plainly shown by the fact that we have so few Conservatives among the students. Last year, on taking a vote in the Literary Society, it was found, to the great surprise of many, that about five-sixths were Patrons of Industry, who had been principally Reformers, before becoming enlightened, while the remainder were either pronounced Grits or Conservatives. This institution, although supported by the Government whether Reform or Conservative, is not, in the strict sense of the term, a political one. We have officers belonging to both of the old political parties, and no attempt whatever is made to influence the political beliefs of any student, by lectures from any of the Professors. Therefore, no farmer need be concerned about the political beliefs of his son being changed by the officers of this College. In fact, we are of the opinion that a young man cannot attend an institution of this kind without having his political views considerably broadened. Our reading room is supplied with the best representative papers of the three political parties. Political debates take place in the Literary Society. The important subject of Political Economy is ably lectured upon, and through these and various other means the student is taught to give some reason for the belief he holds.

It is almost invariably asked, by a farmer, when consulted as to the advisability of sending his son to an Agricultural College: "Will he be enabled to make any more money on a farm by taking such a

course? If not, what is the use of spending two or three years time in the study of scientific farming? Now, the making of money is not the only aim in farming, but it may be safely said that it is the most important one, and unless a farmer sees that his son is going to be benefitted in this particular, he hesitates to send him. But the assertion can be freely ventured, that at the present time a student who has a knowledge of the most scientific methods of cultivating his land has two chances to one to make more money than one who has no such knowledge, and the former will take more pleasure in his work owing to the fact that he is not working in the dark.

With these facts in view, to whom are we to look for the upholding of the name of the Agricultural College and increasing of the number of students in attendance? It is mainly to her ex-students. Lecturing on the subject at Farmers' Institutes, issuing of small bulletins to farmers, who visit here from time to time, giving them an idea of the work done here, and advertising in various other ways all have their influence. But unless our ex-students can show by their practical work that they have been greatly benefitted by their course here, we cannot expect the attendance to increase very rapidly. Great responsibility, therefore, rests upon every ex-student. He owes a great deal to his Alma Mater. Let him, therefore, not dishonor her. It is to ex-students mainly that we owe our present attendance, and it is to them that the institution looks forward for an increased attendance in the future. Take a pride in proclaiming to others that you are a graduate of the O. A. C., and show by your work that you are superior to those who have not been so fortunate. In this way the future farmer will be compelled to have a scientific knowledge of farming operations in order to keep up in the race. This institution, therefore, hangs out the following signal to her ex-students, "The O. A. C. expects each and every one of her graduates to do his duty."

A Few Notes on the Conduction of Water in the Soil.

With Apologies to Dr. E. Wollny.

If we imagine the soil to be made up of very small particles, the interstices may be regarded in their continuity as tubes which, if sufficiently small, possess the power of capillarity. These tubes play a most important part in the movement of water in the soil. In sand, where the particles and spaces are comparatively large, the power to raise a column of water is diminished, and hence water is raised but a short distance. In clays, on the contrary, in consequence of the fineness of interstitial spaces capillarity acts to greatest advantage, and a column of water may be raised four or five times as high as in sand. But though the distance through which water may be elevated increases as the capillary tubes become finer, the rapidity with which it travels diminishes for the same reason. Water is impeded also by the presence of colloidal materials more or less present in clay soils, hence though water may be raised to a considerably greater height in clay than in sand, the movement is relatively slower.

Similar behavior is observed in the conduction of water supplied

from the atmosphere. In percolating downward the water meets with resistance partly due to capillarity and partly to the friction and surface adhesion of soil particles, all of which increases with the fineness of the particles and the quantity of colloidal substances present. The presence of large spaces in tilled soil accelerates the downward movement of water while it impedes the upward movement of capillarity. The presence of stones and other concretions impedes both capillarity and percolation. If a crumbly soil be rolled capillarity is promoted, but the downward movement of surface water is retarded. "Hence the depth and velocity of percolation are inversely proportional to the size of the grains, and the richness of the soil in colloidal substances."

In soils made up of layers differing in physical character, capillarity is checked to greatest extent in layers farthest removed from each other in physical resemblance. For example, a layer of fine clay overlying a bed of coarse sand is a greater barrier to the movements of water than if these soils more nearly resembled each other in size of grain structure. Moreover water rises or sinks from a coarse or fine layer much more readily than the reverse.

Capillarity is also regulated by the amount of water in a soil, ceasing altogether when the water content sinks below thirty or fifty per cent., according to the fineness of soil particles, of the water required for supersaturation. When the water content falls below the above limit, movement is carried on by a much slower process, from the surface of one particle to that of another, due to surface tension. Even before the water content of a soil falls below the limit, when capillarity ceases the surface tension retards both capillarity and percolation, diminishing, of course, as the soil approaches the saturation point.

Other things being equal the amount of water stored up in soil, after all movement ceases, is greater the finer the soil particles and the greater the amount of colloidal substances present. On examining a column of such a soil the quantity of water present is found to be greater as the depth increases, and above a certain height the quantity of water present remains constant. The reason is that above this limit water is held by surface attraction of the particles of soil and the capillarity of the very fine interstices, while the water flows out of the coarser spaces. Below the limit the quantity of water increases with the depth until the point of saturation is reached. For this reason a distinction is made between the minimum water capacity, representing the quantity of water held by the adhesion and capillarity of finer interstices, and maximum water capacity, representing the amount of water present when all the intergranular spaces are filled.

While in most soils the maximum water capacity remains almost constant, except in extremely coarse samples, the minimum water capacity varies greatly, and it is on this account that the minimum water capacity is of greater interest in forming a judgment of a soil. The breaking up of large particles with the roller and the removal of stones and other concretions increases the minimum water capacity; but a rise in temperature, which decreases the viscosity of water, and the mechanical changes caused by freezing and thawing lowers this capacity of soils for holding a minimum water supply.

Permeability of a soil may be defined as that property which prevents supersaturation. Experiments have shown that this property

Personals.

We often contemplate on the great number of students who leave this institution and are never heard from. Your college mates would like to know where you are and what you are doing. Sit down and write us to-night.

J. Yuill, '95, not wishing to follow the footsteps of his pater in becoming a successful dairyman, is studying for the dentistry. We presume he will soon be hanging out his shingle, "Teeth extracted without pain—to Joe."

P. B. Kennedy, B. S. A., who has been engaged this summer in conducting experiments in connection with milk, cheese, etc., in company with Assistant Chemist R. Harcourt, B. S. A., A. T. Wiancko, B. S. A., and W. A. Kennedy, B. S. A., here, intends leaving for England about the first week in December. Pat. has always been an enthusiastic football player, playing centre forward for our First Team for the last five years. We all wish Mr. Kennedy a pleasant trip across the Atlantic. Messrs. Wiancko and Kennedy remain with us.

W. McCallum, B. S. A., has returned from Michigan Agricultural College, where he has been making a special study of parasitic fungi. Mr. McCallum intends to continue his studies in Physiological and Structural Botany.

C. A. W. Hamilton, '93, is at present engaged in manufacturing cheese in Virginia, U. S. "Hammy" is always prompt with his subscription to the Review.

We were somewhat surprised on returning this fall to learn that J. W. Widdifield, B. S. A., had taken unto himself a life partner soon after graduating last May. As a pastime, J. W. has stocked a pond on his farm with fish, and no doubt could furnish us with some excellent fish stories. We wish him success and many years of prosperity.

A short time ago the Curzon Bros., who have been engaged in making Stilton cheese near Guelph this summer, received a cablegram to the effect that their sister had died in Kingston, Eng. Sidney immediately started for his native home. "Toddy" remaining in Guelph. They have our sympathy in their bereavement.

J. W. McGillivray and A. Kipp also returned in company with "Clad." We promise our readers something concerning them in our next.

Every student who has attended the College since '93 will be pleased to hear of Geo. Ed. Chadsey, '95. He returned to his home in B. C. last July, enjoyed the trip very much, and, as usual, made the acquaintance of a fair dame! while on his journey. His athletic

form and well known yell. Sumas for ducks are very conspicuous by their absence. We presume Eddie has scalped several Sivasches since returning to B. C.

L. W. Lang, '95, is working on his father's farm near St. Mary's. When last we heard of him he was plowing soil and feeding steers. We rest assured that "Smoker" will make a thorough success of scientific farming, especially in rearing hens and keeping bees as he was an apt student in Apiculture and Henology while here.

A. A. King is engaged in Dairying at Ludners, B. C. He has control of the Delta Creamery Co. He reports a very successful season, which reflects very highly upon Mr. King's ability as a manager. "Patty's" comical performances are very much missed in the Literary Society this year.

It falls to our lot to record a happy event in connection with the Horticultural Department. When the "Bachelor Club" was formed among the officers last season, Prof. H. L. Hutt refused to become one of their number and now we see substantial evidence for his decision. He has taken unto himself an estimable partner in the person of Miss Pook, of Perth, Ont. Congratulations.

C. P. Silcox, "the lad with the auburn tresses," of '94, is managing his father's farm, near Frome, Elgin county, and what is more, C. P. is running the ranch very successfully notwithstanding his extreme youth. His reputation as a football player and all round "sport" remains as of yore.

W. M. Doherty, B. S. A., has been appointed to the position of Librarian and Assistant Biologist here. "Doc" is a very accommodating librarian.

Prof. Panton will be pleased to hear that J. M. Vipond, '94, is engaged in collecting an extensive Herbarium. Mr. Vipond has sent to New Zealand, England and Bermuda for specimens. We wish Joe every success.

The following is a letter received by the Secretary-Treasurer and handed to us. We reproduce it for the benefit of our readers:

JUNIOR, ST. DAVIDS, BERMUDA.

"Hello! How are you?"

October 29, 1895.

To all whom it may concern:

Whoop her up, College!!! Inclosed you will find my year's subscription for the Review. I hope you fellows are playing up for your Alma Mater; so please send me the October number very soon that I may see how you are doing at present. I am growing Bermuda onions and lillies, but I would that I were at the O. A. C.

I believe you have two Bermudians with you again this year; and I can tell you it gives me great pleasure to know that there are at least two good men up there.

Be sure to have some good "Personals" so that I may know how the old chaps are getting along, for I am not so much interested in the new comers.

Long life and happiness to the O. A. C. and to its Review, and

may you all know all of Fortune's daughters except the eldest—Miss Fortune.

Remember me to all the chaps and especially the Bermudians.

I am, yours very sincerely,

E. A. McCALLAN.

The other day W. Elliott, '94, visited the College in company with his sister. "Billy" is looking well and is in the Dairy business, Jersey being his favorite. We were pleased to see him and his fair sister.

The familiar form of G. Lewis, '94, again adorns our corridors, and our Y. M. C. A. rejoice once more in possessing a competent organist.

Athletic.

Football does not seem to be exactly "booming" just now, whether it is owing to the approach of winter turning our thoughts on hockey or whether it is because we are so hardworked that we get no time for sports is hard to say. For some reason football seems to have lost a great deal of the popularity it had at the beginning of the term. Only one match has been played since our last issue, the match against Brantford.

The team, accompanied by a few football enthusiasts, left for Brantford on the 10:30 train and got to their destination about noon.

The match was to begin at three o'clock, but owing to various delays did not begin till nearly four o'clock. The day was a perfect football day, there being little wind, and the sun most of the time being obscured by clouds.

Our team won the toss and soon showed themselves better players than their opponents.

The ground was very different from our own "Campus," and bothered our team a good deal.

Half-time was called without either side having scored, though the ball was dangerously near the Brantford goal most of the time. One reason which may account for more goals not having been scored was that the ground was a Rugby ground, and the goal was, consequently, not the proper width for the Association game.

In the second half our team seemed to be getting more accustomed to the ground, and the Brantford goal keeper had plenty to do.

Ten minutes only were left for play when Brickwell, playing centre half-back, by a good long shot, scored a goal, the ball slipping right through the goal-keeper's hands. Score 1-0 in favor of the College. The ball was no sooner kicked off than it was returned to the wings by our halves and from there it found its way into G. A. Smith's possession who, making a good shot and charging the goal-

keeper, forced the ball between the posts and scored the second goal.

Time was called almost directly and we were left the winners by a score of 2-0.

The score in no way represents the game however. Our team had no trouble in checking any aspirations of the Brantford forwards, and our goal-keeper had only three times to show his good eye.

We did not leave Brantford without letting the citizens know how the game had resulted and on our journey home we remembered to give our football friends of Hespeler, Preston and Galt a friendly greeting. At Harrisburg one elderly lady was heard to enquire where the fire was! We can imagine how disastrous a fire might prove to such a metropolis as Harrisburg, consisting, as it does, of two hotels and a general store.

We got back to the College about ten o'clock, having had a very enjoyable trip and feeling in good humor with ourselves and every one.

A return match was to be played here on Thanksgiving Day, but owing to the wish of the authorities was cancelled. We hope to see our Brantford friends down here in the spring.

The hockey rink is being got into shape and will be far superior to last year's rink both in size and shape. Hockey promises to "boom" this winter and we hope the College may prove itself as successful in the game as it did last year. In our next issue we hope to have more in the way of Athletics, to report on, as we feel that this column is, to a great many of the students, as interesting, if not more so, than any other.

EXCHANGE NOTES.

Two Chinese girls from Kukiang, China, stood the highest in the recent Junior examinations of the medical department of the University of Michigan. They came to America three years ago at the solicitation of Miss Howe, a missionary from Ann Arbor, hardly knowing a word of English, and graduate next year to return to China as medical missionaries.—*Missionary Review*.

Old lady in book store: "Last Days of Pompeii!" So he's dead, poor fellow. I wonder what killed him?" "He died of an eruption, madam," said the grave-faced clerk.—*Ex.*

The precepts of the law may be comprehended under these three points: to live honestly, to hurt no man wilfully, and to render every man his due.—Aristotle, B. C. 384.

To spoil scissors: Cut everything from a sheet of paper to a bar of iron.

Radcliff College of Harvard University has seventy-five instructors for two hundred and twenty-five women students.—*Ex.*

"Man's life means tender teens, teachable twenties, tireless thirties, fiery forties, forcible fifties, serious sixties, sacred seventies, aching eighties, shortening breath, death, the sod. God!" Joseph Cook.