

Volume XXV.

Number 8

# O.A.C REVIEW



Summer Sweethearts

MAY, 1913

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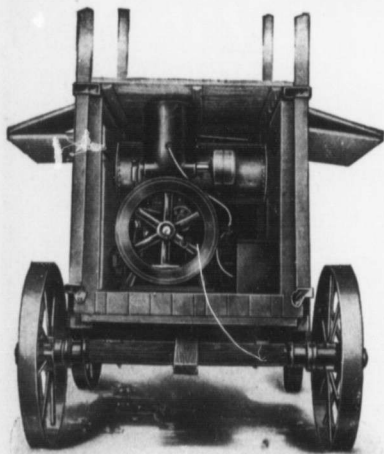
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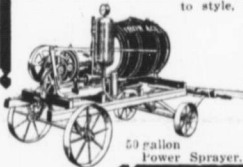
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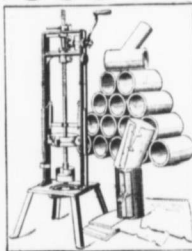
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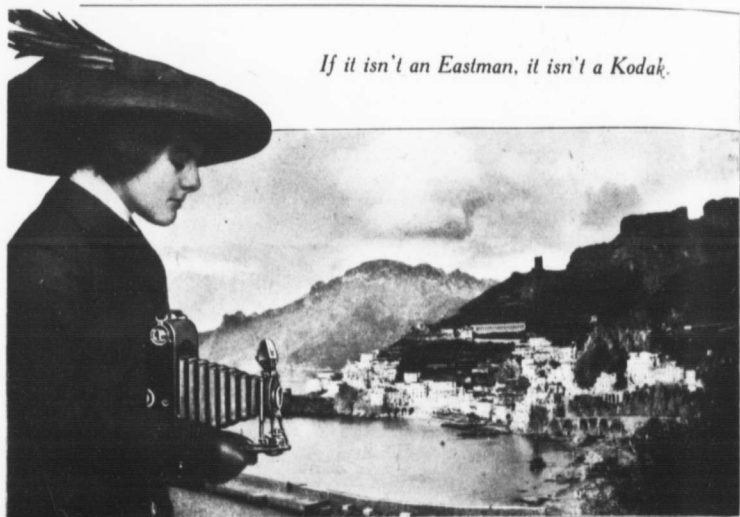
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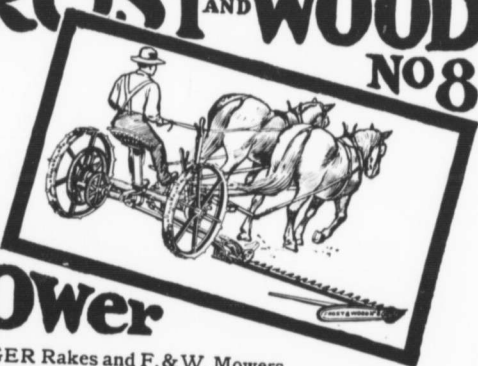
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## No 8



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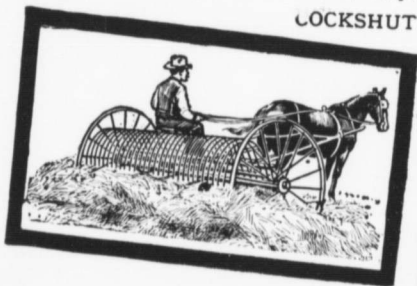
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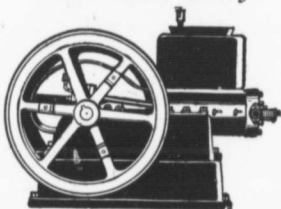
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**HON. J. S. DUFF,**  
Minister of Agriculture, Toronto, Ont.

**H. A. MACDONALD,**  
Director of Colonization, Toronto, Ont.

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# THE O. A. C. REVIEW

THE DIGNITY OF A CALLING IS ITS UTILITY

VOL. XXV.

MAY, 1913.

NO. 8

## Marketing Dairy Products, Etc.

OWING partly to the growth in population and partly to the increased consumption of dairy products by the average household, the Canadian market is rapidly expanding. Unless production increases the home market will eventually take care of a great portion of the output.

It is estimated that the total yearly production of Canadian dairy products has reached close to \$100,000,000. About 150,000,000 lbs. of cheese worth about \$20,000,000 is annually exported. The export butter trade has reached the vanishing point, and although each year sees an increased quantity of butter manufactured, yet butter is imported to supply market requirements.

A noticeable feature is the advance in milk prices since 1904. In May of that year cheese was selling on the country boards at from  $6\frac{3}{4}$  to 7 cents per pound, and creamery butter from 18 to 19 cents. This would net the producers scarcely more than 60 cents per hundred pounds for milk. The supply for the various cities could be secured within a narrow radius at about \$1 per 100 pounds. Milk condensers were just opening in Canada, little was known of milk powder, and ice cream was considered a luxury. Many people stated that the dairy business was overdone and the outlook at that time was rather discouraging. The fallacy of this

statement can best be realized when we view the present outlook. The number of condensed milk and powdered milk factories are increasing, thousands of gallons of cream are being utilized for ice cream purposes and the outlet for milk is constantly being widened. The growing towns and cities are demanding more and more milk and vendors are obliged to go into the milk producing centres for their supply. As greater quantities of milk is diverted into other channels than that of cheese and butter making, higher prices for these products must result. It would appear that never was there a time in the history of the dairy industry when prospects looked so bright for the producer provided advantage is taken of the many opportunities offered for gaining knowledge relating to more profitable production.

Cheese is sold chiefly on the "cheese boards" (where salesmen and buyers meet at stated times) on what is usually referred to as the "call" system. The name of the factory and the number of cheese offered for sale are tabulated. The factories to be first called are drawn from name cards by the auctioneer and when the factory is "called" the buyers bid. The buyer bidding first and highest gets the cheese if the salesman desires to sell at the price. As many as three calls are occasionally made before the highest bid is reached. This

plan is sometimes varied by the "selection" system, which allows the buyer to select the factories he desires after he has won the privilege by the first and highest bid. At times the board is merely a place where buyers and sellers congregate to "feel" the market and the real selling is done quietly on the "curb." There are also what is known as "regulars" or factories that sell subject to the highest price bid on some certain cheese board.

In the western part of Eastern Ontario and in Western Ontario, most of the cheese are inspected at the

duty it was to investigate any causes for complaint. As a result of the work of this commission the Federal Government may be asked to legislate on several important points regarding the buying and selling of cheese.

A few factories consign the cheese direct to buyers in the Old Country.

During recent years a number of Quebec cheese are sold on sample in Montreal by public auction.

One weak point in all the selling systems, except perhaps the latter, is that although the prices offered are for finest quality, yet the average



Cold Water Tank for Cooling Milk.

factory and weights at the car door.

The majority of the cheese in the eastern part of Eastern Ontario and Western Quebec are shipped direct to Montreal houses subject to inspection. A public weigher is employed to settle differences between buyer and seller regarding weights. For a number of years an official referee was stationed in Montreal, to whom disputes respecting quality might be referred.

Some of the dairymen apparently became dissatisfied with the direct shipment plan as evidenced by the appointment of a commission whose

quality governs to a great extent the price, and there is not sufficient discrimination made in favor of fancy goods. The importance of continually improving the average quality, striving to make the poorest as good as the best is quite evident, although "cuts" in prices on account of quality are much less frequent than was the case a few years ago.

Ontario creamery butter is seldom sold on the "Board," but over the telephone, by letter, on consignment, direct shipment, on contract, or bids are asked from the buyers at certain times. Perhaps since creamery but-

ter-making has only recently become prominent the Board System of selling has not yet had time to develop. In any case butter prices are now governed by local conditions rather than the export trade.

Large quantities of inferior quality home dairy butter find a first market at the country store, where it is paid for in trade at a price which usually does not take quality into consideration since the merchant does not always discriminate in quality or price, probably fearing to offend the customer, thus losing the trade to a competitor. There is very little incentive for the home dairy butter-maker, who depends on the country store for a market to try to excel. However when this butter reaches the consumer the poor quality has its effect on the market. "Packing stock" does not sell as readily as in former years, as the channel through which this butter reached a final market is gradually closing. Products made from vegetable oils are gradually replacing the poor butter formerly utilized for different purposes.

It is astonishing when we consider the economic waste in making into a poor quality of dairy butter thousands of pounds of pure milk fat.

The present creamery system is based on the constantly increasing and insistent demand for butter of uniform quality and such butter can no doubt best be produced in a creamery. A number of farm dairies turn out good butter that satisfies consumers, but in these days when creameries are so numerous it is a short-sighted policy to continue to make dairy butter of different grades when the cream may be placed in the hands of a competent butter-maker

at the creamery and a uniform quality of butter turned out which would sell for quality prices.

Our factory cheese should not only be attractively finished, but no cheese should be shipped which are too high for the boxes. Such cheese when piled one above the other in storage crack open, mould penetrates and much of the cheese is ruined. The boxes should be trimmed one-quarter of an inch below the top of the cheese and the weight should be neatly stencilled on the box next to the seam. One of the reasons that the consumption of cheese in Canada does not increase as rapidly as it otherwise would is that too much immature cheese is put on the market. The export trade is also to some extent suffering from the shipping of "Green Cheese." This does not mean that strong flavored cheese are preferred, but a mild, pleasant flavor which can be developed by curing the cheese at about 60 degrees.

The problem of material for cheese boxes will have to be faced shortly, as it is becoming very difficult to manufacture boxes from present available material at any reasonable price. Butter boxes should be double lined with the best parchment paper, which has been previously soaked in brine or formalin to prevent mould. Prints should never be packed in boxes in a soft condition, but allowed to harden and a paper strip placed under one print in each layer to allow easy removal. Whenever practical the better plan is to allow the butter to harden and then cut the prints with a cutting machine.

Print wrappers should be printed with ink that will not rub off.

The night's milk to be sent to the cheese factories should be cooled to

65 degrees immediately after milking by placing the cans in a tank of cold water. The morning's milk does not require cooling if the two messes are kept separate.

Cream to be sent to creameries should be cooled immediately after leaving the separator to 55 degrees by placing the cream can in an insulated tank containing cold water, or preferably cold water and ice.

Cheese and butter which will com-

mand the highest price can be made only from milk and cream delivered to the factories in first-class condition. The discriminating consumer will pay the price for fancy goods, and in the production of dairy products it is not possible to hold too high an ideal or labor to better purposes.

F. HERNS,

Chief Dairy Instructor for Western Ontario.



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# Ancient History of Football

S. H. GANDIER

THE honor of founding and fostering the game of football must be assigned to many nations. The old Teutonic tribes of Gaul not only used the skulls of their enemies for drinking cups, but they contemptuously kicked their severed heads about as footballs in a savage game. The Celts are believed to have used a certain football game in the worship of the sun-god. The earliest explorers of the north found the young Esquimaux playing on the ice floes with a football sewn with welt and filled with moss. Explorers in the South Seas found the natives playing a ball game with a ball made of bamboo fibre. The reason for this universal popularity of football throughout the ages is obvious; child nature is uniform the world over, and children who are forced to find and make their own toys will turn to the same objects. Country children in Canada today await eagerly the arrival of "butchering day" in the fall to get the bladder, to knead and roll it until pliable, then inflate it with a quill for a game of football in the pasture field. Four hundred years ago this custom of childhood was celebrated by Alexander Barclay, an English poet, in the following lines:

"And now in winter when men kill  
the fat swine,  
They get the bladder and blow it  
great and thine,  
With many beans and peasen put  
therein,  
It rattleth, soundeth and slimeth,  
clere and fayre,  
While it is thrown and cast up in the  
ayre;

Each one contendeth and hath a  
great delight

With foote and with hande the blad-  
der for to smite;

If it fall to the ground they lift it  
up again,

And this way to labour they count it  
no pain."

The earliest tangible record available would indicate that some form of ball was played as early as 750 years before the Christian era, for in Isaiah 22:18, we find the verse "He will turn and toss thee like a ball"; but the earliest reference to a game approaching our modern Rugby is in early Greek literature. The game harpaston was very popular at Sparta. It was played on a rectangular field, marked with side, goal and centre lines. The number of players was unlimited and the object was to force the ball by kicking or carrying, across the opposite goal line. Any form of blocking, holding and tackling was permitted.

From Greece the game found favor in Rome, and the first football fan of prominence on record was Emperor Augustus, who, in B. C. 28, demanded a revision of the football rules. Augustus' objection to the existing game, however, was its gentleness, which he considered too childish for Roman youths intending to become centurians and commanders of legions. The game continued to be played throughout Italy until the middle ages, and in 1898, was revived at Florence. The Italian game was played on a square field with side lines, goal lines, centre line and goal posts. There were twenty-seven

players on each side organized in the manner of Roman military tactics. Each side was divided into fifteen forwards, five quarter backs, four half backs and three full backs. Scoring was accomplished by kicking or carrying the ball across the goal line between the posts. Ends were changed after each goal. The game ended at sun set. The supporters of the contesting teams, provided with horns and banners, occupied seats behind the goal posts. At the conclusion of the game it was customary for the vanquished to deliver their banners to the winners.

The history of football in England is as tempestuous as the early English game itself. It is clear that through a long period the game did not enjoy royal favor. Early in the fourteenth century football was played in the streets of London with great noise and violence. Complaints by many citizens caused Edward II. in 1314 to issue the following proclamation to suppress the pernicious game:

*"Forasmuch as there is great noise in the city, caused by hustling over large footballs from which many evils arise, which God forbid, we command and forbid, on pain of imprisonment, such game to be played in the future."*

Thirty-five years later, in the reign of Edward III., the game became so popular as to threaten to submerge the practice of archery. Accordingly an edict was issued prohibiting many sports, among which were hand-ball, hockey, golf and football. In 1389 football was forbidden by Richard II., and in 1410 it fell under the displeasure of Henry IV. James I., writing a book on deportment for the education of his son, Henry, Prince of Wales, wrote:

*"From this court I debar all rough and violent exercises, likewise football, meeter for laming than for making able the users thereof."*

Several early English writers were decidedly opposed to the game as played in their time. Philip Stubbs, in discussing the degeneracy of the times, wrote:

*"For as concerning football playing, I protest that it may rather be called a friendly kind of fyghte than a play or recreation, a bloody and murdering practice than a fellowly sport or pastime. For doth not everyone lie in waight for his adversary, seeking to overthrow him, and pick him on the nose, though it be on hard stones, on dale or valley or hill, and he that can serve the most of this fashion he is counted the only fellow, and who but he. So that by this means sometimes their backs are broken, sometimes their legs, sometimes their armes, sometimes their noses gush out with blood. For they have the sleights to mix one betwixt two, to butt him under the short ribbs and peck him on his nose, to dash him against the hart with the elbows, with a hundred other murdering devices."*

But football had too strong a hold upon the hearts of the sturdy English youths to be suppressed by royal edicts. In the seventeenth century a French writer who visited England says: "In winter football is a useful and craming exercise. It is played with a leather ball about as big as one's head, filled with wind. This is kicked about from one to another in man, in replying, stated on seeming the streets by him that can get at it and this is all the art of it."

At Teddington and Twickenham, each Shrove Tuesday, prudent householders covered their windows with



boards and bushes until the mighty game that roared through the streets for hours had ended. In fact in all market towns throughout England on this holiday, business was suspended and the afternoon given over to a great game of football in which his Honor the Mayor invariably kicked off and every able-bodied citizen followed the ball.

In 1650 football was regarded as a national institution throughout Great Britain. The great game of these times was that fought at Chester every Shrove Tuesday in commemoration of the battle of Chester in the year 217, when their English ancestors formed a mighty wedge and rushed the Roman garrison out of the city. The goals for the football game were the Town Hall and a cross in an open space outside the city. The playground was between these goals, a vast space featured with fences, walls, trees, houses, city blocks and streets, but was none too large for the several hundred contestants. Occasionally, about this period, one town challenged another

and the game would be waged between the towns. The ball was kicked off midway between the two places and the battle would wage furiously "by hill and dale" until dark or until one side had kicked the ball into the other's town.

About 1680 football began to be adopted by the secondary schools of England. The distinguished Joseph Addison was a great school boy leader of the sport. Later in life in an article on "Rustic Amusements he write with pride of the many matches in which he had played; also William Cowper, the poet, never ceased to tell of his "excellence at football while at school."

It is at this period that we begin to find the real foundation of the modern game, for not until the school-boy took it in hand, was any attempt made to create a properly organized game dominated by specific rules.

(Editor's Note.—June issue will contain another article on football, outlining the later history of the game.)



The Football Team at Varsity Grounds.

# Future Markets for Canadian Fruit

W. W. MOORE, Chief Markets Division, Ottawa

**T**HE greatest market for apples to-day is found within the borders of our own country and as time rolls on larger and larger quantities will be required to meet the demands of our home trade.

Our second greatest apple market is found in the United Kingdom where the product of the Canadian orchards is sold in friendly but strenuous competition with apples from the Homeland and the United States.

Other markets, some of which are only in the initial stage of development, are found in Germany and other parts of Europe, in the United States, Newfoundland, South Africa, the West Indies, Australia, South America, etc., but for some years to come the main demand for our apples will come from the first two markets mentioned—Canada and Great Britain.

## Extent of the British Market.

In the last nine years there has been practically no increase in the quantity of apples imported yearly into the United Kingdom. In 1904 the total importation was 3,771,781 hundredweights and in 1912 it was 3,881,947 hundredweights. It is significant, however, that in the same period the imports of bananas almost doubled, jumping from 3,910,511 bunches to 6,978,867 bunches.

The lack of increase in the apple imports was not due to an augmented home supply as, so far as I can learn, the annual production of apples in Great Britain, apart from the usual crop fluctuations, has not varied much in the eight years in question. Taking into account the increase in

population it is therefore apparent that the per capita consumption of apples in the United Kingdom has in reality declined since 1904 seeing that the actual quantity consumed each year has remained practically the same. According to my calculation the present consumption of apples in the United Kingdom, including those for cider and all other purposes, does not exceed one half bushel per head, a rate which is unreasonably low in view of the recognized value of the apple as a wholesome food product. If the efforts that were used to advertise and push the sale of bananas in the British Isles were employed there on behalf of the apple, I have no doubt that the consumption of the latter could be increased fourfold.

That Canada is now the chief source of supply for imported apples is shown by the fact that in the period from September 1, 1911, to April 30, 1912 out of a total importation of 2,850,000 barrels, this country furnished 1,520,387 barrels, the United States 981,130 barrels and other countries 348,483 barrels.

If consumption in the Old Country continues at the existing level it is not likely that the total quantity of apples imported annually will show any material increase over present figures except in years when the home crop is more or less a failure, and it is therefore obvious that Canada can only acquire a larger proportion of that market at the expense of her principal competitor—the United States. In this competition the only advantage possessed by the United States is the size of her crop; in all

other respects this country occupies the better position. In the States the growers can hardly hope to become organized as one body to the same extent as is possible in Canada, nor are they ever likely to have the benefit of one uniform law regulating grading and packing such as is now in force in Canada. In order to take full advantage of the situation, however, a greater measure of organization among Canadian growers is required and happily the present tendency is strongly in that direction.

#### **Our Domestic Market.**

The consumption of apples in Canada also is much less than it should be. Assuming that in 1912 this country produced approximately fifteen million bushels of apples, good, bad and indifferent, and deducting from this 10 per cent. for culls and waste, or say  $1\frac{1}{2}$  million bushels, and 5 million bushels for export (including fresh and dried apples), we still have  $8\frac{1}{2}$  million bushels left to be marketed in Canada either in a raw state or dried, evaporated or canned. To this figure we must add 600,000 bushels to represent our imports of apples, making a total of 9,100,000 bushels. Divide this by our population of  $7\frac{1}{4}$  millions and we get a per capita consumption of  $1\frac{1}{4}$  bushels. If the consumption could be increased to two bushels per head, surely a reasonable estimate, it would enlarge our home market 60 per cent. and offer an outlet for an additional  $5\frac{1}{2}$  million bushels. The same conditions obtain in the United States where the quantity of apples consumed per head is probably slightly greater than in Canada.

The combined population of the United Kingdom, the United States and Canada is 143,000,000 and if the

yearly consumption of apples averaged two bushels for each individual, 286 million bushels would be needed to meet their wants. Last year's apple crop in the three countries named probably did not exceed 153 million bushels at an outside estimate, and the increase in production in Canada and the United States, which is looked for in the near future, would in these three markets alone be comfortably taken care of, especially as the increase in population in the three countries amounts to about  $1\frac{1}{2}$  millions a year.

#### **Increased Production Looked For.**

And all the signs point to a large increase in the production in the next few years. In the Northwestern States and in British Columbia there is said to be about 290,000 acres under apples which produced last year about 15,000,000 bushels with only 8 per cent. of the trees in bearing. It is thought by some that the Northwestern States will grow forty-five million bushels in 1913 and that the total crop of Canada and the United States in that year will reach 300,000,000 bushels. In Nova Scotia there has been a noticeable expansion in the apple growing industry of late years and predictions are freely made of a crop of 9,000,000 bushels from that section alone within five years.

The outlook, therefore, is for a period of readjustment of conditions and probable lower prices, which will undoubtedly bear heavily on districts in both Canada and the United States, where the cost of production and marketing is high owing to unsuitable soil, inflated land values, distance from markets and undesirable varieties. The grower of low grade fruit, wherever located, will also feel the pinch and will be obliged to improve

the quality of his product or else go out of business.

The cheering feature of the situation is that even under the present non-aggressive selling methods there is hardly a reasonable limit to the quantity of No. 1 apples that can be sold. Consumers are getting more particular every year and when quantities of low grade apples are dumped on the markets sales drag and prices for all grades decline. It has been said of the Western apple growers that they have grasped the truth "that two good apples are worth more than two good apples with two poor ones thrown in." One of the principal aims of the Canadian apple grower, therefore, should be to produce as

high a percentage as possible of No. 1 fruit. But after he has succeeded in growing first class apples the grower still has the marketing problem ahead of him and if this is to be solved satisfactorily there must be organization among the individual growers so as to achieve intelligent distribution. Under the present haphazard methods there is uneven distribution resulting sometimes in a dearth of apples in some markets and a glut in others. Co-operative marketing holds out the only hope for an amelioration of these unfortunate conditions, and the wider this movement extends over the apple growing sections the more successful it will be.



#### "CANADIAN BORN"

We first saw light in Canada, the land beloved of God,  
We are the pulse of Canada, its marrow and its blood,  
And we, the men of Canada, can face the world and brag,  
That we were born in Canada, beneath the British flag.

Few of us have blood of kings, few of courtly birth,  
But few are vagabonds or rogues, of doubtful name or worth,  
And all have one credential that entitles us to brag,  
That we were born in Canada, beneath the British flag.

We've yet to make our money, we've yet to make our fame,  
But we have gold and glory in our clean Canadian name;  
And every man's a millionaire if he can only brag  
That he was born in Canada, beneath the British flag.

No title and no coronet is half as proudly worn,  
As that which we inherited as men Canadian born;  
We count no man so noble as the one that makes the brag,  
That he was born in Canada, beneath the British flag.

The Dutch may have their Holland, the Spaniards their Spain,  
The Yankee to the south of us must south of us remain,  
For not a man dare lift a hand against the men who brag  
That they were born in Canada, beneath the British flag.

—E. Pauline Johnson.

# Heckee, The Striped Chipmonk

CHARLES G. D. ROBERTS

**F**ORCED out of his own dwelling, which had been both commodious and retired, Heckee, the striped chipmonk, moved indignantly over to the next hillside, and chose a site for his new home near the south face of the delapidated stone wall which separated the beech wood from the upland pasture.

He had had a peculiar, exasperating experience. Quite by accident, an ill-conditioned but obstinate mongrel terrier from the farm down in the valley had found the narrow entrance to his underground abode, and had started to dig him out. This, of course, was a vain undertaking for any dog, for not only was the entrance tube several yards in length and leading a good three feet below the surface, but the central chamber, or dwelling proper, had another exit, yards away, by which Hackee had come out at his leisure, to perch on a nearby fence rail and shriek chattering curses at the foolish dog. Having a strain of daschund among the many which went to his pedigree, the terrier had really done a fine piece of burrowing before he realized the futility of his efforts, and backed out of the hole, with eyes and fur full of dirt, to give ear to Hackee's shrill insults, and trot off with assumed indifference in search of some more advantageous enterprise.

This had been late in the afternoon. On the edge of evening, a family of skunks had come by, and had at once adopted the roomy burrow which the terrier had excavated for them. Lazy burrowers themselves, the skunks were no fools. They knew how to profit by a good thing when it came

their way. They had continued the work of the dog until they had reached Hackee's central chamber. To Hackee's voluble and stuttering wrath, they had taken possession of it at once, enlarging it to suit their dimensions. They were certainly no company for a chipmonk. There was nothing for it but to yield place to these lazy but formidable invaders. Hackee and his whole family had taken themselves off, stealing through the silent dusk with a silent diffidence quite unlike their chattering daily audacity. They knew that the dusk was particularly dangerous for them; so they had scattered at once, seeking refuge in the burrows of friendly neighbors, or in nooks which their daylight wanderings had revealed to them. It had been a nerve-trying night for Heckee, trembling in a hastily enlarged mouse-hole dangerously near the fox-and-weasel-hunted surface. As soon as the full pink tide of sunrise had driven the night prowlers to their dens, he had set himself to the securing of new quarters. For none knew better than he that, to a ground squirrel with no underground retreat, this sunny hillside, these cheerful, tranquil beech woods, these open pastures with their calm-eyed cattle, were a region of imminent and deadly hazard.

Pending a decision as to the exact spot where he would begin to sink his tunnel, Heckee kept along the old stone wall, because, with its chinks and crannies it was more likely than any other path to offer him a hiding-place in case of emergency. In the early sunshine there were many other chipmonks abroad, out for their

morning sip of dew. They were playing or foraging among the leaves, racing in utter abandon of mirth up and down the old wall, or sitting up alertly to chirp and chatter to each other their satisfaction at the promise of a fine day. But Heckee felt himself quite alone among them. He knew that each of them had a safe burrow close at hand. He had no chattering or chirruping to do. He was a thing apart, a chipmonk without a hole. And all his wits were anxiously, concentratedly on the alert against the perils which he knew might assail him from earth or sky at any instant.

He was not even hungry, for the moment, because his anxiety was so absorbing. Therefore it was that he, being the most vigilant, was first to catch sight of a pigeon-hawk which came stealthily through the branches of a great birch tree near the wall, and dropped like a fly-catcher in the hope of capturing one of the morning revellers. But Heckee's piercing chirrup of alarm, ere he whisked into a crevice, had been enough. Every chipmonk heard, and dodged with a celerity which even that swift hawk could not match. The alarm cry passed the length of the wall. The hawk pounced this way and that, zig-zagging with the speed to confuse the eye. But not a chipmonk could he catch; and presently, in the sulks, he sailed off to try his luck with less nimble game.

When he was gone, Heckee whisked out from between the stones, ran on some fifty feet further and stopped to peer about him carefully. This seemed a likely spot for his purpose, and it was not overcrowded. On the pasture side of the wall a big chipmonk came out from a hole about

three feet distant, and scolded insolently at the stranger. But Heckee was not insulted. He was a stranger, and he knew he must take the consequences. He proposed to get over being a stranger just as quickly as possible, and to this end he decided to establish himself just across from his insulter, on the other side of the stone wall. Here beech trees were scattered, and the sward was close and firm, such as he loved, and the autumn sunlight lay warm under the wall.

Some three or four feet from the wall he marked a spreading, prickly bush of juniper, under which, as he calculated, he might begin his digging operations without much fear of interruption. All seemed secure. No hawk or fox was to be seen. The red squirrels and the blue-jays wrangled merrily and carelessly in the trees—a sure sign that there was no marauder about. Along the wall and on the close, gossamery turf at either side, other chipmonks gamboled or foraged or scratched at the sod with their clever little hand-like paws. And a soft, irregular tonk-tink, tonka-tink, tonkle came from the line of red-and-white cows loitering up to the pasture from the milking-shed.

Heckee gave a chirrup of satisfaction, and was on the very point of jumping down from the wall, when a piercing chirrup of alarm stiffened to a stone. Everywhere, on the instant, he saw chipmonk after chipmonk flash frantically to its hole, shrieking the great danger signal as is vanished.

For half a second Heckee's heart stood still, for this, according to the signals, was one of the most dreaded enemies of his tribe—a weasel. From this enemy, a swift pursurer and a

tireless, implacable tracker, there was but one safe refuge—the chip-monk's hole, too narrow at the entrance for a weasel to squeeze himself into. And Heckee had no hole to take refuge in. He knew that he would be smelt out immediately if he tried to hide in some cranny of the wall. For some precious moments he stood there alone in the perilous world, his sharp stripes of black and cream vivid on the foxy red of his cheeks and sides. Suddenly the weasel slipped into view, emerging on the top of the wall a long, low, sinuous, deadly apparition, with a vicious, pointed face and cruel eyed. He was not more than ten feet away.

Heckee came to himself. He bounded into the air as if galvanized, came down on the pasture side of the wall, and slipped like an eel down into the burrow of the stranger chip-monk. The weasel was so close at his twinkling heels that Heckee heard the snap of jaws just behind the tip of his tail.

Exasperated at this escape when he had felt sure of an easy kill, the weasel strove, with a snarl, to force his triangular head down the narrow entrance. As he knew, however, from many a previous effort, this was a waste of time. He presently gave it up, and darted off on the trail of a rabbit which was unlucky enough to go hopping by at that moment.

Heckee knew well enough, that, as a stranger to the burrow, and especially as an invader from another colony, he need by no means look for a welcome in his forced refuge. He kept near the entrance, therefore, trembling and making himself small, and hoping that the proprietor would not appear. But it was a vain hope. Within a half minute the proprietor

did appear, and rushed at Heckee open-mouthed with the most inhospitable squeal. Heckee understood very well that etiquette required him to withdraw from the hole at once. But etiquette had little concern for him so long as he thought the weasel might be waiting outside. He met the attack with the courage of necessity, and for a few seconds the narrow confines of the tube were filled with chirrups and squeals and flying foxy fur.

Suddenly the proprietor, indignant at the refusal of Heckee to go out and feed the foe, withdrew to seek reinforcements. Heckee understood what his withdrawal meant. He had no wish to fight the whole family. Slipping back to the entrance, he stuck the very tip of his nose out and sniffed. The taint of weasel was on the air, but it was certainly disappearing. Very cautiously he put his whole head out and peered around with knee, wary eyes. The weasel was nowhere in sight. For a little he waited there, half in and half out. Then came a scurrying of feet behind him in the depths of the burrow. He darted forth discreetly and whisked into a hole in the wall. The next moment the inhospitable household came forth one by one, and again began chattering uncomplimentary things about him, which he did not think it worth his while replying to. Slyly peering forth with one eye from his hiding place, he noticed that all this chatter failed to bring back the weasel. This being proof enough that the coast was now clear, he whisked out, jumped over the wall, and under the shelter of the juniper bush where he proposed to have his front door.

He began by digging a round hole,

perhaps three-quarters of an inch in diameter. With sharp, jerky motions he packed the edges hard and firm, till the diameter was enlarged to a full inch. The earth, every morsel of it, he carried off in his capacious cheek pouches—which stretched far back under the loose skin of his neck—to empty it under another bush half a dozen yards away. He was much too wary to leave the fresh earth, to betray him, on the grass beside the entrance; and, moreover, he was too cunning to leave any trail between his dumping ground and his place of operations. He made the journey to and fro by great leaps, swerving erratically now to one side, now to the other.

The entrance looked hardly wide enough to admit his head. But that, he knew, was sufficient; for where his head could go through also his whole lithe body, which, for all its strength, was as supple almost as a glove. At a depth of less than one inch, however, he began to enlarge the shaft gradually. He worked with a nervous, jerky vehemence. Every half minute he would back out and lift his head—whiskers, forehead, and ears covered with earth—to take a swift look about and assure himself that no enemies were approaching. And his trips to the other bush, his dumping-ground, took place with amazing frequency, so resolute was he that not a grain of new soil should remain beside his doorway.

The shaft which Heckee was digging so assiduously led straight downward. At a depth of four or five inches its diameter was sufficient for him to turn around in it comfortably. At this diameter he kept it. He could now work with more security and satisfaction, because, be-

ing completely hidden, he was not compelled to look about him for enemies every half-minute. Turning himself round and round, he packed the walls of the shaft hard as he went, and so reduced considerably the amount of his trips to the dumping-ground.

Straight downward the strenuous digger sank his shaft through the light soil to a depth of nearly four feet. Then he turned at an abrupt angle, and began running his tube diagonally, with a gentle upward slope, towards the stone wall. But by this time he had done so much excavation that he felt the need of finding a new dumping-ground, it being against his doctrines to make any of his operations too conspicuous. Moreover, having now a refuge, a place that he could call his own, however unfinished, he began to realize that he was hungry. Such a bundle of energy and fiery nerves as a chip-monk cannot go long without feeding his forces.

Whisking forth from his hole, he sprang to the wall, and perched himself on its highest stone to look about. He sat up now with a confident flirt of his tail, chattered a defiant proclamation of proprietorship, and proceeded to make a hasty but necessary toilet, combing the earth from his ears and fur. Several other chip-monks, belonging to the immediate neighborhood, eyed him doubtfully, as if half inclined to combine and drive him away. But his assured air had its effect, and he was not interfered with.

His toilet accomplished, he sprang down again from the wall and began rummaging for nuts among the leaves beneath the nearest tree. But this was ground that had evidently been



gone over. He went on deeper into the grove. It was a pleasant place for his foraging. The bland autumn sunlight came sifting down through the browning leaves. There was no wind, but the branches were gay with screaming blue-jays and chirring, jibing red-squirrels; and from time to time two or three nuts would come pattering down, either dropping of their own ripeness, or jarred off by the tree-top revellers. Heckee was not long in making his meal; and then, being ever a provident soul, he began to cram his cheek-pouches.

While he was thus occupied, a trim moose-bird pounced down hard upon the leaves a few feet ahead of him, scrutinized him with bright, impudent eyes, squawked harshly, and finally made a rush at him with open beak and lifted wings. But Heckee knew the moose-bird for a mischievous bluffer and practical joker, and he carelessly went on gathering nuts.

For a few seconds the fantastic bird danced about him, getting more and more excited at finding herself ignored. It looked as if she might almost work herself up to the supreme audacity of tweaking the busy forager's tail. But suddenly there came a scream of warning from the sentinel blue-jay in a near-by tree-top. It was taken up on the instant by a chorus of shrill voices. The moose-bird flew up to a convenient branch, and Heckee thinking it might be a fox that was coming, whisked under a root and peered forth anxiously.

There was no sign of a hawk; but presently he made out two blue-jays, in the next tree, peering and scolding down at something on the ground. Their accents told him it was a fox. If so, this hiding under the root was no place for him. Slipping around

the trunk, in hope of putting it between himself and the enemy's eye, he made a dart for the wall. But the fox saw him and gave chase.

It was a desperate race, but Heckee won. He whisked down into his hole just as the fox arrived. At the foot of the shaft, however, he crouched trembling. He had forgotten till now that the unfinished tube might not be a refuge, but a trap. He knew that the fox was a good digger. His heart thumped wildly, and he crowded himself into the beginning of the level gallery, fearing lest the fox should look down and perceive his predicament.

If the fox had been young and ignorant, or excitable enough to indulge in apparently futile effort, Heckee's career would have come to an end at this point. But, happily for him, this fox was a wise one. He knew that chipmonks had not only deep and elaborate burrows, but also that they always dug them with more than one exit. How was he to guess that this case was the one exception in a thousand instances? He blinked shrewdly, threw a quick, sharp glance about to see if he might not snap the fugitive in the act of emerging from some back-door, and then went trotting off indifferently down along the wall, pouncing on the fat locusts as he went.

As soon as Heckee had recovered his composure, he fell again to his digging, and soon had his level tube advanced a couple of feet. According to the plan which he was carrying in his capable little brain, the central chamber, or main habitation, was to come directly under the wall; and then for the better baffling of all kinds of enemies, the second entrance was to be on the other side of the

wall, in the pasture field. But by this time he was once more hungry. And now he remembered the stores which had been left behind in the old borrow. Some of them, doubtless, being in narrow side galleries, would be well away from the intruding skunks, who had no interest, moreover, in the nuts and grain and roots which make up chipmonks' hoard. He hoped to be able to come at these treasures, by a little tunnelling, without being brought in contact with the objectionable usurpers.

Reaching the old home and slipping in by the back door, he found that several other members of his household had anticipated him. They had stopped up the back exit a little way from the central chamber, thus cutting themselves off from the skunk family, and they were now busily engaged in feasting on the accumulated stores. Heckee followed their example till his own hunger was satisfied, and then lured them back, each with crammed pouches, to the new home beside the stone wall, where they all fell to with a zest at the work of excavating.

In two or three days the new home was finished, and all the accessible stores from the old place safely removed to it. The main tube, from the original entrance shaft, ran on a gently inward slope for a distance of some seven or eight feet to the central chamber, the real dwelling of the family. The chamber, perhaps a couple of feet in length, but considerably less in width, and nearly a foot high to the centre of its arched ceiling, was spread with a thick layer of the finest and silkiest of dry grasses. It lay exactly beneath the stone wall. Off it led several short storage galleries, to be enlarged or duplicated as

the accumulation of stores might call for. Another tube, five or six feet long and slanting slightly downward, was run from the rear of the living room, and terminated in a second perpendicular shaft similar to the first. The top of this shaft was in the open pasture on the other side of the wall, and depended for its privacy on the short grasses fringing its tiny entrance.

Thus comfortably established, Heckee and his diminished household—for several of the family had meanwhile settled themselves elsewhere—slipped without further difficulty into the life of their new neighborhood. The chipmonks being a friendly folk, there was no more hostility shown to the new-comers, who now took their part of course in the gambols among the dry leaves and in the chattering conversations which sometimes went on intermittently through the long, drowsy afternoons. Nuts were abundant that autumn, so the supplies in the storage galleries increased till there was no fear of a winter scarcity. And to vary the diet there was a neglected apple orchard a little way down the hillside, while big brown locusts and late grasshoppers were still abundant.

But Heckee, being once more singled out for the wild wood Fates for discipline, was not to be suffered to slip into his peaceful winter sleep without further trials. One day two boys with a dog appeared, with apparently nothing better to do than throw stones at chipmonks. In spite of this, the boys, not having guns, were regarded as harmless, it being a poor chipmonk that couldn't dodge a stone. But the dog—that was another matter. Dogs might dig and damage good front doors. There was

a general chorus of alarm signals, and most of the chipmonks, including Heckee himself, disappeared into their burrows.

The two boys sat on the wall and began to munch their apples with which their pockets were stuffed. The dog stumbling by chance upon Heckee's front door beneath the juniper bush, snuffed at it long and interestedly, and then began to bark. The boys jumped down from the wall and "sicked" him on eagerly. But this dog was not one of the digging tribe. He knew he couldn't be expected to crawl down such a hole as that, so, having no idea of what was expected of him, he nearly went wild with excitement and anxiety.

Seeing that the dog was not going to dig, the boys conceived the idea of imprisoning Heckee in his own home. It was not exactly cruelty on their part, but rather an impulse towards vague experimenting. Here was a mysterious hole, with something alive in it. What more natural than try and kill that something, and see what would happen? They got a long stake and jammed it into the hole, while the dog jumped around them, yelling his admiration of their prowess. To their amazement, the stake went down with the greatest ease to a distance of nearly four feet before it stopped with a jerk.

"Gee," remarked one boy, "but that fellow likes a deep hole all right," and he ground the stake home vigorously.

"S'pose we got him?" queried the other boy, his eyes glued to the stake.

"Of course," yelled the dog in ecstasy.

The first boy cautiously pulled up the stake, the dog scrambling in as if he expected the unknown hole-dwel-

ler to follow it forth. The boy examined the point of the stake. There was no blood on it. Everybody looked disappointed, and the dog dropped his tail in dejection.

"No. Missed him, I guess," decided the boy. "But we'll stop up his hole for him, the beggar," and he proceeded to drive the stake home once more.

Heckee, meanwhile, filled with curiosity and wrath, had come out by his back door to see what the strangers were up to, and was now sitting on the wall, not a dozen feet away, expressing his feelings with explosive vehemence.

"Darn that chipmonk," remarked one of the boys, flinging an apple-core at him. "He's making fun of us."

But in this he was mistaken. For Heckee was not making fun. He was cursing them with all the maledictions in which the language of squirrel and chipmonk appears to be so rich.

Of course it was Heckee's business to build a new front door without delay. He did, indeed, begin one promptly from within—as soon as the troublesome visitors were out of sight. But he and the whole household were beginning to grow a little indolent, in premonition of the long winter's sleep which was soon to come upon them, and after nearly three days the new shaft was yet uncompleted. Just at this critical moment came the most to be dreaded of all the chipmonk's enemies, and caught Heckee unready. A black snake, alert in the warm noon-day sun, and himself on the look-out for winter quarters, chanced upon Heckee's back door there in the open pasture. Being a snake of prompt decisions he whipped in instantly and made for the central chamber, feeling sure that he would

find some of the family at home.

They were at home—Heckee and three others. As that dreadful black form, noiselessly and lithe and but dimly visible, came gliding into the chamber, Heckee and two of his companions darted criss-cross up and over the ceiling in a mad whirl of desperation. But the fourth, an inexperienced young female of the season, was unlucky enough to catch the snake's set, malignant eye. She crouched for half a second, paralysed. Then, recovering herself with a violent effort, she darted down the old tube leading to the closed front shaft. The snake darted after her at once, and as his tail vanished into the tube, Heckee and the others dropped shuddering from the ceiling behind him.

When the unhappy little fugitive reached the foot of the blocked shaft, she turned at bay. At the same instant the snake arrived. Striking before she had time to put up any defence, he drove his long black set fangs deep into her muzzle. Being not a venomous snake, but one of the constrictor family, his impulse was to wind her in his coils and crush her to a pulp before devouring her; and therefore he wished to drag her back to the chamber. But though she was dazed by the blow on the nose, she was not completely stunned by it, because her assailant had had no room to strike with effective force. Spreading herself flat and digging in her claws, she resisted the snake's efforts to pull her back. Finding the task so difficult, and his appetite unusually insistent, he wasted no more time, but simply began to swallow her, head first as she was.

It was a slow process, especially in the beginning. But as the victim was engorged, and her breath finally

cut off, her struggles ceased; and in two or three minutes her shoulders, too, had vanished down the distended and writhing throat.

Meanwhile, the other members of the family, convulsed with panic, had fled out and hidden themselves in the crannies of the wall. But Heckee, himself, being a veteran of many battles, always courageous, and charged with responsibility as head of the household, had pulled himself quickly together and remained in the burrow. He knew well enough that it was all over with his little companion. He understood the ways of the black snakes also. And he could tell by the sounds that came from the depths of the tube just how this ghastly business of the swallowing progressed. As he listened, his rage grew hotter and hotter, till presently, judging that by this time the assassin would have the victim so far swallowed as to be incapable of quickly disgorging it, he darted into the tube and bit clean through the snake's backbone, just at the base of the tail.

The long trailing body writhed and lashed, but there in the narrow tube it had no room to coil itself. Heckee raced nimbly along it, heedless of the jamming and buffeting he received, and fell furiously upon the tight stretched skin at the back of the reptile's head. Flattening himself down upon the body, he clung so tightly that the maddest lashings could not dislodge him, and of course, the hideously distended jaws were powerless to seize him. With his keen teeth he bit and bit, now gnawing like a rat, now worrying like a terrier, till presently he succeeded in severing the spinal cord.

The convulsive lashings and twist-

ings dropped into a strong, quivering motion; but for a while Heckee, in his rage continued to bite and worry his now impotent enemy, till at last, realizing that his victory was complete, he withdrew and ran out into the sun to make his toilet and proclaim his triumph. When he had informed the whole neighborhood of it, and even convinced his trembling household, he returned to the burrow and proceeded to wall up the old tube firmly to a depth of a good eighteen inches, thus securing to a certainty that the entombed slain should cause no more annoyance to chipmonks.



## TO MY DOG

Some people think dogs ain't got no sense  
 And that they don't know what's what,  
 But from the 'quaintance I've had with them  
 I've found dogs know a lot.

Trouble is, folks don't seem to understand  
 What a dog is trying to say  
 When he wags his tail he means "I'm glad to see you,"  
 And when he growls he means "go 'way."

And' when it comes to takin' care of his health  
 He knows just what to do,  
 For he never eats nor sleeps too much  
 And he don't drink nor smoke nor chew.

Now you just kinda watch your dog  
 An' I'm sure you'll learn a lesson,  
 Be kind to him, and you will find  
 His love will be a blessin'.

He'll stick to you through thick and thin,  
 When you're down he'll share your sorrow,  
 An' wag his tail as if to say  
 "Cheer up, good luck to-morrow."

Now, when I die, if I've the luck  
 To reach the golden gate,  
 And I see a sign, "No dogs allowed,"  
 By gosh, I'd hesitate.

For if my old pup was standing round,  
 An' ud look me in the face,  
 I think I'd have to take a chance  
 And try the other place.

—Billy B. Van,

## Pure Vital Seed

### Pure Seed

**T**HE demand for pure vital seed is increasing. Progressive agriculture demands it. It is up to farmers who are specializing in seed grain to furnish it. It can be done.

To have a certain amount of weeds on a farm may not be the worst thing that could happen a farmer. Weeds serve a purpose in farm economics. Don't you suppose the fight against weeds has led to the manufacture of better farm implements, which in turn has stimulated the best methods of tilling the soil and of rotating crops? Have they not led to many farmers keeping a few sheep which have proven to be a profitable investment, as well as a sure cure for many forms of noxious weed life? Weeds seem to stand in a similar relation to farm crops that sin does to the good that is in the world. As the world learns to dispose of the "evil" by driving it out and replacing it with "good." So by our efforts to drive out the weeds in farm practice we are securing better and purer crops. The struggle is on. We must not get discouraged; we can win and we will.

Some observant travellers in riding over our country and spying it out from the car windows are apt to grow pessimistic and say the weeds are greatly on the increase and this is true in places. In other localities it isn't true. Has not the spread of weeds in old Canada led to mixed farming and short rotations and will they not soon drive the Northwest farmer along a similar path? Will it not be in his interest as well?

### The Seed Control Act.

The Seed Control Act of 1905, amended in 1911, was enacted to help check the spread of noxious weed life through commerce in seeds. Naturally we ask, is it accomplishing what was intended by its promoters? Let us seek an answer first from the seed merchants who fought the law most bitterly. They say that the demand for No. 1 seed has greatly improved, so much so, that they have difficulty in putting up enough to meet the requirements of the market. They are trying and succeeding in improving their machinery for cleaning their seeds to meet this demand. They have to a considerable extent discriminated in price between seed foul with certain kinds of weed seeds and those that are comparatively free of them. This has stimulated the growers to overcome these weed pests, so that they can furnish the high priced seeds. This they are doing in the production of small seeds, by sowing clean seed on a clean piece of hoe crop ground which has not been plowed but simply cultivated to make a fine seed bed and following this up by weeding out the growing crop. This is undoubtedly the sanest method that has been adopted as yet.

### High Prices for Seeds.

When seeds go up to certain prices as timothy went last year, for instance, and that red clover and alsike are going this year, farmers are bound to do away with the middleman's profits and sell to one another. Too frequently this has resulted in disastrous results from the standpoint of the weed problem, as so many

farmers do not have proper facilities for cleaning their seed. This year the crop of clover seed is a very inferior sample frequently polluted with ribgrass or ragweed and other varieties of seeds. These seeds will not be wasted, consequently many farms are menaced. Frequently farmers bring in samples of their seeds to dealers and ask for prices. When they find it is polluted with ribgrass or catchfly or something else, and they cannot get the highest prices that are paid they say "they can sell it to their neighbors." Sometimes they are informed that this would be a violation of the seed law and sometimes they are not so informed. They may sell it to unsuspecting farmers and very much land gets polluted in this way. A farmer evidently living on such a farm said the other day that he was sure it had cost him fully \$50.00 to do what weeding he had done in a field of 10 acres of red clover, and yet it wasn't saleable for seeding purposes. One trouble was he had sown a lot of infested seed and there were too many ribgrass plants to make a clean job of it. There can only be pure seed when farmers will grow it pure, and they can do it if they will. Some of them are doing it, and it pays them. More should do it.

#### Vital Seed.

Perhaps not enough attention is being paid to the vitality of seeds. It is a sore disappointment to a farmer to learn after he has sown a field that the seed used lacked in vitality. Many a corn field has shown such a condi-

tion on the side line and concession. Many a western farmer has sustained big losses in this way by ignorantly sowing frosted oats. There is no need for such losses when every user of seed can with so little trouble either test or have his seed tested to determine its vital prospects.

#### The Methods of the Canadian Seed Growers' Association.

There is one organization in Canada which stands for the production of pure vital seed. As its methods are more generally known they will be practiced more. It is the Canadian Seed Growers' Association. Before sale is made of these seeds under the seal of the Association, they are thoroughly examined for impurities and tested for vitality. In this way the purchaser is protected. The grower, however, must have more than commercial prices for such seed, and he does get from 2½ to 3 cents per pound for it, when properly cleaned and graded. Hand selected plants each year helps to keep up the standard of quality in a variety of any kind of grain and this elite stock seed when grown on a breeding plot or the product of it grown on multiplying plots is under yearly field inspection. Arrangements are being made by the Association to have the cereal crops multiplied more largely in suitable sections so that the stock seed may be obtainable in car load lots.

This is a line of work that some of the O. A. C. Review readers might take up with considerable profit to themselves.

T. G. Raynor.



# New Soils From Old

## And the Maintenance of Soil Fertility

OF the ten different chemical elements required by every agricultural crop, one, namely carbon, comes from the air, and comprises about 50 per cent. of the mature crop. Two more, hydrogen and oxygen, are supplied by water and furnish the material for about 45 per cent. more. The remaining five per cent. is composed of seven absolutely essential elements which come from the compounds in the soil. Of these seven elements, iron and sulphur rarely, if ever, need replenishing as the supply in most soils is practically inexhaustible. Thus the problem of maintaining soil fertility is narrowed to five substances, but the yield on all arable soils in good physical condition is dependent on the supply of limestone (a compound, usually, of calcium and magnesium, but the magnesium may be absent) nitrogen potassium and phosphorus. Because of the fact that limestone, nitrogen, potassium and phosphorus are often deficient and have to be replaced artificially they have a definite value in commercial form. Limestone is common in many parts of Ontario and is quite cheap, but as will be seen later it is very valuable when applied to certain soils. In commercial fertilizers the potassium and phosphorus are given as potash and phosphoric acid. The reason for this is not known, as the potassium in the soil is not in the form of potash, neither is the phosphorus in the form of phosphoric acid, but both exist in many complicated compounds. In this article they

are given as potash and phosphoric acid, but by means of a simple calculation they may be changed into the elements or vice versa.

To compute potash from potassium multiply by 1.2046.

To compute potassium from potash multiply by .830.

To compute phosphoric acid from phosphorus multiply by 2.29.

To compute phosphorus from phosphoric acid multiply by .4366.

In the accompanying table the amounts and values of the nitrogen, potash and phosphoric acid in the common crops and produce are given. The yields are above the average for Ontario, but no farmer should be satisfied with any lower standard. They are not given as the maximum, however, and one should not be satisfied if his farm yields these amounts. The amount of the three constituents is only an approximation, as the composition of the various crops differs according to the variety, season and soil. The value of the nitrogen, etc., is computed on the basis of the present market value for plant food in fertilizers, namely:

Nitrogen, 15 cents per pound.

Phosphoric acid, 5 cents per pound.

Potash, 5 cents per pound.

It is doubtful if the nitrogen can be readily purchased for less than 20 cents per pound in available condition.

From this we see that it is much more economical on the soil to use the grains, hay and root crops to produce meat, milk and butter than to sell them in the raw state. It is true that a large amount of grain must be sold



to furnish food for the people in the cities, but the farmer should make provision for restoring the "fertility" thus disposed of, either by purchasing manure from the stables in the towns and cities, or by using artificial fertilizers.

soils, are rich in potash, containing sufficient to supply the needs of hundreds of heavy crops, but often this is in a very insoluble condition, and in such condition cannot be utilized by the growing plants. If the potash is insoluble or unavailable, then the

AMOUNTS AND VALUE OF PLANT FOOD IN VARIOUS CROPS AND PRODUCE:

CROP OR PRODUCE		POUNDS			MARKET VALUE			
KIND	AMOUNT	Nitrogen	Phosphoric Acid	Potash	Nitrogen	Phosphoric Acid	Potash	Total Value
Wheat—Grain	30 bu.	42	16	9				
Wheat—Straw	1½ T.	14	7	32	6.30	.80	.45	\$ 7.55
Total Crop		56	23	41	2.10	.35	1.60	4.05
								\$11.60
Oats—Grain	50 bu.	33	14	10	4.45	.70	.50	5.65
Oats—Straw	1½ T	18	8	38	2.70	.40	1.90	5.00
Total Crops		51	22	48				
								\$10.65
Barley—Grain	40 bu.	35	15	9	5.25	.75	.45	6.45
Barley—Straw	¾ T	14	5	25	2.10	.25	1.25	4.60
Total Crop		49	20	34				
								\$11.05
Timothy Hay	2 T	55	14	60	8.25	.70	3.00	11.95
Clover Hay	2 T	85	24	75	12.75	1.20	3.75	17.70
Alfalfa Hay	3 T	150	31	84	22.50	1.65	4.20	28.35
Potatoes	200 bu.	42	20	72	6.30	1.00	3.60	10.90
Mangels	600 bu.	72	40	170	10.80	2.00	8.50	21.30
Turnips	600 bu.	66	21	107	9.90	1.05	5.35	16.30
Fat Cattle	1000 lbs.	25	15	1.2	3.75	.75	.96	4.56
Fat Hogs	1000 lbs.	18	7	1.2	2.70	.35	.96	3.11
Milk	1000 lbs.	5.6	1.6	1.4	.85	.08	.97	1.00
Butter	1000 lbs.	2.0	1.	.4	.30	.05	.02	.37

One ton of fresh farmyard manure contains on the average 10 pounds of nitrogen, 10 pounds potash and 5 pounds phosphoric acid. Figuring on the same basis as in Table I, it would be worth \$2.25 a ton, a price which few would wish to pay, and as will be seen later is unnecessary.

Most of the soils in Ontario, with the exception of peaty or swamp

application of a soluble potassium salt as potassium chloride, potassium sulphate or kainit, a substance containing about 25 per cent. of potassium sulphate, together with magnesium sulphate, together with magnesium sulphate, magnesium chloride and sodium chloride or common salt, will give increased yields. The increase where potassium salts are found to be beneficial is attributed to

the potash, but it is probable that it is due to the stimulating action of the soluble salt. In this case it is probable that a cheap salt as kainit, costing about \$14.00 per ton, would be more economical than a concentrated salt as potassium sulphate, containing 50 per cent. of potash and costing \$50.00 per ton. Some work done by the Illinois Experiment Station supports this contention; 28 tests were made with corn. "An application of 200 pounds of potassium sulphate, containing 85 pounds of the element potassium and costing \$5, increased the yield of corn by seven bushels per acre; while 600 pounds of kainit, containing only 60 pounds of potassium and costing \$4, gave 10.1 increase."\* Phosphoric acid and limestone were also applied to both sets of plots, but no farmyard manure was used. Where eight tons of manure was used as well as phosphoric acid and limestone, on another set of 28 plots, 200 pounds potassium sulphate gave an increase of 2.9 bushels per acre and kainit 3.3. It is thus seen that farmyard manure reduces the effect of the soluble salts, as it has a stimulating effect in itself. The conclusion we draw from this is that on ordinary soils potash salts are not profitable if farmyard manure is used and that in the absence of manure, a cheap fertilizer, as kainit, is more profitable to use than an expensive and concentrated salt like potassium sulphate. If potassium sulphate is applied it is best to put it on land for potatoes or tobacco, as these crops require more potash than ordinary cereals, and are benefitted to a much greater extent by it. Most peat soils are very de-

\*Bulletin 123, Illinois Experiment Station.

ficient in potash. On this type the addition of potash, either as potassium sulphate, potassium chloride, or kainit, generally gives remarkable results. Potassium chloride or muriate of potash contains about 50 per cent. potash and is cheaper than the sulphate, but it may injure the quality of sugar beets, tobacco or potatoes if applied to them.

Nitrogen is another essential element that should not have to be purchased extensively by Ontario farmers. Over each acre of land there is more than 70,000,000 pounds, or enough to supply the demands of bumper crops for one-half million years. Clovers and other members of the legume family, as peas, beans and alfalfa, have minute organisms, or bacteria, living in nodules on their roots, which are capable of obtaining as much nitrogen from the air as is required by the stem and leaves. This amounts to about two-thirds of the total. It is seen from this that if the clover and alfalfa hay is sold the land will become poorer in nitrogen, but if the hay is fed and the manure returned there is a distinct gain. The nitrogen that is left in the roots of the alfalfa, clover, and peas, can be utilized much more rapidly than that which is in the soil. Decaying organic matter and humus are excellent materials for preventing the nitrogen in the soil leaching away.

Nitrogen may be purchased in the following forms:

Dried blood containing about 14 per cent. of nitrogen.

Sodium nitrate or Chili saltpeter, containing 15-16 per cent.

Ammonium sulphate, containing about 20 per cent.

Raw bone meal and steamed bone meal contain respectively 4 per cent.

and 1 per cent. of nitrogen, as well as large amounts of phosphoric acid.

Sodium nitrate is very soluble, and if applied before the crop is sown it is liable to be lost in the drainage water. Mangels and plants which botanically are members of the grass family, as wheat, barley, etc., are most benefited by nitrogenous fertilizers, but the farmer should not resort to these commercial nitrogen compounds to build up his soil permanently. Clover and legumes on a stock farm will do that.

Phosphoric acid, in many districts, may be called the key to permanent soil fertility. In ordinary soils it is usually only from one-third to one-eighth as abundant as potash. In some loams it is as little as one-eighteenth, while in the Leonardtown loam of Maryland State, there is 57 times more potash than phosphoric acid, and the potash is less than in our common soils.

About three-quarters of the phosphoric acid taken from the soil by plants is deposited in the seed. If the grain is sold the phosphoric acid is lost to the soil. If the grain is fed, a considerable amount of this constituent is used in the formation of bone, and most of the remainder can be returned to the soil. This drain has been going on since the first settlers came. Fortunately there are great stores of phosphatic materials from which it is possible to replenish our soils. The main ones are bones, rock phosphate, apatite, basic slag and superphosphate, or acid phosphate.

If the bones are ground up without special treatment they contain, in addition to 4 per cent. of nitrogen, about 20 per cent. of phosphoric acid. Bones in this condition contain water and fat and are not so useful as after the

fat has been removed since the fat retards the dissolving of the bones. Steamed bones contain little or no fat and water and only 1 per cent. of nitrogen, but the phosphoric acid is more available and the percentage is increased to 28 or 29 per cent.

Rock phosphates, which are mined in S. Carolina, Tennessee and Florida, are variable in composition, varying from 18-40 per cent. of phosphoric acid, but this need not hinder any one from purchasing them, since the chemical composition has to be stamped either on the sacks they are in, or on tags.

Apatite is mined to some extent in Ontario, but more in Quebec. It contains as high as 40 per cent. phosphoric acid. The mining is expensive and the rock very hard to grind, thus making the cost of production high.

Basic slag, or Thomas' phosphate, is a by-product in the manufacture of steel from iron ores, containing phosphorus. It contains about 18 per cent. phosphoric acid and 45 per cent. of lime. The availability depends on the fineness of the material; 80 per cent. of it should pass a sieve having 10,000 meshes to the square inch. It is one of the best forms of phosphatic fertilizers and is used extensively in the Maritime Provinces. It costs in the neighborhood of \$20.00 per ton.

Superphosphates are made by treating bones, bone black from sugar refineries or raw rock phosphate with sulphuric acid, thus rendering the phosphoric acid quickly available. It is acid in nature and should not be used on soils deficient in lime. They contain about 14 or 15 per cent. phosphoric acid, but are more expensive than raw phosphate or basic slag.

Limestone or calcium carbonate is very important, both as a plant food

and as a stimulant. It is the basis of most chemical reactions in the soil. By it potash is changed from insoluble to soluble compounds. The growth of legumes is much more luxuriant in the presence of limestone, partly because legumes utilize considerable quantities as food and partly because the beneficial soil and nitrogen-fixing bacteria thrive in its presence. In clay soils limestone exerts a beneficial action by coagulating the sticky substances or colloids, and thus improving the physical condition by making the soil more friable.

Unless the soil is sour or acid, ground limestone is much better to use than either fresh burnt lime or slaked lime, since these latter, especially the fresh lime, destroys considerable organic matter by its caustic action. Where ground limestone is used, it does not need to be

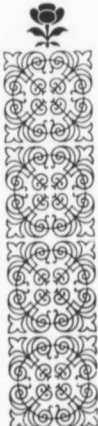
in a very fine condition or it will leach away rapidly.

To sum up a method for maintaining soil fertility we may say: Apply farmyard manure to supply a portion of the nitrogen potash and phosphoric acid required and also to supply humus. Humus improves the physical condition of the soil, increases its water-holding capacity and gives off acids and carbon dioxide, which aid in liberating potash and phosphoric acid from insoluble compounds. Keep stock and grow legumes to feed them. Apply limestones to liberate potash and to aid in increasing the yield of clover and alfalfa hay. Fertilize with phosphatic materials to keep the supply from being depleted. By using basic slag last two operations are reduced to one. Nitrogenous and potassic manures are recommended only for special crops. As a rule it is more expensive to purchase mixed fertilizers than the raw materials.

—C. W. Stanley, '13.

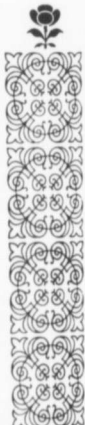
## *The Voice Of The Clover-Wind*

By Mary Madison Lee.



When the wind comes over the clover fields,  
 All sweet with the breath of June,  
 When the world is white  
 With the magic light  
 Of the stars and the half blown moon,  
 Then it seems to me that his melody  
 Brings a message from you, my own,  
 When the wind comes over  
 Far fields of clover,  
 And meadows newly mown.

When the wind comes over the clover fields,  
 All dank with the midnight dew,  
 When the tree-tops croon their ancient rune  
 He sings to my soul of you,  
 And the heart from my breast  
 To share his quest  
 Out into the night has flown,  
 When the wind comes over  
 Far fields of clover,  
 A Voice from the vast Unknown.



## Masters and Mannerisms

OF all the soft and soppy subjects which are supposed to be taught in schools, easily and by far the most rotten is that of essay writing. It wouldn't so much matter if they gave you something decent to gas about—such as ghosts, or big burglars, or the torturing of Christian martyrs, which I happen to be jolly well up in—but nearly always it's something absolutely sickening, like "Politeness" or "The Advantages of Education." Last week, for instance, we had to do a "comp." for old Crossland—who teaches English, or tries to—on "The Cow." Just as if any decent-minded chap wanted to know a single thing about the brutes, except that they are valuable for the rich juice they contain, and that their flesh is pretty generally used for purposes of eating, when dead. Yet we were expected to write no less than five hundred words on the miserable customs of the wretched creatures. And when I went and swotted them up for simply hours out of a whacking big book in the ref. library, I got into no end of a row on account of it. In fact, old Crosseyes, as this master is commonly known as, for shortness, also through squinting, actually had the calm cheek to accuse me of cribbing, besides calling me a callous and abandoned young plaguyarist to my face to the whole form. Of course, none of the fellows knew what that meant, but they ragged me most chronically, in spite of it, and tried to make out that I'd got some beastly disease that people die of by hundreds in history. But not satisfied with this even, the swine went on to read out aloud every single thing I'd written upon cows, for mere kids to laugh at. Really, as a matter of fact, there was nothing funny about it at all, most of it, indeed, coming clean out of the book, and just altered by me in places where necessary to make sense. As Solomon says, time is money, especially to authors, so I can't afford, much less fag, to write it all out again

now; just to show the jolly goodness of it, this is how it started:

"The cow—or 'bos,' as Latin calls it—is an artiodactylous ruminant quadruped, unguled and pachydermatous in parts, and a mammal. It is well known to scientists by means of its cud-chewing propensities. These are situated in its stomachs, which are extremely abundant and complex in character. In shape it is almost invariably square, though rounded at the ends, and supported by four stout and strong legs. As ornaments to the head, it wears horns, which are sometimes crumpled, besides being hollow and very hard, especially to sit upon. The wet nostrils on its broad snout are nearly always naked through lack of hairs. At the other extremity is a tail, which is of little use except for purposes of killing flies. When dead, cows change into beef. This, in schools, is often said to be horseflesh, really. The children of this fascinating mammal are known as calves when living, but veal if deceased. If a cow is a gentleman, it is called a bull. These turn into beef-tea when bottled, and are used in Spain for fighting purposes, also tossing, toreadors. Cows have frequent dewlaps, also a bag which secretes milk (Latin lac). If tanned, their skin turns to leather, used for boots, also footballs, because there is nothing like it—"

There was heaps more like this, if not better, and every word of it true. Yet, just because I happened to mention towards the end that cows are jolly lucky and fortunate in that they never have to go to school, or do a single minute's swotting of any sort, especially at essays, old Crosseyes got into a fearful rave, and said that I was guilty of "abominable rudeness" and "gross personal impertinence," together with many other things too numerous and vulgar to mention. In consequence, I got whacked pretty severely, without time for padding even, as well as a jawing from the head.

Then, on the top of all this, while I was still smarting beneath the sore injustice of it all, the poor deluded ass went and set us this week a subject which I should think is the absolute limit even for essays in schools. I'll willingly bet all the cash I have in my pocket—which happens to be twopence and a stamp with no gum on it—that none of you can guess what it was. But, as you'd be dead certain to lose in any case, I'll tell you.

It was "Mannerisms." Now, I know a good bit about manners, especially through getting rather seriously jawed about them the other day by a master called Baxter, when I happened to come into his class with my cap on and whistling. He said that they made man, and several other things which I didn't fully understand, except that errand-boys haven't got them, nor navvies, though gentlemen have—at any rate, when in public. As a result of this, I got a big "impot," and have remembered all about them ever since. But when it came to mannerisms, I was clean up the pole, just like Doctor Cook, who discovered it, likewise Peary. To begin with, I hadn't even so much as heard the mere word before, and when I rushed off to consult a dictionary, I found it to be of little assistance, if any, though the preface made out that it was a jolly good and important one. It said, "Mannerism is a constant or excessive adherence to one manner, style, or peculiarity, more especially of literary or artistic treatment," and a lot more like that, which was no earthly use to me, or anyone else either, I should think, excepting schoolmasters and ancient Members of Parliament.

Well, at any rate, the beastly essay had got to be done, so, the dictionary having failed me most utterly, I went to a kid here called Foley, who happens to be my sort of cousin, and in the Sixth. In most respects, this chap is extremely soppo, and wears spectacles through much swotting; and though in age he is nearly a year older than me, I could fight him easily with only one fist and my hands tied. So I said to him, when I caught him by himself—

"Please, Gerald, will you tell me what mannerisms are, because I've got to write a jolly important essay about them for to-morrow."

At this he looked generally soft and said—

"Mannerisms, Masters! Let me see, I think I've heard that word before. Do you mind saying it again?"

"M-A-N—man, E-R—er, also isms, and look here, if you don't tell me what they are jolly soon, I'll smack you over the snout, likewise in the eyeballs."

"All right, old man," he answered, "don't excite, and just give me time to think. But, I say, if you don't mind, I'll consult Webster."

This Webster is a measly pal of his, who wears mittens in winter and always wins prizes for Scripture. So I said—

"If Webster's any good to you, well and good. Fetch the brute in."

After they had discussed the business together for long in secrecy, my cousin said:

"Do you really want to know what it means?"

"Of course, you silly goat—that's what I'm here for. So buck up and tell me, or else I'll give you a clout across the gazeke, otherwise known as gesische, which is German for it."

"All right, old man, don't excite. If you are sure you really want to know, and aren't merely kidding, it's this; a mannerism is just—well, it's just a mannerism, isn't it, Willy?"

He always calls his wretched chum Willy in private, that being just the soft sort of name you'd expect to find in such an arrant ass. At this Webster tried to look jolly wise, but failed utterly; then he stroked the place where he thinks his moustache is, and coughed and said:

"Yes, of course. Yes, certainly. You see, to us men in the Sixth, the meaning of such words is painfully obvious, through our great knowledge of classics."

"Oh, shut up about your miserable classics and talk sense! Do you know what mannerisms are when they are at home, or don't you?"

"Well, it's this way. A mannerism

is a thing you have, so to speak, and other people haven't got," my cousin said.

"Oh, I answered, trying to understand, "I suppose that your funny mug is a mannerism, then?"

"No," Webster explained, "Foley's face is simply an unfortunate dispensation of Nature, which he can't help. Mannerisms, on the other hand, are things you can get rid of if you want to and try hard enough."

"Something like bad tanners, you mean."

"Precisely. But then, counterfeit coins can hardly be regarded as mannerisms, properly speaking, because they aren't really part of you."

"Is talking rot a mannerism?" I asked him. "Because, if it is, I should think you are just made of them. But, look here, if you don't mind, you might make a few notes on the subject and give them to me later. I've got to go now and change for footer."

"But wouldn't that be perilously near to cheating?" Foley remarked, with his usual softness.

"Cheating be blowed! You don't think that I would be such a chump as to copy the piffling sort of stuff that you two blighters would write. I merely want it just to use as what old Crosseyes calls a sinoxes, or something."

"Synopsis, you mean."

"Oh, all right, sin anything you like, as long as you get it done! And send it along to my study when it's finished. *Twiggez-vous, mes enfants?* So long, then; likewise, pip-pip!"

It was there all right when I got back from footer, though, as a matter of fact, I forgot all about the thing till just before prep., when I sat down to swot at the miserable essay in earnest. On inspecting the sickening synopsis of these Sixth Form chaps, I found it to be most awful bilge, as was only to be expected, and bung-full of dictionary words, including Latin and many other deadly languages. At first I and Mac—who is my study chum—could not make the least bit of sense out of it; but in the

end, with the help of two bottles of pop and some sausages, we began to see daylight, like hens do before crowing, and, as a result of dire swotting, I turned out what we both agreed was a ripping good and interesting essay.

So next morning, when the fatal hour for showing it up arrived, I was feeling pretty bucked with myself, and rather looking forward to the English lesson, which, as a rule, I loathe utterly. Generally old Crosseyes just squints at the chaps' comps. as he collects them, and afterwards carts them off to his den for the purposes of marking. Then next week he returns them, unless he forgets—which often happens—with blue-pencil notes in the margins, and often rude and rotten remarks at the end, such as, for instance: "Replete with every form of puerile impertinence," or "The writer's intelligence is appreciably lower than that of an imbecile chimpanzee," or "The supreme hideousness of the author's calligraphy is only exceeded by the execrable banality of his excogitations," or "Lamentably lacking in everything but illiteracy," or "This essay reveals the appalling depths of mental depravity to which the perpetrator's intellectuality has descended." All of these statements, in fact, the brute has made about my own essays this term; but, of course, nobody takes the least bit of notice of them, because they merely prove the long-winded and pompous nature of the poor deluded ass, besides being untrue. However, this time my essay was so jolly good and interesting in every way that I felt dead sure that he couldn't possibly find a single thing in it to grouse at, however hard he tried.

After we had been waiting about ten minutes for old Crosseyes to appear—which in itself was nothing unusual, he being a chronic all-round slacker—the door suddenly opened, and who should enter but the Head!

He said: "I am extremely sorry to have to inform you that Mr. Crossland is suffering from a slight maternal indisposition, which will preclude him for a period from presiding over



your pedagogy in person. So I have decided for the nonce myself to conduct you to the pleasant and pellucid Pierian springs—"

He always talks as though he had just finished swallowing half a dozen dictionaries, and this time he had a daft grin on his face, as though he expected us to be jolly pleased about it. Of course, most of us did not twig in the least bit what he was driving at; but Kidson, who is a swot, said: "Please, sir, thank you, sir."

"The special branch of linguistic instruction which is provided in your curriculum for this particular period is, I understand, that of composition in the vulgar tongue or vernacular. May I venture to inquire the subject appointed for to-day's academic disputation?"

"Mannerisms, sir," all of us answered who understood the question.

"Ah, mannerisms! A most fascinating and alluring theme, surcharged with infinite potentialities of variegated imaginative development. Therefore, my dear Masters, be so good as to stand erect and declaim to us your thesis."

I was so utterly staggered at his even knowing so much as my name that I blushed and stammered—

"Me, sir? Did you say me, sir?"

"I did, indeed, uncomprehending youth. Proceed!"

"Yes, sir. Shall I read it all, sir, or just pick out the best bits, sir?"

"Each single syllable, sir, without the smallest expurgation or scintilla of transmogrification."

He said this so jolly sternly that my heart seemed suddenly to sink right down to the bottom of my boots as I started:

"Essay on Mannerisms, by Norman K. Masters. Form 4. Up."

"Speak up, my good lad, and cease to mumble from the innermost recesses of your interior!"

"Yes, sir—very good, sir," I replied.

"The frightful importance of mannerisms cannot be exaggerated. History is full of them, likewise literature."

"A little hyperbolic, but proceed!"

"Look at Napoleon, for instance," I went on. "Why did he always have his photo taken in a cocked hat with his arms folded?"

"Ah, you have perpetrated an unpardonable anachronism, I fear! But supply us with the answer to your curious conundrum."

"It was merely his mannerism; but this alone made France what it is to-day."

"An ingenious yet, I fear, not unimpregnable hypothesis," the Head interrupted rudely. "Continue!"

"Then again, take Hamlet. If the poor chap hadn't always kept on messing about with a dagger and saying to himself, 'To be or not to be!' very likely Shakespeare would never have heard of him. It was just his mannerism, like marrying with Henry VIII., or shooting teddy bears and making speeches with Mr. Roosevelt. Again, what about Wellington?"

"Yes, enlighten your comrades as to the pet mannerisms of the Iron Duke."

"His beak, in a way, was only a mannerism; yet, if he hadn't gone and got it broken on the playing fields of Eton, would Waterloo ever have been won? No!"

"The legend is apocryphal, I am afraid. But resume."

"The valiant Nelson, too, the dauntless hero of Trafalgar, had many mannerisms, such as always putting his telescope to the eye that was not there, and wearing medals all over his waistcoat in battles, besides expecting every man to do his duty."

"Your ideas as to what constitutes a mannerism appear to be grievously lacking in precision, not to say exactitude. But go on."

"Descending now from the sublime to the ridiculous, as Gladstone once said to Dizzy in Parliament—"

"I do not recollect the occasion you refer to. However, we will let that pass."

"Look at schoolmasters!"

"I trust, my good lad, that you are not daring to insinuate that the preceptors of youth are for one moment



to be included in the category of the ridiculous?"

"No, sir, certainly not, sir. It's only what it says in the essay. Please, sir, shall I go one?"

"By all means—immediately," he answered. "Your remarks upon the noble profession with which I have the proud honor and privilege of being associated should prove full of interest and instruction to your conferees."

"Schoolmasters,' I went on, reading from my essay, 'are well known to be peculiar, because of their mannerisms. Some of these are useful and necessary, such as using long words and wearing caps and gowns, and caning; but others, again, are extremely unwholesome and objectionable in every way.'"

"Ah, indeed! Pray proceed."

"Wearing green waistcoats in school is a mannerism, together with pink ties and striped socks. Also frequently curling the moustache.'"

At this some silly asses started giggling, thinking me to be referring to Crossland, who does all these things rather chronically. Whereupon old Sandy grew jolly ratty, and, glaring most tragically, shouted:

"Cease this unseemly and ill-timed hilarity, and remember that you are in an educational academy, not at a pantomime! If I detect again the slightest symptom of this insidious spirit of ribald laughter and brazen buffoonery, I shall put every one of you down for detention!"

He paused for purposes of breathing, looking jolly rummy and purple about the gills. Then he turned to me and said:

"And now please to resume your interrupted recitation, my young friend."

"Please, sir, I'm feeling rather queer, sir, so I would much rather not, if you don't mind."

"Feeling queer! What do you mean, sir? Do you dare to set at defiance the voice of supermagisterial authority? Unless you continue at once, I'll have you put down for detention."

"All right, sir," I answered sadly. "But I don't think you'll like the next bit, sir."

"What I like, sir, and what I insist upon having, is absolute and implicit obedience in my pupils. Do you follow me, sir?"

"Yes sir, certainly. Well, it says: 'Sticking one's specs. on the extreme end of the snout is a mannerism which sometimes occurs in headmasters, also sucking lozenges in school and frequent snoozing.'"

Thereupon a swine called Silcock, who is my deadliest enemy, and hates me worse than poison, had to go and simply explode, out of pure spite, which shows what a low cad he is in every way. And so old Sandy turned upon him slowly in consequence and cried:

"Did you speak there, or did my auditory organs deceive me?"

"No, sir, I merely smiled, sir—just sort of out loud, sir."

"And what, may I ask, was the cause of your daring to perpetrate so hideous an outrage?"

"Please, sir, I had a funny thought, sir," said Silcock, stuffing his handkerchief in his mouth.

"Ah, indeed! May I inquire as to its nature?"

"I thought that Masters was trying to pull your leg, sir."

"To pull my leg! Have you actually the barefaced effrontery to suggest that one of my pupils would venture to attempt such a gross and unprecedented act of familiarity?"

"It was only a manner of speaking, sir. I meant that he wanted to 'get at' you, sir."

"To get at me, sir—his headmaster, seated here ex cathedra et in loco parentis. Explain yourself, sir, instantly!"

"Well, sir, I only thought that the bit about lozenges and snoozing was intended to refer to you, sir."

"Oh, you did, did you? And on what possible grounds, sir?"

"Well, you see, sir, you sometimes do, sir."

"What do you say?" old Sandy simply roared. "Leave the room at

once, sir! In the whole thirty-five years of my scholastic experience, I have never—I say never—been subjected to such unpardonable insults! Get out, sir, before I forget myself and—”

Silcock didn't wait for any more—he just scooted without further delay.

“And now, Masters,” the Head continued, when he had calmed down a little, “proceed with your excursus.”

“Very good, sir. If you really would like to hear it, it says: ‘Then again, if you are really a French master, you keep on saying “Zero” when you mean nought for the lesson, and “Pray don't excite, mes jeunes annis,” and “Ah, you are von Dutch peeg, I take eet!” These are just mannerisms and don't matter really, besides being funny to listen to.’”

On hearing this, the Head sort of croaked and said—

“Will one of you kindly interpret to me the meaning of these curious and cryptic utterances?”

Of course, nobody answered for long; but that Kidson, who is a beast, put up his hand and said—

“Please, sir, I believe I know, sir.”

“Oh, you do, do you? Pray then, be so good as to explain.”

“Well, sir, you see, sir, it's this way, sir. Those are some of the remarks that Mr. Frogmann, the French master, keeps on making in Form; so I suppose Masters just introduced them as—well, as sort of illustrations, sir.”

“I see nothing, sir,” the Headmaster, who was by this roused to utter rattiness, replied, “save that you, O miserrime puer, are by your statement confessing yourself an accomplice to the crime—revealing yourself, indeed, an accessory both before and after the fact. Sir, you are, in short, a criminal of the deepest dye, sir! You have wantonly and outrageously transgressed every single law of academic propriety! Do you understand, sir?”

“Ye—yes, sir,” Kidson admitted sorrowfully, looking very white and bubbling most frantically. “Please, sir, I didn't mean to make you mad!”

“Make me mad! You actually have the audacity to accuse your Headmaster—your supreme exemplar of cor-

poral and intellectual sanity—of being a victim to the dread disease of dementia?”

“Please, sir, no, sir. I don't mean what you mean, sir,” said the miserable Kidson, his tears splashing down on his desk very loudly. “I only meant, sir, that I didn't intend to get you hairy.”

“Hairy! You have the unparalleled impertinence to stand there and state, on the very top of your monstrous imputation of insanity, that I am afflicted also with excessive capillosity! Consider yourself expelled, sir, and be very thankful that there is no severer and more condign a punishment at my command. Go, therefore, immediately and pack your trunks. But stay—I will myself accompany you to supervise your labors.”

They went, to my utter relief and joy; for, in this way, what books call the vials of wrath of the Headmaster were turned away from me and my essay on mannerisms. We none of us cared the least bit what happened to Kidson, he being a miserable specimen in all respects, and no good for anything except sneaking and swotting. But in the end things turned out all right for him even, because he fell into such a frightful fit of blubbing at the mere thought of being expelled, that the Head, who is not a bad sort in his way, in spite of his terrific rattiness when roused, softened towards him, through fear of his dying, and merely had him severely whacked by the Sergeant.

And as for me, I never heard a single thing more about my wretched “Mannerisms,” which just shows that even one's bitterest enemies may often do one a jolly good and useful turn without meaning it, as Silcock and Kidson did in this case for me.

And also these events prove that a man can have the very best intentions in the world—as I had when I swotted for hours at that blooming synopsis just so as to make my essay bright and interesting, and so buck old Crosseyes, who always tells us to introduce a topical interest where possible—and yet get not the slightest credit or praise for them in the long run.

## Handicaps in Horticulture

HERE'S nothing like seeing a favorite gain on his man. In our foot-races the new boys get the advantage of the handicap and then we sit up or stand up to watch and shout for and wave for the veteran sprinter as he cuts down the lead. We acquired a kind of pride when we saw it before and we glory in seeing it again.

In real life the handicap goes the other way. The veteran financier, manufacturer, merchant, even the veteran horticulturist, has all the advantage of capital or prestige that gets it for him. He has the confidence of races won before; he knows where the weak places are, where to guard against mistakes; and experience, the greatest of all teachers, has pointed the way and trained him for his best efforts.

The novice may have capital, but the wrecks of companies and the disappointment and failures of individuals who have started horticultural enterprises not knowing where to look for trouble and having a confidence conjured up by hearsay, and having little or no experience in the doing—these handicaps soon put him and his capital out of a race with veterans who have been there before.

The purpose of this article is to recount some of the handicaps that have dropped many hopefuls by the wayside. If you do not understand fully what they mean, get out and experience as many as possible of them with practical men who will pay you small wages for doing it, before wasting your time and your where-with-all growing apples or celery or even cabbage that you've heard there was money in.

Some old fellow who had had his share said that success is a matter of margins. The first margin of the orchardist is the ripened growth his trees make the first year. He got that young growth on first class trees that he knew how to buy at the proper price. He got young growths coming out on his trees where he wanted them, because he had his trees early enough, heeled in properly before planting, so that every tree he planted was in good condition, so when planted properly they grew well from the beginning. The land they were on was strong enough to shave out growths all along the stem. Perhaps he was preparing the land one or two years previous to planting. Probably he did some manuring. Anyhow, he had enough growths to make a good choice and he shaped those trees' heads just about as he wanted them. Up to July of the first year they made excellent growth from a good start.

Then they had enough start, he thought. So he sowed the orchard down using crimson clover or buckwheat may be, though he could have used weed seed if he was just growing an orchard on the ground. That was the first cover crop. When fall came he knew about mice and their plans and he wrapped his trees with white paper. Mice won't go into an orchard to eat paper, and moreover, the paper prevented winter injury, since it extended up to the crotch. He had his trees on a northern exposure anyway as he knew sunscald does not occur so much on that kind of a slope.

And while he was at it he planted enough. Perhaps he only put in ten acres, but if he didn't put in twenty-

five it was scarcity of labor that scared him off. If he lived in a fruit section he could avail himself of co-operative selling and shipping. If not he had enough to demand a market and to make shipments on his own account to those who wanted his product.

Yearly the work of cultivating, spraying, pruning and covercropping was kept up until the trees were bearing. The trees were not all one variety for one reason, that too many to pick at once would have been disastrous. Moreover, solid block planting would not have been so conducive to productiveness. No, he had them mixed up, two or three rows of a kind and then two of another and so on.

When blossoming time came the trees were free of mites and cankerworms and scale, and scab was being prevented with lime sulphur, and he kept the codling moth down in numbers and out of the apples, when the time came. The hail didn't hit him every year, so he often had something like ninety per cent. of number ones and fancy to pack.

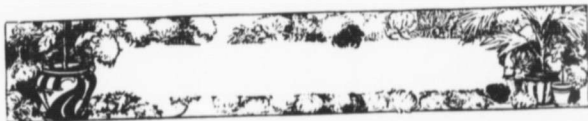
He did not have drinking or incompetent packers and pickers. He had his barrels and boxes ready when needed. He had circle presses. In fact, down to the headliners soaking, everything was ready. How did he do it? One thing he did was to give his men work the year round, so when he got his packer trained he kept him, and careful active pickers the same. Of course, his apples, packed

well, had a reputation. That was another handicap giving him all the margin there was coming on the price. Maybe he had to store some to get it, but he knew what, when and where to store and when to sell.

There are a few, a comparative few, of his kind in Ontario. Their success is causing ex-bookkeepers, superannuated teachers, ambitious but not over cautious Englishmen, and others, including college men, to see in horticulture the evasive easy money they have looked for all along. These ambitious sprinters, however, have the handicaps against them. There are such qualities as grit, ability to manage men and affairs, and capacity to act quickly when in a predicament. Such qualities are inborn. They may make you appear to be a born horticulturist. But do not bank on them unproven, as the whole aggregation may be spelled c-o-n-c-e-i-t.

Maybe you'll want to know, "and what if this success was a celery grower, or a peach, or grape grower?" Maybe he was or is. A number of specialties if not too numerous increase such a one's chances of profit. He would have had enough of each to really make an impression will those who wish to buy. He was ready to plant when the time came, he knew how to do things, and what to do them with, and he was timely. More than all the others he had experience. That's the biggest handicap. If you haven't it, get it.

—W. M. Aikenhead.



# QUERIES

EDITOR'S NOTE—*This department is open to our subscribers. We can obtain expert information on practically any branch of agriculture, at first hand here, and shall be pleased to answer any queries submitted*

## Question.

Whitby, Ont.

Dear Sir:

I wish to have your advice regarding my bees.

I keep them in a small, frame building, where it gets all the sun, and this fine weather the bees are very uneasy. Would you advise me to put them out on their stands and protect them with tar paper? I took them out last year on Good Friday, but it is much milder this winter.

I left two hives out, just covered slightly, and they are fine. Yesterday they were flying all around.

I have been four years in the bee line. I work all day in town, and am now busy making hives for spring. Have had good luck so far. Last summer I bought an extractor and now I have a complete outfit. Am well satisfied so far as I have gone. I put my honey up in first-class style and get a good price.

Since starting in the business, I have lost only one or two swarms wintering, and I now have twenty-five hives. Kindly let me hear from you.

Yours truly,  
J. L.

## Answer.

I think perhaps you had better set the hives out doors where they will have a chance to fly. This mild weather is very hard on them, especially when they are confined to such a

place as you have them in. We do not recommend keeping them in a building above ground in that way. We always prefer putting them in the cellar or packing them in boxes and planer shavings, or some such material out of doors with the entrance so arranged that they can fly in warm days.

## Question.

Dear Sir,—I have a few hives of bees, but my boxes are all different sizes, and I want to make the new ones all the same size. Will you please give me the dimensions of the standard Longstrath hive? Which do you consider the best, the Longstrath or the Dadant hive, as given in Longstrath's book on the "Honey Bee"? Can one get an extractor to take the Dadant frames? Please tell me the address and subscription price of a good bee journal. Hoping I am not giving you too much trouble, I remain yours sincerely,

S. N.

## Answer.

Dear Sir,—In reply to your query of recent date, I could not give you all the dimensions of the Langstrath hive. You had better write to the Ham & Nott Co., Brantford. Ask them for their catalogue. Then buy one of their hives as a model to use in making up new hives. It is very important to get hives made accurately, so that the different parts will fit and will be interchangeable. I do

not recommend the use of the "Dad-ant" hive. The tier frame Langstrath is the standard in this country.

Your best plan for getting a Bee Journal would be to join the Ontario Beekeepers' Association. You might send me one dollar as I am Secretary and I will make you a member, when you will receive the "Canadian Bee Journal" for one year and other privileges.

Yours very truly,  
Mr. Morley Pettit,  
O. A. College,  
Guelph, Ont.

Question.

Hensall, Ont.

Colt sprained his stifle joint in the barn yard some time ago, and now there is a hard lump in front of the joint. He goes lame. What can I do for him?

L. P.

Answer.

The best way to treat this is to apply a good blister. Two drams each of biniodide of mercury and cauthorides, mixed in two ounces of vaseline makes a suitable blister. Before applying this the hair should be carefully clipped off the affected part; then the blister should be rubbed well in for two days. On the third day wash off and apply sweet oil daily until the scale is removed. Repeat the blister once a month for four or five months. Care must be taken to tie the animal so that he cannot bite himself while the blister is on.

Question.

Horse had distemper in early part of winter. He still has a cough and a slight discharge from the nose. In the morning after a hard day's work

he breathes as if he had the heaves. He is in good condition, is a small feeder and light drinker. I have been feeding him raw linseed oil and oil of tar twice a day, but he is not improving. Could you suggest a cure?

Answer.

It is not unusual for horses to be affected in this way after a severe attack of distemper, and if it is neglected it may terminate in heaves. Try the following:

Potassium Chlorate Pulv.  
Nux Vomica Pulv.  
Lobelia.

Four ounces of each, mix and make into 32 pounders. Give one three times daily, and damp hay with lime water.

Question.

I have some scabby potatoes, which I wish to use for seed. Would you please tell me how to treat them to kill the disease before planting?

Answer.

It is not well to use scabby potatoes for seed if it can be avoided. Where it is necessary to use such seed, the whole potatoes should be immersed for two hours in solution made by adding one pint of formalin to thirty gallons of water. The same solution may be used repeatedly. Treat potatoes before cutting them.

Question.

Dear Sir,—Would you kindly publish in the Review a full report of the work done in the spraying of mustard.

Answer.

Sir,—In reply to your request, would say we cannot give in our paper a full report of the work done along this line. You will find a fairly

good report of work done by the O. A. C. Union in the 1913 report, which will be out shortly. Below we publish instructions for both copper sulphate and iron sulphate.

### Copper Sulphate.

#### Killing Mustard With Blue-Stone.

(Read carefully and preserve for reference.)

The demonstrations given throughout Ontario for the destruction of wild mustard have proved that, in the majority of cases, under favorable conditions, spraying with copper sulphate almost entirely eradicates this troublesome weed from growing in cereal crops.

#### I. How the Blue-Stone is Applied.

—Place an ordinary spray pump, to which is attached the 6-row sprayer, on a cart or light wagon; drive along slowly through the field, applying the solution to the mustard plants in the form of a fine spray. When the field is badly infested, it is advisable to spray the crop in strips in order that no mustard plants may escape the spray.

**II. How the Blue-Stone Solution is Made.**—Put nine pounds of Blue-stone (copper sulphate) in a coarse sack or bag, and suspend it in a vessel containing three gallons of very hot or boiling water. The Blue-stone will usually dissolve in 15 or 20 min-

utes. Strain the solution into the barrel of the spray-pump, and fill up with cold water to make 40 or 45 gallons.

**III. When to Spray the Mustard Plants.**—Spray the mustard on a calm, bright day, just as the plants are coming into bloom. Should a heavy rain come immediately after spraying, it will be necessary to spray again.

**IV. How Much is Required to Spray an Acre Thoroughly?**—A barrel of the solution, costing about eighty or ninety cents, is sufficient for an acre. Successful results are obtained when the spraying is done thoroughly.

#### V. Are the Crops in Which Mustard is Growing Hurt by the Spray?

—Experience shows that the young wheat, barley, oats or young clover plants are not injured beyond a slight browning for a few days by the Blue-stone spray.

#### Ferrous Sulphate.

The instructions for spraying with ferrous sulphate are the same as those for copper sulphate, only instead of using nine pounds you should use (80 lbs.) eighty pounds of the ferrous sulphate.

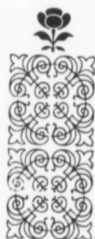
It should be remembered that thoroughness is one of the essentials to success in this work.

## Transgression

By Richard Le Gallienne.

I meant to do my work to-day,—  
But a brown bird sang in the apple-tree,  
And a butterfly flitted across the field,  
And all the leaves were calling me.

And the wind went sighing over the land,  
Tossing the grasses to and fro,  
And a rainbow held out its shining hand—  
So what could I do but laugh and go?





O. A. C. REVIEW STAFF, 1912-13.  
 Front Row—Left to right—G. J. Jenkins, Bus. Mgr.; Miss Greta Crowe, Macdonald; J. H. Winslow, Editor; Miss Kathleen Buehler, Asst. Editor; L. S. Johnston, Circulation; Mac; I. S. Johnson, Circulation; Alami; F. Strong, Asst. Bus. Mgr.; J. L. Tennant, Editor; G. C. Knight; G. C. Knight; G. C. Knight; G. C. Knight; G. C. Knight; G. C. Knight.  
 Second Row—C. W. Stanley, Agriculture; C. H. Webster, College; R. F. Horrobin, Asst. Clk. Mgr.; L. B. Henry, Horticulture.  
 Rear Row—L. M. Davis, Query; C. A. Good, College; R. F. Horrobin, Asst. Clk. Mgr.; G. F. Kingsmill, Asst. Clk. Mgr.



# THE O. A. C. REVIEW

## REVIEW STAFF

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S. C. JOHNSTON, Circulation Manager.

C. W. STANLEY, Agriculture.

J. L. TENNANT, Experimental.

L. B. HENRY, Horticulture.

C. A. WEBSTER, Poultry.

L. M. DAVIS, Query.

CHAS. A. GOOD, College Life.

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MISS FAYE WINSLOW, Asst. Macdonald.

G. CLARK DUFF, Athletics.

A. CORY, Artist.

J. E. LATTIMER, Alumni.

H. P. HORROBIN, Locals.

## Editorials

As in the past two years The Review is allotting prizes to the winners of first and second places in a parallel series of competitions.

The nature of these and the rules governing the award, will be mentioned in full in the June number of the magazine, but there will be four classes; first, short stories, not over 2,500 words in length; second, poems; third, a set of three photos dealing with some branch of outdoor life in Canada; and lastly, a set of three cartoons. The first prize is a cheque for the sum of \$10.00, and the second a cheque for one-half this amount, which, if we figure correctly, amounts to \$5.00. The judges will be chosen from either the Faculty of the College or from the City of Guelph, and will not be aware of the names of the contestants, all entries, of course, being submitted under a nom de plume. These competitions are open to all subscribers, and entries may be sent in at any time.

Why not? We have heard and seen lengthy and learned discussions in various places on the best means of improving conditions in rural Can-

**BASEBALL ON THE FARM** ada. The chief attention seems to be devoted to the social life of the winter months, which is admittedly not equal to that of Toronto or New York. But surely a little sport in summer is even more to be desired. Let us suggest to the district representatives that they do all they can to develop the great American game in their constituencies. Anyone who notices the development of athletes at the College from the oft-times raw looking youths who enter in their first September, will easily believe that there is an abundance of raw material in every township. At present it has, except in a few exceptional districts, not a chance in the world to come to light. The introduction of the game into every county in Ontario would effect a transformation in the life of the boys.



# ALUMNI



**I**T is often asserted that gold medalists are not the most successful graduates. Innumerable instances of the genius of the indifferent students of past history rise before us in support of this opinion. How blissful such a comforting idea when the examination results are being published. One could almost persuade himself that a starry position in the list was a particular mark of genius.

According to Emerson, every mind is offered a choice between truth and repose. Take which you please, you can never have both. It was ever thus. The truth of the matter deprives us of the pleasure offered by the idea that a low standing in examination was a guarantee of future success. Recent investigation reveals the fact that the gold medalists of this institution have achieved even greater success outside of their college career.

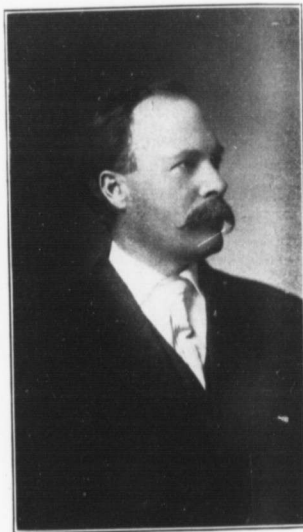
A list of pass winners of medals has been obtained and some space will be given to them in this and future issues of the Review.

Mr. F. B. Linfield won his medal in '89 and was graduated in '91. After a course of dairying in Wisconsin, two years were spent in travelling in Ontario in Institute work.

In autumn of '93, Mr. Linfield was appointed Professor of Animal Husbandry and Dairying at Utah Agricultural College. This position was held for seven years when he was promoted to the position of head of

the Agricultural department of the College.

In '02, this position was given up to accept that of Professor of Agriculture and head of the Agricultural Department at Bozeman, Montana. In '04, he was appointed director of the Experiment Station, which position he now holds.



MR. LINFIELD

In the ten years that Mr. Linfield has been at Bozeman, a thoroughly equipped agricultural college has been developed, and the opinions of the people as to the State of Montana changed from that of considering it merely a mining and stock-raising state to a great farming state.

G. B. McCalla, medalist '97, was graduated in '98. The following year was spent in Canadian West.

During the South African War, Mr. McCalla served one year in the Royal Canadian Artillery. The two following years were spent at the O. A. C., in Department of Physics. In 1903, he bought a farm near St. Catharines, and has lived there since that date.

His studies here could not have monopolized his time completely as Mrs. McCalla was a Guelph girl.

D. Z. Gibson, medalist of '90, since graduating in '92 has been farming near Calendonia in Haldimand County. His two hundred acre farm, though run to mixed farming, profitably grows from thirty to fifty acres of alfalfa.

Mr. Gibson has lectured for six years at Farmers' Institutes.

Municipal politics has received some attention from Mr. Gibson, he having served through its various phases, ending in the County Council.

For the past two years, Mr. Gibson has been president of the Caledonia Fair.

Y. R. Arkell, gold medalist in '05. "Reg" was a keen participant in college sports. He was a member of the stock-judging team that won the trophy in '07.

After he was graduated, he served six months as Agricultural Editor of the Ottawa Citizen. Later he became Assistant Editor of Canadian Farm. Soon after this he was appointed head of Department of Animal Husbandry at New Hampshire College. While here Mr. Arkell studied the inheritance of character

in sheep in relation to Mendelian theory. The results of this work is published in several bulletins issued by the New Hampshire Station. In June, 1912, Mr. Arkell returned to Canada and was appointed to his present position of sheep expert at the Dominion Live Stock Branch, Ottawa.

O. C. White, '10, won the Barton-Hamer medal in his graduating year, securing the highest number of points of any O. A. C. student at the Chicago International.

After Mr. White was graduated, he went to Ottawa as assistant to the Dominion Agriculturist. He was recently promoted to position of Assistant Field Husbandman.

H. R. Ross, medalist '97, was graduated in '98. "Hank," as he was familiarly known, piloted the Review through the year '97 and '98.

In 1901, Mr. Ross became Editor of the Maritime Farmer, Sussex, N. B.

In September, 1903, Mr. Ross gave up journalism and has since been in the cold storage business, for the past six years as manager of the N. B. Cold Storage Company, at St. John, a subsidiary of the Canadian Pacific Railway, one of the largest and best equipped plants in Canada.

In 1909, Mr. Ross married Miss Ella Faulkner, Sterling, Ont. The family now includes a sixteen-months-old candidate for "Mac" 1928.

Mr. Ross enjoys clubs, is a Free Mason and a military man, holding a commission in the 3rd Regiment Garrison Artillery.

A more extended list of gold medalists will be given in the next issue.

On March 19th, a quiet but very pretty wedding took place at the home of Mr. and Mrs. John Jamieson, Guteluis, B. C., when their youngest daughter, Nina Helen, was united in wedlock to Arthur J. Cowie, of Slocan Park, B. C.

After a dainty lunch was served, the happy couple drove to their new home at Slocan Park, where Mr. Cowie has been employed as foreman by the Kootenay-Slocan Fruit Company for the past three years.

Mr. Cowie took the associate course with the '11 class.

An old member of Class '11 writes the following:

"I visited the home of Dr. R. B. Kennedy, of '94, and found some interesting trophies won at old athletic contests on the O. A. C. campus. Dr. Kennedy has silverware which shows the following: 1893,  $\frac{1}{2}$  mile, 2 min., 14 sec.; 1894, 100 yds., 10 4-5 sec.;  $\frac{1}{4}$  mile, 58 sec.; 220 yds., 24 sec.; 1895,  $\frac{1}{4}$  mile, 54 sec.

Besides prizes for these, Dr. Kennedy can show some very valuable trophies won at track meets during his post-graduate course at Cornell.

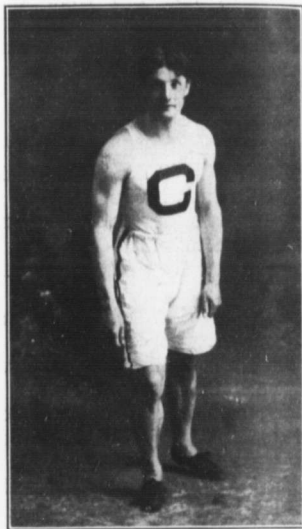
Dr. Kennedy, after his Cornell course, occupied a position as Agrostologist in the Department at Washington, which position he vacated to accept a chair in the Agricultural College of Nevada, which he now occupies.

In addition to his work in horticulture, Dr. Kennedy has been doing valuable research work in the line of clovers and range grasses. He is now preparing an extended treatise on clovers.

Although a little heavier than he once was, "Pat" turns out to play soccer and would be apt to reason

with the man who would hint that he is no longer one of the boys."

J. H. Sterling, '08, formerly of North Toronto, is now superintending Mr. W. B. Tomlinson's Old Norfolk Orpington Plant, at Norfolk Heights, Simcoe, Ont.



P. B. Kennedy, '94, P. G., '95.

Students of the O. A. C. from '07 to '11 will be sorry to learn of the bereavement of R. Grant Thomson, the typical Westerner, from Boharm, Saskatchewan. His wife died at Winnipeg on March 20th. There was left a fine nine-day-old daughter.

After leaving college in '11, Mr. Thomson, or "Tommy," as he was generally known, joined the staff of the Farmers' Advocate, of Winnipeg, as Live Stock Editor. In the fall of that year he was married to

Margaret Bastedo Hill, of Boharm.

Winnipeg O. A. C. boys were on hand to do what they could to comfort their bereaved brother. Their sympathy was shown in a small way by the sending of a sheaf of roses by the following: George H. Geig, Class '79, now a member of Winnipeg School Board; Prof. L. A. Moorhouse, '02; F. W. Brodrick, '03, and M. C. Herner, '11, all of Manitoba Agricultural College; J. Albert Hand, '05; W. W. Emerson, '12, and A. A. Toole, '12, all of the Farmers' Advocate, Winnipeg; W. J. Carson, '02; Harris McFayden, '05; G. G. White, '06; E. F. Coke, '08; I. B. Henderson,

'12, and Lloyd Jackson, who was instructor in the Chemistry Department here.

The pallbearers were: Prof. Herner, W. W. Emerson, A. A. Toole, G. V. Stonhouse, for a time associated with Mr. Thomson on the Farmers' Advocate staff. B. H. Thomson, brother of the bereaved, and J. Madden, a next-door neighbor, who has been a staunch friend of Mr. and Mrs. Thomson since they settled in Winnipeg.

O. A. C. boys everywhere join with the Winnipeg contingent in sincerest sympathy.



(The following little masterpiece has been sent in by a contributor who wishes to remain nameless. He is evidently afraid of the consequences. We publish it as an interesting example of what the Editorial Board has to suffer at the hands of thoughtless people who are unaware of the anguish of mind they cause.)

## A SERENADE

O mistress mine, thy smiles divine  
Have kindled an ardent flame,  
That doth consume my soul with gloom  
And terrors without a name!

Wilt thou fly with me o'er the stormy sea,  
Where the waves in wrath are roaring?  
Where the north winds blow and the winter's snow  
And the waters are downward pouring?

We'll fly to a land where the burning sand  
Will cook us our Sunday dinners,  
Where niggers abound and dance around  
The pots where they're stewing their sinners.



# ATHLETICS



## AN INTERESTING GAME.

The possibilities of the English language have frequently been taxed to describe the American game of football, but for striking illustration this from the "Herald," of Quincy,

toasted by the basilisk-eyed cattle drivers from the west. They stood around with gaping eyeballs, like a hen on a hot nail, and suffered the grizzly yawps of Omaha to run the bases until their necks were long with



FIRST YEAR HOCKEY TEAM—CHAMPIONS INTER-YEAR SERIES, 1913.

Back Row—B. P. Gandier, Centre; C. E. Lackner, Point; H. Curran, Goal.  
Front Row—B. Langley, R. Wing; H. S. French, Left Wing; S. Thompson (Capt.), Rover; E. C. Foreman, Coverpoint; C. V. Hartley, Spare.

Illinois, has rarely been "equalled":

"The glass armed toy soldiers of this town were fed to the pigs yesterday, by the cadaverous Indian grave-robbers from Omaha. The flobby one-lunged Reubens who represent the Gem City in the reckless rush for the baseball pennant had their skins

thirst. Hickey had more errors than Coin's Financial School, and led the rheumatic procession to the morgue. The Quincys were full of straw and scrap-iron. They couldn't hit a brick-wagon with a pick-axe; and ran bases like pall-bearers at a funeral. If three base hits were growing on the back

of every man's neck they couldn't reach 'em with a feather-duster. It looked as if the Amalgamated Union of South American Hoo-dooes were in session for work in the thirty-third degree. The geezers stood about and whistled for help, and were so weak they couldn't lift a glass of beer if it had been all foam. Everything was yellow, rocky and whavgblasted, like a stigtossel full of doggle-gammon. The game was whiskered and frost-bitten. The Omahogs were bad enough but the Quincy Brown Sox had their fins sewed up until they couldn't hold a crazy quilt unless it was tied around their necks."—Queen's Journal.

### BASKETBALL.

#### Seniors, 19; Freshmen, 13.

The Seniors won the basketball championship of the College on March 20, by a score of 19-13. A close game was expected, and the people who went to see it, were not disappointed. While the game was fast it was not furious, at least

not in the sense of rough play. Both teams deserve commendation for the clean play.

The Seniors led all the way. They assumed the lead shortly after the commencement of the game and thereafter were never headed. The half time score saw the Seniors leading by 10-6. The second half was much of a repetition of the first, the Seniors increasing their lead but slightly.

The Freshies lost the game by their poor shooting. Time and time again they worked close to the basket, but could not put the ball through. The Seniors on the other hand, with fewer opportunities, made better use of them. The teams:

Seniors—Bramhill, Palmer, guards; Culham, centre; Tisdale, Neff, forwards.

Freshmen—White, Orr, guards; Wilson, centre; Wilton, Munro, forwards.

Referee—A. W. Baker, B.S.A.

Umpire—D. W. Gillies.

## Short Sport Story

### Gotch Wrests Crown from Jenkins

Frank Gotch became champion wrestler of America, Jan. 27, 1904, after one of the roughest battles in the annals of this ancient sport. Tom Jenkins, a rough and ready wrestler, of the slam-bang variety, had held the title for six years. He had suppressed all challengers by his rough-house tactics, including Gotch, at Cleveland the year previous.

The sting of that defeat and its gruelling punishment spurred the young farmer lad to secure a return battle. Jenkins at this time was con-

sidered invincible, and Gotch, well aware that he could not hope for success except at the price of supreme effort, trained night and day. He ran thirty miles across country every afternoon. Joe Carroll was his handler. Emil Klank, Farmer Burns, Duncan McMillan, Tom Davis and George Kennedy were his trainers and wrestling partners.

The pavilion at Bellingham, Washington, where the match was staged, the largest on the Pacific coast at the time, was packed to the doors and

some fans were hanging on the rafters. Seats sold as high as \$25 each. Jenkins seeing the size of the "gate," held the crowd for an hour, demanding \$250 more in addition to his guarantee of \$1,000, win or lose.

"This match wasn't a scientific grappling contest," said Klank, one of Gotch's seconds and later manager of the world's champion. "It was a rough and tumble encounter. It was the bloodiest battle in wrestling history. If I live to be a hundred years old, I never expect to see a mat struggle the like of that one between Gotch and Jenkins at Belingham."

When Tom Davis, the referee, yelled "time," Jenkins flew at Gotch like an anger-crazed tiger in an African jungle. Gotch, outweighed by 25 pounds, stood his ground and went into the referee hold with the champion.

It was Jenkins' campaign to rush Gotch off his feet and win in a hurry. He knew the young Hawkeye farmer had trained for endurance. So he bored in and put Gotch to the mat, but the youngster went to a sitting posture and was up in a flash. Jenkins charged again and put him down, but try as he might he could not hold the athlete from Humboldt.

Up and down the pair fought and struggled like mad. Gotch had the endurance and the terrific pace began to tell on Jenkins. The champion put Gotch down and tried for a half nelson, then a head lock and other holds. He tried to break Gotch's arm by one of his old tricks

but Gotch was up in a flash.

Maddened at the champion's rough tactics and tearing into him like fury, Gotch picked Jenkins off his feet and hurled him to the mat. Jenkins rose and Gotch repeated, putting the champion heavily on the mat and giving him a taste of his own medicine.

Jenkins wanted to quit, contending Gotch had fouled him. Jenkins had punished Gotch when the farmer laid was on the mat by pretending to secure a further arm hold and in the motion of doing so striking the nose violently. He also tried to injure Gotch's elbow.

Gotch showed wonderful speed in sidestepping the lunges of Jenkins and the champion tired himself out. Gotch finally rushed in and slammed him to the mat for the first fall, with the half-nelson and crotch. Jenkins' seconds had to carry him to his corner and administer restoratives.

In the second bout, preferring to lose on a foul rather than go down, Jenkins apparently deliberately placed a strangle hold on Gotch. When Gotch extricated himself, Jenkins deliberately aimed a vicious swing at him, which, had it landed, might have knocked him out. The referee jumped between them but they kept lunging at each other until the ring was cleared. It was the last despairing effort of a beaten tiger of the mat. Gotch was declared the winner, the champion of America, and hauled down \$400 in a purse and side bet. Gotch weighed 184 pounds and Jenkins 210.







# College Life



## The Sophomore Banquet.

THE last assembly of the original class '15 took place at the Royal Hotel on the evening of April 14, when the Sophomores and their guests celebrated this event by a banquet. There were nearly one hundred fellows present, including a few boys who had come back for this final reunion.

The honorary guests, seated at the head of the table were Dr. Creelman and some of the members of the Faculty, Messrs. Geo. Chapman and Wm. Gamble, of Guelph, and the representatives from the other years.

The guests and students assembled in the dining-room at 8:30, and did royal honors to a well-served meal. The cigars having been passed around, the chairs were pushed back and everyone settled down for the programme.

Mr. R. S. Johnston, the president of the year, acting as toast-master, proposed the first toast to the King. Mr. Hart then gave a song, the boys joining in the chorus.

The toast to Canada was proposed by E. G. Gordon. Prof. J. E. Howitt, in replying, pointed out that the future of Canada depended upon the intelligence and activity of her people.

A. Austen Leigh proposed "The Faculty," to which Dr. Reed replied in one of the best and most humorous speeches of the evening.

"Alma Mater" was proposed by M. T. Smith. Dr. Creelman replied, wishing the retiring students every

success and hoping that each one would be in the front rank of agricultural improvement wherever they went.

Robt. Sutton dealt with his old subject, "The Mac," and R. B. Hinman, in replying, stated on seemingly good authority that the young ladies appreciated what the year had done for them.

"The Other Years" was the subject of the toast proposed by W. R. White, the year representatives, L. B. Henry, '13, H. R. Hare, '14, and J. E. McLarty, '16, replying to it.

N. R. Martin now had the floor and having proposed "Our Profession," was answered by Mr. H. H. LeDrew, who explained that just as much ambition and courage was needed in agriculture as in any other industry, and that scientific agriculture was certainly going to win out in the long run.

After a few words by the Honorary President, Mr. W. J. Squirrel, the year mascot appeared on the scene. Mr. A. L. Gibson and his brother gave vocal and piano solos.

"Auld Lang Syne" and "God Save the King" brought the successful banquet to a close, and all too soon the boys had to separate.

## THE RESULTS OF THE ELECTIONS.

### Athletic Association.

Hon. President—Prof. R. Harcourt, B.S.A.

Hon. Vice-President—Mr. E. W. Kendall.

President—C. F. Neelands, '14.

Vice-President—S. Jones, '15.  
 Secretary—W. E. Hare, '16.  
 Treasurer—D. R. Sands, '15.

#### Managers—

Basketball—A. W. Baker, B.S.A.  
 Baseball—W. J. Squirrel, B.S.A.  
 Hockey—A. H. McLennan, B.S.A.  
 Aquatic—W. H. Wright, B.S.A.  
 Track—S. G. Freeborn, '14.

#### Literary Society.

Hon. President—Prof. J. B. Reynolds, M.A.  
 President—G. C. Duff, '14.  
 Secretary—J. F. Andrews, '16.  
 Treasurer—J. M. Vasey, '15.

#### O. A. C. Review.

Associate Editor—A. C. Cory, '15.

#### Editors—

Agriculture—P. Stewart, '14.  
 Experimental—J. N. Allan, '14.  
 Horticulture—C. A. Good, '14.  
 Poultry—J. P. Hales, '14.  
 Query—J. A. Neilson, '15.  
 Alumni—R. A. Finn, '15.  
 College Life—D. M. Smith, '15.  
 Athletics—D. G. Laird, '15.  
 Artist—P. C. Connon, '15.  
 Locals—M. Jones, '16.  
 Business Manager—H. S. Fry, '14.  
 Assist. Business Manager—M. J. McQueen, '15.  
 Circulation Manager—G. F. Kingsmill, '14.  
 Assist. Circulation Manager—N. R. Martin, '15.

#### THE RIFLE ASSOCIATION.

The Rifle Club with a membership of sixty in this its first year, has seen a most successful season, and we have great hopes for the years that are to come. The following are the results of the competitions that were held during the first three weeks in March.

#### Inter-Year Faculty Competition.

A shield is donated to the winning

team, each member of which receives a bronze medal.

Second Year, score 399, possible 525  
 First Year, score 394, possible 525  
 Third Year, score 375, possible 525  
 Faculty, score 363, possible 525  
 Fourth Year, score 243, possible 525

#### Best Individual Scores.

The first place was awarded to W. Knoop, '16, who made a score of 90 from a possible of 105, and who gets the silver cup. L. B. Henry, '13, came second, obtaining the silver medal, while F. L. Goodman, '15, who came third was awarded the bronze medal. Messrs. Henry and Goodman came out a tie, in the shoot off the former won.

#### The Novice Competition

Three pearl handled knives were given to the three novices who showed the best progress during the term. Won by W. H. Scott, D. Elliott and C. M. Laidlaw.

The match with the Army and Navy Veterans, on March 26th, resulted in a victory for the boys from the Heights, who totalled a score of 400 while their opponents got 355. In the return match, O. A. C. won again, by one point.

Sir Henry Pellatt has quite recently donated a silver cup to be the possession of the shooter who wins out three times in succession.

#### WHO SAID BANQUETS?

"Isn't that a dainty feast to set before a king?" said Mother Goose, as she looked over the following lines, which were handed to the Secretary of the Biological Club of the College, as a few hints for future banquets:

"Finding ourselves not in a position to be present at the dinner (the Biological Club banquet), we decided to hold a little affair of our own on

the same night, so as to be with you in spirit at least. We spent a good deal of time (the only thing civil servants have lots of) in making arrangements for this function, and we send a few details of it to the Club, hoping they will prove useful on some future occasion.

We decided to hold the affair at the R. C. L. lunch counter, which is to be fitted up for the occasion. The walls will be decorated with graceful boughs of protococcus, interspersed with waving tendrils of oscillatoria. Several small pots of lepidodendron and sigillaria will complete the color scheme. The table will be handsomely adorned with centre pieces of inch Luny lace, on which will repose several daffy-dils. The table will bear buckets of other rare and costly blooms, among which will be found the fragrant sympla carpus foetidus, the golden dandelion and perennial sow-thistle, with their bright-blue blossoms, and the delicate fragile sprays of Echium vulgare.

The main floral decorations will be a large basket, whose contents will recall many old friends. It will be lined with couch grass, stuffed with bed straw, made comfortable by the arrow-heads shooting up at the sparrow-grass. In inspecting this basket today, we noticed a considerable commotion inside, and upon examination found that a large number of our old acquaintances were in peculiar predicaments.

Sam Bucus and Rose Mary were dancing to the music of the Bugleweed, Trumpet flower and Canary grass. Jack-in-the-Pulpit, in a Virgin's Bower, was persuading Bouncing Bet to exchange her foxglove for his skull-cap. Black-eyed Susan was vigorously belaboring

Johnny-Jump-Up with her lady slipper. It is suggested that her indulgence in such unseemly conduct has earned her the nick-name "Rude Becky." In a secluded spot, Ragged Robin and Stinking Willie were angrily quarrelling over the possession of Dog-Tooth Violet. Jack Oak was walking circumspectly about with Alice Macey and Daisy Fleabane, acutely conscious of a tear in his Dutchman's breeches.

The menu will be as follows:

#### Soup.

Turtle-head soup.  
Consomme Chelone.

#### Meats.

Lamb's Quarters. Hart's Tongue.

#### Vegetables.

Water Parsnips. . . Indian Turnip.  
Potatoes, with phytophthora sauce.  
Skunk Cabbage.

#### Condiments.

Pepper Grass. Hare's-Ear Mustard  
Saltworth. Treacle Mustard

#### Salads.

Salad de Rocket.  
Salad a la Zea Mais.

#### Pastry.

Pie Plants.  
College Doughnuts a la Cunninghamella.

#### Fruits.

Mock Orange. Pineapple Weed.  
May Apples.

Prunus Boardinghouseensis.

#### Nuts and Candies.

Hog-Peanut. Candy-Tuft  
Spearmint.

#### Beverages.

Wild Rye.  
Wine de Cellaris Creelmanis.

#### Cigars.

Howitt's Celebros  
Brassica Oleraceollis.

As a lasting memento, the guests will be presented with a century plant."

C. E. Petch.

W. A. McCubbin.



#### SELF-HELP.

The fact that you are poor and obliged to make your own money is no reason why you should look upon

honor due you and the equally dangerous one of thinking that every man who has plenty of money at his disposal looks down on you because you are obliged to work for what you have.

Lack of money means some restrictions and added work, but it also means business training and sharpened wits.



The Morning After the Ice Storm in March.

yourself as a martyr. And the fact that many poor men have become great is no reason why you should deem yourself on the straight road to greatness. You are in your present position as the result of someone's misfortune or mismanagement. Face your position sensibly at the very start and save yourself the blunder of a too exalted idea of the

Every man who "splits rails" will not necessarily be a president (even of a lumber company). Give up reading prize essays of self-made men and face a plain business proposition as such. You want to possess a college education—for capital you have what God has given you (and what you have not destroyed) of brains, health and time.

Make your own opportunities.

Enjoy life while you work. You can't afford to be a "sour-balled."

If you do not stand well with your fellows, do not try to console yourself with the thought that it is because you are poor. Look for the trouble in your personality and character where it really lies. Any dearth of common interest with other men is more often your fault than theirs.

"Cheerfulness and perseverance are nine-tenths of success."

"Seest thou a man diligent in his business? He shall stand before kings."

When you hear or read about some boy who has worked his way from poverty to a position of prominence and influence, should it not suggest to you, who have enough money to keep you from worrying about your livelihood, how much greater your chance for success is? Think of the advantages that are yours that the poor fellow lacks. See to it that your money helps you rather than proves a hindrance to you. "A little learning" and "too much money" are both dangerous things; many college men have both.

"Not in the Curriculum."

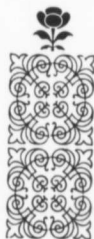


Busy Times on Lower Panton.

"Be wise! Be cheerful bright and glad  
Leave to the fool his folly,  
And let your motto be Cheer up!  
Your rule of life—Be jolly!

"Just think of all things cheerful  
And sing a happy song,  
And hunt up things to laugh about  
To help the day along."

—Anon.





# MACDONALD



## SPRING.

The spring term opened, as usual, with a very rainy day. Throughout the day people came disconsolately to the Hall with their Easter millinery carefully protected with veils and umbrellas, their suit cases dripping, and their suits rather the worse for the weather. Nevertheless, it was good to be back after the all-too-brief holiday, for only too soon most of us will be leaving forever, and we appreciate our blessings most when we know we are about to lose them.

As the old girls nailed one another, the two first questions asked were, "What's your standing?" and "What do the new girls look like?" The answer to the first was generally satisfactory, for the slaughter was not so extensive as usual this time, and the answer to the second—well, it wouldn't do to make the youngsters too cocky, you know, but allow me to tell you in confidence, gentle reader, that they're the best looking new bunch I ever saw. But don't breathe it to a soul.

## INITIATION.

As the more or less painful ordeal of initiation has to be undergone three times a year at Macdonald Hall, it becomes an oft-repeated tale to chronicle each event separately. Accordingly, this account would not have been written at all, had it not been that the initiation was particularly cleverly and successfully managed.

The gymnasium was dimly lighted, and spectral figures flitted uneasily about the corners. Enthroned in

ghostly booth sat the terrible Inquisitor. A wild, weird shriek announced the beginning of proceedings as the first victim, blindfolded and disfigured with charcoal, was ushered to the platform. The Inquisitor first demanded that the victim give her full name and address, then a task was assigned. This proceeding was gone through with every member of the new class till all were declared to be fully initiated. Those who refused to perform their tasks were arrested and placed in a cage whereon was the legend, "Cowards fed at ten o'clock," until they wisely decided to remove the blot on their honor by complying with the commands given them.

In assigning tasks, the Inquisitor showed a wonderful ingenuity. A novel peanut-race was one where two girls had to hop on one foot across the platform, each kicking a peanut as she went. Several stump speeches were called for, and responded to very cleverly. One on "Why I am such a great pianist" told that when one's grandfather owns an elephant, one will find pianistic ability in the third generation. Another fair dame, in giving her impressions of O. A. C. men gave an interesting account of the functions of a "crucial" collar-button. Evidently the new class has much literary ability. Several cake-walks promised well for our May-pole dance, while some other girls showed their culinary powers and home experience by preparing vegetables and making an apple pie. The finished pie was a very curious specimen indeed.

Altogether, the initiation was very well planned, by the B-Homemaker class, and responded to by the new girls with a spirit that promises well for the success of our social events of this term.

—G. M. C.

### WEDDING YELLS.

The Gym in Mac Hall was the scene of a very important and solemn event last Friday evening when Miss Chris-

gouty father—who, however, was not at all affected. The ceremony went off without a hitch, the only drawback being that the groom had some difficulty in ascertaining the exact location in his pockets of the wedding ring. This being found, the happy couple were firmly joined with the bonds of love—the groom showing his fervency of admiration for his bride in the number and demonstrations of his endearments.



Oh, What a Pudding Was There!

tina Mepzibato, only daughter of Mr. and Mrs. Senior Housekeeper-Normal, was united in holy bonds of matrimony to Mr. Geo. Cecil Augustus Tepter Top, at 7:30.

The ceremony was most imposing and awe-inspiring from the tip of the bishop's amazing hat to the dusty shoes of the gum-chewing groom. That he loved the bride was sure from the cheerful acquiescence he gave to his bride's future gad-about propensities. The bride shed copious tears at the thought of parting with her

### YE HARD TIME TEA.

One of the most enjoyable functions of last term was the "Hard Time Tea," given by the Home-makers and Short Course girls. The guests were asked to dress in suitable costume, and I must say, that the efforts exercised by the girls to attain the above were at least honest. The result was good and when the supper bell rang and the girls made their way to the scene of the tea, I am sure that the fair hostesses were fully satisfied that the tea was

going to be a success as far as the costumes were concerned anyway.

Needless to say, the "eats" were enjoyed by everyone and the appreciation was shown by a few stump speeches which in due time were suitably replied to.

The rest of the evening was spent in the Gym. Many and varied were the amusements indulged in among which was a grand march and the Sir Roger de Coverly dance. During the evening the girls presented Miss Long with a parting gift. She was not only a devoted friend of all the girls, but a helpful adviser and helped them over many rough places.

Alas, too soon the study bell clang-

ed forth its strident notes and each and every little student was compelled to descend to earth again and "study."

Miss Nellie Alleby, who takes Miss Long's place on the staff, is an old friend to the present Senior Class, as she herself was a Senior last year. Last spring Miss Alleby had the honor of being steward of the luncheon given to the Duke and Duchess of Connaught and the Princess Patricia, and when we remember what a success that function was, we know that Miss Alleby is, and always will be, mistress of the situation.

## Much Ado About Nothing

The Normal—"I hear that Miss Long is off to New York to study interior decoration."

The Housekeeper—"Oh, isn't that funny. I never knew she took any interest in Dietetics."

On an examination paper recently, the class was asked to define "auto-intoxication." One fair damsel told the examiner that when you see a man in a motor skidding around in the spring puddles on the O. A. C. hill, then he looks as if he had auto-intoxication.

### In Bacteriology.

Prof. Jones—"You may now macerate the prunes to a pulp. This work must be performed expeditiously and with despatch."

Patsy—"And what might he be meaning by those words?"

Bina—"Mash the stew, and don't be rusty!"

The New Girl—"Whose that girl with her face all bandaged?"

Her Classmate—"That's a Senior. She was reading her Bacteriology notes aloud and hurt her jaw."

Short Course Girl—"Do you study Shakespeare?"

Senior—"Of course."

Short Course Girl—"Well, tell me, how much did Romie owe for what Julie et?"

Senior—"If he had a nerve like yours, he probably didn't wait for the bill."

Some questions we might be asked:

1. If the tea leaves, has the coffee grounds for divorce?
2. If you saw the cellar stair, would you know what the basement?
3. If one horse can draw five tons, how much can Macdonald Hall?"



## Results at O. A. C.

## Results of First Year Examinations, Arranged in Order of Proficiency, April, 1913:

(Maximum 2500).			
Brown	2038	Hunter, R.	1518
Clements	2037	Bryden	1518
Cotsworth	2008	Bird	1514
Garlick	1959	Stewart	1506
Lord, L.	1913	Hessel	1504
White	1908	Murray, 4	1485
Bennett	1892	French	1479
Austin	1890	Townsend	1455
Jones	1881	Glavin	1447
Culp	1861	Langley	1444
Andrew	1856	Wheatley	1443
Hastings	1843	Manton	1445
Huckett	1840	McCormick	1430
Waterman	1836	Hearle, 3, 4	1427
Ferguson	1832	Booker, 12	1425
Cairncross	1769	Abraham	1415
Weston	1748	Atkins	1411
Stothers	1726	Thompson, S.	1402
Hunter, R. C.	1711	Rowland	1399
VanEvery	1703	Maes, 17	1391
Bender	1693	Baker	1386
Fitzgerald	1671	Sibbick	1384
Sauerbrei	1667	Harding, 3	1380
Donaldson	1665	Lackner	1379
Yule	1662	Seitz	1379
McDermott	1656	Reeker	1377
Small	1637	Curran, 19	1363
Neff	1633	Knapp	1362
McLarty	1625	Parker	1327
Elliott, G. A.	1518	Puleston	1327
Skelton	1616	Welton	1323
Elgie	1615	Shields, 8	1302
Oldfield	1607	McEwan, 5, 19	1285
McClymont	1604	Griffin	1280
Steele	1597	Sandy	1278
Macdonald	1595	Lord, S. N., 4, 6	1278
Knoop	1592	McMurchy, 1	1274
Lee	1576	Mainse, 4	1272
Fancher	1568	Love, 19	1269
Hare, W. E.	1568	Easton	1265
Thompson, G. A.	1652	Light	1262
Carroll	1651	Hartley, 4	1236
Foreman	1558	Dougherty	1232
Elliott, D.	1544	Walther, 6	1232
Schuyler	1541	Walker, 4	1231
Scott	1533	Altenburg, 4, 12	1228
Vahey	1533	Gandier	1204
Agar	1530	Maxwell, 9, 12	1204
Gregg, 4	1526	Wilson	1175
		Richards, 12	1171

Farncomb, 3	1162	Williams	2020
Watts, 8, 19	1162	Jones	2011
Peart, 1, 10	1156	Lawrence	1998
Richmond	1142	Leigh	1991
Sproule, 12, 19	1116	Neilson	1975
Currey, 4, 8	1111	Smith, P. W.	1972
Mitchell, 1, 8	1106	White	1963
Orr, 8	1060	Sands	1955
Munro, 4, 5, 6, 19	1038	Higinbotham	1925
Lyons, 1, 2, 4, 12	989	Gray	1925
Edmondson, 5	982	Horobin, H. P.	1924
		Clark	1918
		Guild	1907
		Smith, M. T.	1888
		Curtis	1880
		Hall	1860
		Peren	1857
		Donald	1850
		Garrett	1849
		McDowell	1849
		Cumming	1834
		Binkley	1816
		Bertram	1814
		Tawse	1807
		Goodman	1806
		Fortier	1795
		Cuthbertson	1794
		Overholt	1793
		Sutton	1790
		Mucklow	1760
		Steckle	1752
		Francis, T. E.	1727
		Beatty	1725
		Townsley	1723
		Amos	1717
		Gordon	1714
		Johnston, 15	1690
		Fairles	E1687
		Wilson, N. I., 11	1672
		Burrows, A. R.	1670
		Gardiner, 15	1663
		Binnington, 15	1657
		Cooper, 5	1657
		Edmunds	E1647
		Hart, 19	1647
		Rumsby	1646
		Wilson, J. T., 1, 7	E1640
		Lindsay	E1637
		Elder	E1634
		Locks, 20	1621
		Stratford	E1618
		Ferguson	1614
		Donovan, 6	1611
		Anglin	E1603
		Burrows, L. F.	1602
		Nind, 6	1594

#### List of Subjects

1. English Literature.
2. Composition.
3. Arithmetic and Drainage.
4. Bookkeeping.
5. Soil Physics.
6. Mechanics.
7. Manual Training.
8. Chemistry.
9. Geology.
10. Botany.
11. Zoology.
12. Horticulture.
13. Field Husbandry.
14. Animal Husbandry.
15. Dairying.
16. Poultry.
17. Apiculture.
18. Veterinary Anatomy.
19. Veterinary Materia Medica.

\*Number indicates subjects in which candidate has failed.



#### SECOND YEAR

Results of Second Year Examinations,  
arranged in order of proficiency, April,  
1913:

(Maximum 3100).

Cory	2456
Smylie	2440
McQueen	2330
Martin	2320
Varey	2282
Bell	2152
Holmes	2146
Smith, D. M.	2145
Finn	2102
Hinman	2069
Connon	2067
Croskery	2058
Frejd	2041
Laird	2040

Francis, J. F. ....E1560  
 Dow, 6 .....E1550

E—Below 60% in English. The remaining second year students received less than 50% on total and less than 60% on English.

**List of Subjects**

1. English Literature.
2. Composition and Public Speaking.
3. Economics.
4. Thesis.
5. Surveying and Drainage.
6. Agricultural Engineering.
7. Electricity.
8. Farm Mechanics.
9. Organic Chemistry.
10. Agricultural Chemistry.
11. Animal Chemistry.
12. Bacteriology.
13. Entomology.
14. Horticulture.
15. Economic Botany (Xmas).
16. Economic Botany (April).
17. Plant Physiology.
18. Field Husbandry.
19. Animal Husbandry (Feeding and management).
20. Animal Husbandry (principles of breeding).
21. Horse Judging.
22. Dairying.
23. Poultry.
24. Veterinary Pathology.
25. Veterinary Obstetrics.
26. Forestry.

Golding .....1602  
 Lattimer .....1587  
 Laidlaw .....1534  
 McLaurin .....1527  
 Stewart .....1510  
 Davis .....1564  
 Hales .....1474  
 Bergey .....1445  
 Hare .....1434  
 Winter, 14 .....1433  
 Stansfield .....1424  
 Mosely .....1417  
 Ramsay .....1416  
 McRostie .....1414  
 Strong .....1406  
 Creelman .....1376  
 Lund .....1369  
 Paterson .....1362  
 Downie .....1349  
 Fry .....1339  
 Dickey .....1329  
 Nixon .....1300  
 Kirk, 4 .....1295  
 Barnet .....1273  
 Forsyth .....1258  
 Kingsmill .....1231  
 Irvine .....1226  
 Anderson, 11 .....1225  
 Christie .....1222  
 Duff .....1161  
 Jackson .....1136  
 Harris, 11 .....1106  
 Pope, 1 .....1106  
 Nourse, 11 .....1081  
 Madden, 4, 11 .....1049



**THIRD YEAR**

Results of Third Year Examinations, arranged in order of proficiency, April, 1913:

(Maximum 2200).

Freeborne .....1775  
 Allan .....1743  
 Winslow .....1718  
 Castro .....1714  
 Knapp .....1701  
 Hirst, 7, 12 .....1695  
 Leppan .....1688  
 Good .....1685  
 Neelands .....1670  
 Stark, 10 .....1653  
 Culverhouse .....1604

**List of Subjects**

1. English Literature.
  2. Composition and Public Speaking.
  3. Economics.
  4. German.
  5. Heat.
  6. Meteorology.
  7. Cold Storage.
  8. Inorganic Chemistry.
  9. Qualitative Chemistry (written).
  10. Qualitative Chemistry (practical).
  11. Quantitative Chemistry.
  12. Organic Chemistry.
  13. Geology.
  14. Cryptogamic Botany.
  15. Plant Physiology.
  16. Entomology.
- Number indicate subjects in which candidate has failed.



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From murky grot the baleful sea-frog's scream  
 Floats plaintive on the dank, mi-asmic air;  
 The pale, pellucid wavelets glance and gleam  
 Like frenzied fireflies in a harpy's hair.  
 A horrid throbbing shakes the purple ground.  
 While rabbits run in circles round and round,  
 The season's at its end; the ink is dry;  
 The moon has set; the grass is rather green;

While like a meteor gurling through the sky

My moral will at once be clearly seen

In all its beauty; or perhaps 'twill not,  
 Since there's no meaning in this awful rot.

I hope you will not think it merely trash

This vague effusion of an erring pen;

It's worse than that, it's arrant balderdash,

And may I never write such bosh again,

But writing bosh is after all what to do

To fill the pages of the old Review.

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A



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Respectfully yours,

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# Official Calendar of the Department of Education

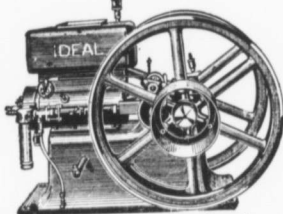
FOR THE YEAR 1913

May:

1. University of Toronto Examinations in Arts, Law, Pharmacy, Music and Agriculture begin.
2. Inspectors report number of candidates for Senior High School Entrance, Senior Public School Graduation Diploma and the Model School Entrance examinations and the Lower School examination for Entrance into the Normal Schools and Faculties of Education. Arbor Day. (1st Friday in May).
14. Notice by candidates to Inspectors due for the following examinations—The Middle School examination for Entrance into the Normal Schools, The Upper School examination for Entrance into the Faculties of Education, the Pass and Honour Matriculation examinations (before May 15th).
16. Inspectors report number of candidates for above examinations. (Not later than May 16th).
23. Empire Day. (1st School day before 24th May).
24. Victoria Day (Saturday).
31. Assessors to settle basis of taxation in Union School Sections. (Before 1st June).  
Collectors in Unorganized Townships to report to Sheriff uncollected rates for previous year. (On or before 1st June).  
Public and Separate School Boards to appoint representatives on the High School Entrance Boards of Examiners. (On or before 1st June).  
By-law to alter school boundaries or form Consolidated School Sections — last day of passing. (Not later than 1st June).

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The College is a Government Institution, designed primarily for the purpose of giving instruction in all branches of military science to cadets and officers of the Canadian Militia. In fact, it corresponds to Woolwich and Sandhurst.

The Commandant and military instructors are all officers on the active list of the Imperial army, lent for the purpose, and there is in addition a complete staff of professors for the civil subjects which form such an important part of the college course. Medical attendance is also provided.

Whilst the College is organized on a strictly military basis the cadets receive a practical and scientific training in subjects essential to a sound, modern education.

The course includes a thorough grounding in Mathematics, Civil Engineering, Surveying, Physics, Chemistry, French and English.

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of the course, and, in addition, the constant practice of gymnastics, drills and outdoor exercises of all kinds, ensures health and excellent physical condition.

Commissions in all branches of the Imperial service and Canadian Permanent Force are offered annually.

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The length of the course is three years, in three terms of 9½ months each.

The total cost of the course, including board, uniform, instructional material, and all extras, is about \$800.

The annual competitive examination for admission to the College, takes place in May of each year, at the headquarters of the several military districts.

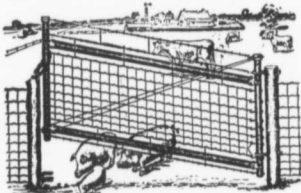
For full particulars regarding this examination and for any other information, application should be made to the Secretary of the Militia Council, Ottawa, Ont.; or to the Commandant, Royal Military College, Kingston, Ont.

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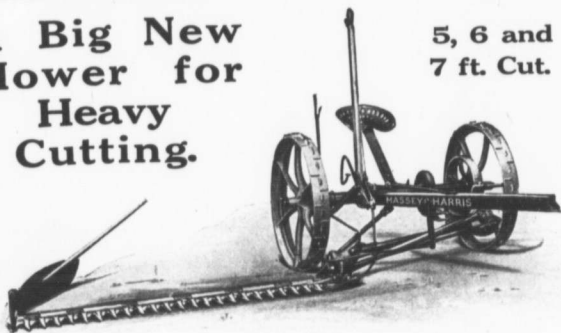
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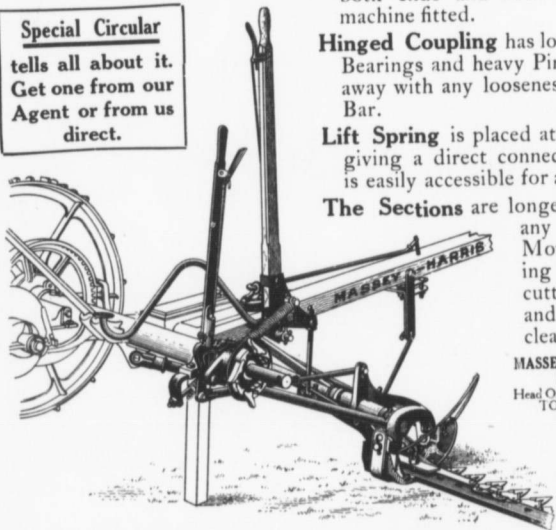
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