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# The O. A. C. Review.

VOL. VIII.

ONTARIO AGRICULTURAL COLLEGE, GUELPH, JANUARY, 1897.

No. 4.

## Editorial.

IT IS remarked by many persons who visit the O. A. C. after an absence of a few years, that such advances have been made in improving the old departments and establishing new ones as to render unnecessary any further outlay for the extension of the work, and that the equipment is now all that is required. But what appears to be a culminating point in the growth of the institution is in all probability, only a resting stage, from which it will emerge into a larger life with greater possibilities of development before it. Like any other human enterprise, it must adapt itself to the trend of events around it, and, in our opinion, the time has come when the question of a new departure will be forced upon the consideration of the Government.

The fact that the students now have increased facilities for the prosecution of their studies implies that they will have a higher standard of attainment, and will graduate as educated men who will compare favorably with those from the universities. If the college fails to produce such, it is not due to any inefficiency of the professors or of the students, but because a double work is attempted on one and the same curriculum. The institution appeals to the farmers for their support on the ground that the primary object is to turn out practical farmers. No one can deny that in this it has succeeded and easily bears the palm from all other agricultural colleges in America. On the other hand, the requirements of those who take the B. S. A. degree call for advanced work in the sciences of Chemistry, Botany, Bacteriology, &c. These two aims cannot be accomplished with success to both; one or the other must suffer.

The course of study for an associate diploma as given in the College circular enumerates thirty-one different subjects, together with some half dozen practicals, on which examinations must be passed. The idea is that a graduate at the end of three years should be fitted either to return to the farm or to qualify for some position requiring a special knowledge of agricultural science. With this in view, the curriculum has had added to it a little here and a little there, until it is too lengthy for a thorough mastery of the subjects in the allotted time.

There are really two classes of students in attendance here, those who have had a previous training in a preparatory school and who

have the ability and application which go to make good students, others who can barely pass the entrance examination, and who are unable to master the more difficult subjects of the course. Yet in the first and second year they must all take the same lectures and try the same examinations. It is unfair to those of the former class to compel them to spend part of their time in work which they have already covered. Why not specialize the work beginning even in the first year, and thus separate the two classes of students so that all could work to the best advantage?

A change of this nature would bring the course more nearly into line with modern educational systems, which offer a wide range of options. At Cornell the course for a degree in Agriculture is almost entirely elective in the junior and senior years. Even in the Collegiate Institutes of Ontario, where they follow strictly the regulations of the Educational Department, a considerable portion of the work is optional. Instruction is becoming more and more specialized to meet the demands of the age for men who are trained specialists in some department of art or science.

With an improved curriculum, a better class of students would be attracted who could pass a matriculation examination approaching the University standard. One or two of the languages, together with the sciences bearing on agriculture, might be required by those intending to take the course for the degree. Then with another year added to the course, the B. S. A. would be equal in every respect to the B. A. degree.

A proposal has been made that the regulations of the Educational system should be altered so as to permit graduates of this College to teach in the Public or High Schools of the Province. Their three years training is sufficient to qualify them for such positions, and they would be specially fitted to give instruction on practical subjects which are of value to the farmer such as Elementary Chemistry, Physics, Entomology, &c. Such a change would be in the right direction, and would be meeting the demand which is now made for more practical instruction, but there are two obstacles in the way of its adoption. One is that the teaching profession is already crowded so that the members of the profession are complaining of the ruinous competition which has brought salaries down to the level of those of the day laborer. Another is that while it has no place on the examinations it will not pay a teacher to devote any of the school time to an outside subject.

### CARING FOR MACHINERY.

Never in the history of Canadian Agriculture has there been a greater need of retrenchment of expenses along every line connected with farming than at the present time.

In travelling throughout the whole Dominion one is everywhere met with the cry of "hard times" among the farming communities, and the question is often asked: "What are we to do to make farming a paying business?"

A great many answers are suggested for the solving of the difficulty, and there are none more important than those advocating economy as much as possible. The assertion may be freely ventured that farmers, as a rule, practise less economy in the care of agricultural implements than in any other line on the farm.

How often we find implements of all kinds left exposed to the inclemencies of the weather during the winter months, in the exact spot where the workman left off work the last day!

The plow is often left beam deep in the soil for four months of the year, and, other times, dragged into the nearest fence corner, and there left still more exposed. The iron harrows are piled leaning against some fence; the cultivator in the corner of the turnip field; the hoes, hanging on the fence at the end of the last row; the self-binder drawn under some tree half the size of itself, being partly shaded from the morning sun, but getting full benefit of all the showers and the sun in the afternoon, and the wagon left along the lane fence, where it is covered with snow during the greater part of the winter.

In this short article, only the care of tillage implements will be spoken of, as most certainly the management and care of strong tillage implements must differ somewhat from that of barn machinery, which is always under cover, as that neither suffers from the same dangers, nor can it be treated in quite the same fashion, as that which is constantly exposed.

All strong tillage implements undergo a certain amount of unavoidable wear in the performance of their work, and, sooner or later, must give way in some part or other, but a great deal of the deterioration from other sources may be avoided.

The wearing and deterioration, as spoken of, of farm implements that may be regarded as unavoidable or reducible by adequate care, are chiefly due to the action of atmospheric agencies, which have played such an important part in the physical, as well as the life history of our globe. Air, moisture and change of temperature act with as much persistency in destroying implements and machinery as they have done in the disintegrating of rocks and converting them into fruitful soils.

One of the most active of the agents is the oxygen of the air, which causes the so-called rusting of the iron and steel. Rust is the result of a process of oxidation. The oxygen of the air attacks the iron part of the implements and converts it into "hydrated sesquioxide of iron," or iron rust, and thus the substance and strength of the implements are gradually worn away. The corroding oxidation occurs only in the presence of damp or moisture, iron, in its ordinary state, being unaffected by dry air.

The new combination remains in a state of loose cohesion and readily rubs or scales off the surface of the metal. The laborer, who

is ignorant of the above facts, becomes accustomed to the appearance of rust, and does not feel that it can do any real mischief. But the action of rusting, though apparently slow and slight, is none the less sure and none the less detrimental; and it cannot be too well realized that its presence indicates the operation of a constant foe to all iron implements. Just as, in the human subject, the painful disease of cancer cuts into the flesh of its victim, and gradually saps away his vital force, so the rusting goes on continually, and, sooner or later, its wasting action diminishes the efficiency of the strongest machine. Under constant exposure to its operations the thickest plates grow slowly thinner, bolts are weakened, screws become unworkable, the several parts no longer act harmoniously; and, at length, with some final jerk or strain, the catastrophe is reached, and the implement is unexpectedly found to be worn beyond repair.

Such a breakage of an implement or machine, during working hours, is commonly spoken of and considered as a misfortune, like bad weather, at which the farmer feels, perhaps, aggrieved at Providence, but for which he does not think himself in any way personally responsible. The view is false. Breakage of implements at work is usually like a stroke of paralysis in man, the final result of a gradual process of destructive weakening that has ultimately reached its point of culmination.

In nearly every instance the unexpected accident might have been foreseen and avoided, for it has been the direct and natural consequence of a gradual waste that has secretly impaired the power of the implement, and has rendered inevitable a break-down, which otherwise might have been long averted.

The effects produced on implements by alternations of temperature are by no means so generally understood as the action of air and moisture. It is, however, well known that metals expand when exposed to heat and contract when exposed to cold. In the same metal the expansion and contraction is always in the same ratio, but it is not the same in different substances. Thus, untempered steel has a lower coefficient of expansion than cast iron, and the latter a lower than wrought iron. Pine wood has only about one-half the expansion of wrought iron, while that of the latter is considerably exceeded by copper, brass, tin, and still more by lead, which has an expansion nearly five times as great as that of pine wood.

Now, when an implement is left in a field or an open yard, exposed to the heat of the noonday sun in summer and to the keenest frosts of winter, its parts undergo this alternate contraction and expansion to the utmost degree that the range of four temperatures permits. Should the implements be constructed of the same material throughout, the expansion and contraction would be uniform through the whole body. But should the implement be made of two or more substances, as is the common combination of wood and iron, the exposure to these extremes of temperature is more liable to be attended with injury. The wooden sections expand and contract in a different ratio from the iron; the harmony of the parts is disturbed, undue pressure of one part may be caused by the extra swelling, and undue looseness of another by the greater shrinkage. When the implement has recovered its normal temperature there is every likelihood that the firmness of its adjustments may be found somewhat impaired, and will succumb more readily to the strain of working. The repetition

of such exposure, day after day, and season after season, without the slightest doubt, lessens the durability of any machine.

Having looked into some of the agencies which have a detrimental effect upon agricultural implements in general, let us next proceed to promulgate some plans for the counteraction of such agencies.

From the study of the effects of air, temperature and moisture on implements, it will be readily seen that, to obtain the best results, implements require as much care during the summer as in the winter. We often hear the query, "How should agricultural implements be taken care of during the winter?" but very little is said of their care during the summer season.

It is needless to say that during the summer months we have sudden changes of temperature nearly every twenty-four hours. A cold night is very often followed by a warm day. If an implement, composed of iron and wood, is left exposed to the weather during the summer months, the sudden contraction and expansion will certainly have the effect of straining the implements. The wood work will be come warped and cracked; the joints will become loose, and the iron parts will become attacked by rust, which has been shown to have a detrimental effect. Implements, therefore, require urgent attention during the summer months.

On every well-regulated farm, an implement house is almost as necessary as any other farm building. Too often do we find implements stored here and there through the farm buildings, some in the stables, others in the corner of a hay mow, if the latter is empty, and some of them left under a temporary building, with a few boards for a roof and the sides all knocked out, the latter place being almost as bad as no covering at all.

The implement house does not require to be a costly building, but should be perfectly built, so as to allow no snow or rain to enter and wet the implements from time to time, the size of which should be determined by the number of implements to be stored therein.

The means that may be taken to retard the progress of deterioration and to shield implements from the wasting influences of the atmosphere, are few and simple in character, but not unimportant in effect. One very simple, practical direction is of great consequence.

All implements employed at intermittent work should be taken to the shed, placed under cover, repaired, well cleaned, oiled and kept ready for taking out again, at the shortest notice, in good working order.

By thus putting away implements and tools much time, worry and money will be saved, and the slovenliness of a yard strewn with machinery will not rise up and pronounce the owner as being a slovenly untidy and wasteful farmer.

To give a rough estimate of the loss of machinery that is left out of doors, let us take for an example two binders, costing the same, say, one hundred and twenty-five dollars each; doing precisely the same amount of work, but cared for under the two different treatments. L. T. Hunter, a very eminent authority estimates the loss, as nearly as he can calculate, to be two-thirds, when exposed as above mentioned.

Therefore, suffice it to say that the binder with the sheltered

treatment would last twelve years, while the one with the exposed treatment would only last four years.

G. W. MORGAN.

The above is from the pen of Mr G. W. Morgan, being an essay for which he was awarded a gold medal last fall. The prize was the gift of Mr. L. H. Dampier, Manager of the Strathroy branch of the Bank of Commerce, and the competition was open to the county of Middlesex. No less than ten essays were handed in, so that it is no empty honor to have secured first place in the contest. Ed.

### *The Metabolism of Nutrients in the Animal Body and the Source of Muscular Energy.*

In its widest sense the production of work means the conversion of latent into actual energy. In the animal it is the latent energy contained in the various components of the food or the body, which is thus converted into actual during the breaking up of these components into simpler substances. All work is performed at the expense of food or tissue and the more work is performed the less remains for the production of flesh, fat, etc.

The question as to the manner in which the food is utilized in the body in the production of energy has long been a subject of much study and controversy, and the general interest in the subject has widened as the investigations have advanced, and practical results have been obtained. Investigations along this line are extremely complicated, and there is a great liability to form incorrect conclusions and advance erroneous theories.

Liebig advanced the theory that protein is the source of muscular power. Voit also maintained the idea that the metabolism of protein was the important factor in the production of energy, and in proof of this advanced the theory that whether the organism is at rest or performing labor, the same amount of protein was metabolized. If mechanical labor is produced it is used for this; at other times it simply produces heat. He and Pattenkofer compared the metabolism of protein in a body to a millstream; it produces mechanical labor when it flows over the water wheel, at other times the energy is not utilized.

This theory is not accepted today. The maximum energy which the metabolism of motion in the body can yield has been determined by Rubner by means of exact calorimetric investigations. His data is used in determining the results of a large number of experiments conducted by Keller and E. Wolff on a draft horse. For a long period the animal performed the same amount of work daily, and the actual mechanical equivalent of this work, and the nitrogen excreted in the urine were determined. Assuming that only the protein can serve for the production of external muscular labor, in many of the experiments scarcely half the work done can be accounted for. This discrepancy is still more apparent when we remember that the beating of the heart and breathing represent a considerable amount of mechanical labor, which increases with increased external work.

While Pfluger has proved by his experiments on a very lean dog, fed exclusively with fat-free meat, that it is possible for an animal to live and do considerable labor on a purely protein diet, yet under ordinary circumstances there can be no doubt but that the nitrogen-

# THE O. A. C. REVIEW,

PUBLISHED MONTHLY DURING THE COLLEGE YEAR BY THE LIBRARY  
SOCIETY OF THE ONTARIO AGRICULTURAL COLLEGE,  
GUELPH.

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## SUBSCRIPTION RATES:

Annual Subscription, 50 cents; 75c. if not paid before 1st February.  
Single copies, 5 cents.  
Advertising rates on application.  
Extra illustrations requested by contributors 25c per column.

JANUARY, 1897.

free constituents of the body are also concerned in the production of mechanical force.

In support of the view that the nitrogen-free nutrients are the source of muscular energy, it has been suggested that the protein molecules undergo such change in the animal organism that nitrogen-free substances are produced, and that these are the real source of muscular energy. Voit believed in the theory and advanced the opinion that fat is formed from protein when it is supplied in excess. Many experiments were made which seemed to prove this theory. Among the more important are Petteukofer and Voit's long series of respiration experiments with dogs fed only on meat which was considered to be free from fat. The conclusion was reached that part of the carbon consumed in the protein of the meat remained in the organism in the form of fat, while all the nitrogen was excreted in the urine and feces. Recently Pflüger has carefully recalculated these results and has pointed out that the carbon content of the meat used in the calculation was too high, and the fat content too low. He claims that it is possible to derive all the fat which was stored up in the organism from fat contained in the food.

Voit did not believe that fat would be formed from carbohydrates; but the possibility of this has been repeatedly demonstrated by many experiments since made, among others those of Missel with swine. Pflüger also claims, as a result of his recalculation, that in many cases the result of Voit's and Petteukofer's experiments indicate the formation of fat from carbohydrates.

These opinions to-day are diametrically opposite to those entertained a short time ago. The formation of fat from carbohydrates, which was so long disputed, must be accepted as a well-proven fact; while the proofs of the formation of fat from protein are very much weakened.

But the facts which indicate a cleavage of the protein molecule into molecules containing no nitrogen require further consideration.

In severe cases of diabetes, considerable quantities of sugar are excreted in the urine, even if the diet contains no carbohydrates. It has been shown that the quantity of sugar excreted increases with the increased consumption of protein, but is not affected by the amount of fat consumed. It would seem also that glycogen can be formed and stored up in the liver by fasting animals, from the protein of the organism. This glycogen can be almost eliminated from the body by severe muscular exertion, thus indicating that carbohydrates can yield muscular energy.

The question of the most suitable proportions in which to combine the nutrients in order that the greatest amount of muscular labor will be produced is an important one. We will first consider the amount available under ordinary circumstances, as determined by experiments. It has been determined that about 35 per cent. of the total energy of the food is available for external muscular labor in the case of horses and dogs. Comparison shows that the animal organism utilizes the energy of the food for the production of external muscular work much more thoroughly than an engine utilizes the energy of fuel when only about 5 per cent. of the energy represented by the fuel value of the coal is transformed into mechanical power. The kind of food fed greatly influences the amount of energy available for external work. The nutrients which are assimilated from coarse fodder yield the organism about 20 per cent. less available energy than the same amount assimilated from grain, since the coarse fodder requires so much more energy for its digestion.

According to experiments, intense muscular energy must be derived from the combustion of protein. A greater amount of work performed in a much more leisurely way may be provided for by the combustion of nitrogen-free nutrients. This, perhaps, explains why many of the poorer classes in Europe and Asia exist in comparative comfort on a diet which, according to American ideas, is deficient in protein. The character and not the amount of work determines the amount of protein necessary. This theory certainly harmonizes with observed facts better than any other.—Synopsis of Prof. Zuntz's conclusions from Experiment Station Record.

## To Meet Low Prices.

A farmer in Illinois writes to the Country Gentleman as follows about the present condition of things on the farms of those farmers who are able to save some money even at the present low prices of farm products.

Lower prices and closer margins of profit have reduced but not eliminated the reckless waste of the past. The forage and straw of 150 million acres of cereals are not so neatly thrown away. The silo is preserving in succulence, immense masses of green forage; the shredder is rendering more available, eighty million acres of maize fodder; straw is beginning to be utilized in connection with various oleaginous and nitrogenous feeds, better balanced ratios avoid useless waste of feeding material; some farmers are beginning to learn the wastefulness of feed as fuel, and so protect their live stock from the wintry blasts, and keep their cattle growing in winter as well as summer, increasing the quantity and improving the quality of their beef.

More regular and scientific breeding is bringing meat-producing animals to the block in little more than half the time formerly required. There is greater economy of labor in every line of farm work, means are better adapted to ends, and much wasted effort avoided, yet there is still large room for improvement.

In these and many other directions there has been economic progress, which low prices have quickened, so that the cost of crops is greatly reduced, as has been the cost of almost every product of manufactory throughout the world.

## Locals.

### A Legend of the College.

In the hallway of the College,  
 When our daily tasks are ended,  
 Comes the Squirrel, Adjidaumo;  
 With his gong he makes a clatter,  
 Warning us of ended study,  
 Telling us our work is over.  
 Then upstairs in number thirtee  
 Sits the junior Adjidaumo,  
 Offspring of the college gardener;  
 He, to imitate his uncle,  
 Tries to make as loud a clatter.  
 Hither, then, flock all the students,  
 From the land of Upper Pantan,  
 From the land of Lower Pantan,  
 From the lands of Mills and Hunt streets,  
 Crowd right into number thirteen.  
 Then the Calumet, the peace pipe,  
 Is drawn from nearly every pocket,  
 And they're filled and lighted quickly.  
 And up rises the Peckwana,  
 Smoke that speaks of friendly feeling.  
 Tight the door is closed and window  
 So the smoke can not escape hence,  
 So that from our piper the essence  
 Comes not to untutored nostrils  
 Of some officer who'd fine us.  
 One of many in this chamber,  
 Was Iagoo, Boyd the boaster,  
 Teller of the mighty stories,  
 Legends from the land of Frenchmen,  
 From Quebec, the Frenchmen's province.  
 How a car with lumber laden,  
 High upon a mountain standing,  
 Started down the hill to wauder,  
 Gaining speed as it went farther,  
 Till the wheels were flaming circles,  
 Till the lumber was blown from it;  
 Faster went than telegraphic  
 Message on a wire delivered,  
 Faster than the lightning flashes  
 When the Manitow is angered.  
 Rushed through miles and miles of country  
 Till it lost all its volition.  
 Then the mate of Adjidaumo,  
 Yenadizzo, idler, gambler,  
 Enters through the guarded doorway,  
 "I'm tired of all this talking,

Tired of all the boaster's stories,  
 Here is something to amuse you  
 Better than this endless talking."  
 Then from one of many pockets  
 Forth he drew with solemn manner  
 All the game of whiskey-poker.  
 Made of paper were the pieces,  
 Fifty-two in number were they,  
 Some were bright and some were darker,  
 Some had numbers others pictures,  
 And all eyes were fascinated.  
 Then he shuffled all the pasteboards,  
 Dealt to each a certain number,  
 Taught to them the game of poker.  
 Game that's loved by all the Yankees.  
 Then when all had learned the secret  
 Yenadizzo played in earnest,  
 Took from all their hard-earned pennies,  
 Took their pocket-knives and pencils,  
 Had despoiled them of their women,  
 But that Adjidaumo senior,  
 Janitor, the old bell-ringer,  
 Came around with mighty clatter,  
 On the door did loudly batter,  
 "Gentlemen, all lights out, please!"  
 Ended then is all our gambling,  
 Homeward each one soon is rambling,  
 Soon in bed they dream with pleasure  
 How they will get back their treasure.

—o—  
 Mr. Mooney claims that he has been receiving more than his  
 share of attention in the local pages of past numbers. He should re-  
 member that the local editor loves a shining mark.

—o—  
 The different years have decided to adopt class mottoes as a sub-  
 stitute for the so-called college yells. The assistance of our classical  
 scholar, Mr. Wallace, alias Dublin, having been obtained, the follow-  
 ing were agreed upon:

First Year—E pluribus unum.

Second Year—Primus annus me impune non laessit.

Third Year—Mens agitat molem.

—o—  
 Another proposal has been received as to the kind of reservoir to  
 be built for fire protection. It is that the present swimming bath in  
 the Gymnasium be enlarged both in length and depth, thus giving a  
 sufficient volume of water in case of fire. Objections have however  
 cropped up. Pompey declares that instead of quenching the flames  
 the water would itself be so inflammable as to be entirely useless and  
 in fact dangerous. King sneers at this as he has tested the water by  
 the Babcock method and found only slight traces of fat or oil pre-  
 sent. He, however, offers the suggestion that the water would be too  
 warm to have any effect.

—o—  
 A strange problem has been troubling many of the students of

late. Quite recently it was discovered that the per cent. of butter fat in College milk varies considerably from the time it leaves the milk pail until it reaches the tables in the dining room. On two different occasions tests were made with the following results:

Sample No. 1 from the milk can at the stable, 3.6 % butter fat.

Sample No. 2 from the table in dining room, 1.8 % butter fat.

It is not likely that the problem will be solved without much thought and careful investigation. Many have been working on the idea that changes in temperature were responsible for the results. Some however think that the proximity of the officers' dining room to the kitchen has something to do with it, especially as some milk (?) has been found on their table testing 35.4 %. It still remains a mystery and a solution is anxiously awaited.

—o—

Another college record is to be broken, and what has hitherto been considered an impossible feat is to be attempted by Mr. Richardson next week. He finds he has eight engagements for the seven nights, all of which must be met.

—o—

After eating college dinners  
And drinking of the dairy cream,  
We know full well that we are sinners  
For our sleep's a horrid dream.

—o—

Reminder to unpaid subscribers:—

Lives of editors remind us  
Honest men don't stand a chance.  
The more we work there grow behind us  
Bigger patches on our pants.

—o—

#### NEW YEAR RESOLUTIONS.

F. A. Parker—There's no use talking, boys, I'm going to settle down and study—until the hockey season opens.

Barlie—Away with the frivolities and vanities of life! I give them all up.

Scotty—I'll stop flirting with the servant girls. Mrs. Craig may catch me.

T. C. Bell— I won't go home more than three times this term.

Forbes—Faint heart never won fair lady, so I'll not be backward in accosting young ladies.

Allison—I must not eat too much. Two platefuls of pudding will do me after this.

Morgan—I have sworn off on novel reading.

Muirhead—If the boys work hard I "not dock them.

Davis—I must reduce my expenses, especially my laundry bill. A sweater will do to wear to church.

## Personals.

A. Mackenzie, '95, is farming at Thornton, Simcoe Co.

—o—

The Reinke Bros., C. E., '93, and B. F., '95, are farming near Ancaster, Wentworth Co.

—o—

A. D. Harkness, '87, is farming at Irena, Ont. His specialty is poultry, and he reports a very successful year.

—o—

A. F. Wilson, '96, is on the homestead at McGarry, Lanark Co. His ardor for "things military" has no doubt abated somewhat.

—o—

John Buchanan, '94, is office assistant to Mr. Zavitz, our Experimentalist. Visions of a future third year are still in his mind.

—o—

J. T. Guy, '96, is farming at Columbus, Ontario Co. Jack would fain have been with the Third Year, had circumstances permitted.

—o—

W. H. Taylor, '95, is manning "Beechwood Farm," near Peterboro', for his father. He is following dairying, and reports prospects as being excellent.

—o—

W. J. Thompson, B. S. A., '96, is making rapid improvements in Mr. F. W. Hodson's farm at Brooklin. Rumor has it that he has a better half in the possibilities of the dim future.

—o—

J. W. McGillivray, '95, is farming at Sumas, B. C. His specialty is dairying, and he took a number of prizes on butter this season, besides conducting milk tests at their leading fall fairs.

—o—

Harvey Mitchell, honor graduate of the '95 Dairy Class, has been appointed Superintendent of the Dairy branch of the New Brunswick Bureau of Agriculture. Mr. Mitchell was one of the victims of the small pox scare and still cherishes memories of that occasion.

—o—

W. W. Ballantyne, '81, is farming and breeding Ayrshires near Stratford. It is a significant fact that, since 1892, he has been able to build up a herd of such a high grade as to win the sweepstakes at this year's Industrial Exhibition, and we take pride in pointing him out as an ex-student.

—o—

G. R. B. Maconachie, B. S. A., '96, has purchased 600 acres of land near Fenelon Falls, Victoria Co., and is going into mixed farming. He has also purchased some pure bred stock and will, no doubt, soon become a leading light in his district.

—o—

C. S. Carrick, '93, is in the boot and shoe business in Kincardine. He is still interested in Athletics, and writes that in 1894, he succeed-

ed in winning the championship at the Field Day of Kiucardine High School. We are, however, much surprised to learn that he is tired of farming.

—o—

W. G. McKenzie, '93, is teaching school at Fairview, Perth Co.

—o—

E. J. Whitworth, '91, is practising as a veterinary surgeon at Hall's Corners, Wentworth Co.

—o—

Alf. Moody, '93, has entered the veterinary profession in the State of New Jersey. He recently took a better half in the person of Miss Macdonald, of Guelph.

—o—

E. B. McMaster, '96, has purchased a fruit farm at Virgil, Lin. colu Co. He has started extensively into small fruits and expects to make a success of the business.

—o—

R. R. Elliott, '90, worked in our Live Stock Department for a time after completing his course and then received an appointment as herdsman at the Central Experimental Farm, Ottawa. His work there is entirely satisfactory as is proved by the condition of the stock and by the esteem in which he is held by his Superintendents.

—o—

D. Woolley, '92, visited us last month. Mr. Woolley took the Dairy Course in '93, and is following Dairy farming near Simcoe. A striking feature of his dairy is that it was started by his grandfather, continued by his father, and is now being carried on by him. It certainly must be a success.

—o—

R. N. Morgan, B. S. A., '92, attended the Ontario Veterinary College, Toronto. After graduating from this institution, he for some time practised as a veterinary in Rodney. He then went South and managed a dairy until this summer, when he was appointed Manager of the Louisiana Experiment Station at Audobon Park, under Director Stubbs.

—o—

From the Clinton "New Era" of Dec. 25th, we clip the following:—"A most pleasing event took place on Wednesday evening at the residence of Mr. A. J. Courtice, when his eldest daughter, Ellen E., was united in the bonds of holy matrimony to Mr. F. C. Elford, of this village. The ceremony took place at 5 o'clock, in the presence of a large number of invited guests, and was performed by Rev. A. K. Birks, of Teeswater, brother-in-law of the groom, assisted by Rev. G. W. Andrews of Holmesville, after which the guests sat down to a sumptuous supper. The presents, which were numerous and costly, betoken the high esteem in which the young people are held by their many friends.

The Review adds its congratulations and wishes Mr. and Mrs. Elford a long and prosperous married life.

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E. A. McCallan, '95, is farming on his native Isle—Ber-

muda. Writing of the Review he says: "It is the chief, in fact the only connecting link between the ex-students, their Alma Mater, and the present students. The chief object of the Review, especially of the Personal department, should be to foster among the students and ex-students that *esprit de corps*, which *does* exist among us, though some deny it. *Every* student should subscribe to the Review and as far as expedient, contribute to it."

The old boys of '95 will remember "Mac," and will no doubt concur with him in his opinion. It is well worthy of careful consideration.

### *Distribution of Samples from the Central Experimental Farm at Ottawa.*

#### *To the Editor of the O. A. C. Review.*

During the past nine years, samples of those varieties of grain which have succeeded best on the Experimental Farms have been distributed on application in 3-lb. bags to farmers in all parts of the Dominion, free through the mail. The object in view in this distribution has been to add to the productiveness and improve the quality of these important agricultural products throughout the country by placing within reach of every farmer pure seed of the most vigorous and productive sorts. This work has met with much appreciation and a considerable degree of success.

Instructions have been given by the Hon. Minister of Agriculture to make a similar distribution this season. Owing to the very large number of applications now received it is not practicable to send more than one sample to each applicant, but with this limitation it is hoped that the stock available will be sufficient to permit of every farmer who so desires sharing in the benefits of this useful branch of the work of the Experimental Farms.

The distribution now in progress consists of some of the most promising sorts of Oats, Barley, Spring Wheat, Pease, Field Corn and Potatoes. Requests for samples may be sent to the Central Experimental Farm, Ottawa, at any time before the 1st of March, but after that date the lists will be closed so that the applications then on hand may be filled before seeding begins. All communications can be sent free of postage. It is desirable that each applicant should name the variety which he desires to test, also one or two alternative sorts in case the stock of the sort chosen should be exhausted, while no promise can be made that the variety asked for will be sent, the wishes of correspondents will be attended to as far as practicable. The samples of grain will be sent early, but potatoes cannot be distributed until the danger of injury in transit, by frost is over.

WM. SAUNDERS,

Director, Experimental Farms

OTTAWA, January 5th, 1897.



## Exchanges.

### Ring Out the Chimes.

Ring out the chimes once more again,  
 O'er cloud-capped hills and towering trees,  
 Ring out the tones upon the breeze,  
 That all may hear upon the plain.  
 The years, how swift they onward press,  
 Each trampling on the others' heels,  
 And whirling round like tireless wheels  
 In one unwavering ceaseless race.

Ring out the chimes, loud, swell on swell,  
 O'er heaving sea and running stream;  
 Life, after all, is but a dream  
 From which we wake at death's loud knell.  
 We live and breathe our little span,  
 The generations come and go,  
 Ane go and come, and ebb and flow,  
 Submissive to the Maker's plan.

Ring in the year, the infant year,  
 Ring out all cares that trouble life.  
 Ring out hard times, of late so life--  
 Ring in good times, faint hearts to cheer;  
 That all may know and all may feel,  
 There is a God of truth and love,  
 Who watches o'er us from above,  
 And rules all nature for our weal.

—o—

How do you know that Hamlet had a bicycle? Because he said:  
 "Watch over my safety while I sleep."—Ex.

—o—

Although scientists cannot prove that man springs from a monkey, yet it is evident that woman jumps from a mouse.—Ex.

—o—

### GIRLS WHO MAKE POOR WIVES.

The following may be interesting to all our readers. It should also be profitable at least to many. We insert it for the use it may be to the students generally and not that it is needed in the Royal City and suburbs:

I never see a petted, pampered girl who is yielded to in every whim by servants and parents, that I do not sigh with pity for the man who will some day be her husband. It is the worshipped daughter, who has been taught that her whims and wishes are supreme in a household, who makes marriage a failure all her life. She has had her way in things great and small; and when she desired dresses, pleasure or journeys which were beyond the family purse, she carried the day with tears and sulks or posing as a martyr, the parents sacrificed and suffered for her sake, hoping finally to see her well married. They carefully hide her faults from her suitors who seek her hand, and she is ever ready with smiles and allurements to win

the hearts of men, and the average man is as blind to the faults of a pretty girl as a newly hatched bird is blind to the worms upon the trees about him. He thinks her little pottish ways are merely girlish moods; but when she becomes his wife and reveals her selfish nature he is grieved and hurt to think fate has been so unkind to him.

—o—

We notice in the December number of *The Sunbeam* a note referring to the general trend of our articles. In reply we beg to say that our aim has been to make THE REVIEW a college paper, one that would be of practical value to those engaged in agricultural pursuits. We conceive that our articles, being of a more or less scientific nature, might seem dry and uninteresting to the fair sex. We are conscious, moreover, that articles in the literary line would be more acceptable to the general public, but we must always keep the agricultural interests to the front. It must be admitted, however, that there is some ground for the criticism, and we take this opportunity to thank our critics and to say that we shall always be glad to receive just criticisms from any source, and especially from such as the above.

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We take the following from *The McMaster Monthly*: HOME is the sweetest spot on earth. The name itself awakens in our minds fond recollections which neither time nor trouble can efface. No matter where one may roam, the mention of home recalls to him instantly the scenes of childhood. Every nook and corner is dear to the memory on account of their associations. It makes no difference what one's fortune in life may be the recollections of home are always dear. Or if he establishes a home for himself the charm still remains in the mother and children. It would be difficult to over estimate the influence of the home on life and character. The brave deeds of heroes, the nobility of manhood, the chivalry, courage and fidelity of the good and brave are in many cases the result of seed sown in the home. The Spartans owed their renown to their home training. The lofty ideas of liberty of Washington and Lincoln were the fruit of Puritan homes. The Wesleys imbibed much that made them what they were at their mother's knee. The home is also the mightiest factor in a nation's life. A nation's power and influence is not to be measured by area, wealth or arms, but by her fire sides.

"For the hand that rocks the cradle  
 Is the hand that rules the world."

Home is not however a place of residence only, it is a place of sympathy, mutual confidence and love. It is for all to see that they do all in their power to make home what it really should be. Cursed be the man who sullies this heaven planted institution with vice, profanity or intemperance! Shame on that woman who does not give her best service for her home!

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"John, did you take the note to Mr. Jones?" "Yes, but I don't think he can read it, sir." "Why not, John?" "Because he is blind, sir. While I was in the room, he axed me twice where my hat was, and it were on my head all the time."—Ex.