Soils and Crops

Address communications to Agronomist, 73 Adelaide St. West, Toronto.

S. M.:—Please give directions for construction of inexpensive ice house.

Answer:—Ice may be stored in even a rough shed, provided it will keep out the weather. According to directions given in Pamphlet No. 2 of the Department of Agriculture at Ottawa, entitled "Simple Methods for the Storage of Ice," poles may be driven into the ground and lined with rough lumber or even slabs. It is not even necessary that the lumber be close fitting. The whole should be covered with a roof that is rain proof. The roof should project sufficiently to prevent rain beating in between the boards. Drainage should be provided by four or five inches of cinders or gravel. Ice preservation is due not so much to the construction of the buildings as to the insulating material used around it. Sawdust is perhaps the best insulating material for packing the ice, but if this is not obtainable, planer shavings may be used. Failing to secure either of these, one may use hay of fine texture such as grows in marshes or other low places. If the sawdust or shavings is used, the ice—which should be cut in square blocks—should be so placed in the building as to leave a foot of space all round. This space should be filled with sawdust or shavings well compacted. If hay is used, two feet of space should be allowed and the hay should be well packed. About one foot of sawdust or shavings or two feet of hay should be placed over the top of the ice when the house is filled.

A. B.:—According to the observations of many farmers, good crops are likely to follow heavy falls of snow. Are there reasonable grounds for this belief?

Answer:—Both rain and snow have a fertilizing value by reason of the soluble nitrogen compounds they gather and bring to the earth as they fall. The nitrogen thus added to the soil is highly valuable from a fertilizing standpoint, because nitrogen, which is the most dominant element in plant food, is constantly being removed from the soil by plant growth. It is also lost by drainage. Both rain and snow have for fifteen years been analyzed at the Experimental Farm at Ottawa. The average yearly rainfall at Ottawa during this period was 33½ inches. The nitrogen contained in this amount of rainfall amounted to 6½ pounds of nitrogen per acre. This amount of nitrogen is equivalent to that contained in approximately 42 pounds of nitrate of soda, which is the most important nitrogenous fertilizer available on the market.

H. D.:—On a part of my farm I find it difficult to secure a satisfactory growth of clover. I can get no success with alfalfa and I feel almost certain that the failure is due to an acid condition of the soil. I understand that applications of lime correct this condition and otherwise improve the crop-producing qualities of the land. What is the best form of lime for application on my land?

Answer:—It is more than likely that acidity is the cause of the difficulty experienced, more especially if the land is low. In such case it would be profitable to put in tile drains and also apply lime. The degree of fineness of the lime is an important factor since it determines in a very large measure the rate at which the ground limestone is dissolved and hence the rate at which the acidity will be neutralized and lime furnished for plant growth. From experiments conducted by the Experimental Farms and reported by the Dominion Chemist, the question of fineness has not been definitely settled. It will in part be determined by the price of the lime because grinding to fine powder is a costly operation. The coarser the material the slower will be its action and the longer it will remain an ameliorating agent in the soil. If a quick, prompt action is desired, a material 60 to 75 per cent. of which passes through a sieve 80 meshes to the lineal inch will be found satisfactory, although fairly satisfactory results should be secured by using the lime crushed to such a degree of fineness that 50 to 75 per cent. of it will pass through a 60-mesh sieve and all of the material should pass through a 10-mesh sieve.

X. Y.:—What is the best time of year for applying wood ashes to the land and what is a suitable rate of application?

Answer:—Since ashes contain readily soluble products, the spring of the year is perhaps the best time to apply them. Wood ashes are very variable in composition because woods differ widely in their ash and potash content. If ashes are exposed to the weather, their value is greatly lessened by leaching. A dressing of from 25 to 50 bushels of unleached hardwood ashes per acre will furnish from 60 to 100 pounds of potash. The latter might be regarded as an ample dressing for even light soils including both sandy and peaty loams. There is little advantage in applying ashes to heavy clay loam. According to the Report of the Dominion Chemist, ashes will be found a valuable fertilizer for clover, corn, and root crops, and for fruits. Besides potash, ashes supply phosphoric acid and lime.

Safeguarding the Domestic Water Supply.

A valuable service rendered by the Department of Agriculture at Ottawa through the Division of Chemistry of the Experimental Farms Branch, is the analysis of submitted samples of water for domestic use. Of the 119 samples of well water, coming from every province, dealt with in 1922, only 24 per cent. were found to be pure and wholesome. This small proportion cannot be taken to represent the well water of the country because of the likelihood that suspicious samples would for the most part be submitted. Thirty-five per cent. of the samples examined were found to be seriously polluted. When it is borne in mind that water may be clear, sparkling and practically tasteless and yet contain dangerous germs, the necessity for the service is emphasized.

In his report the Dominion Chemist points out that a spring or pure stream at some distance from the farm buildings should, if available, be selected as the source of domestic supply. If water from such a source can be piped to the house and farm buildings a safe supply will probably be secured. Failing such a source, the location of the well should be at least fifty yards from any possible contamination, the surrounding area for a radius of fifty yards being kept free from manure and all filth and preferably maintained in sod.

The shallow well is not to be recommended as, unless properly located and very carefully guarded from surface drainage, it may at any time become a menace. The bored or drilled well, passing through a layer of impervious rock and tapping a deep-seated source of water, may usually be depended upon to provide a safe supply.

Two methods are recommended in the report for treating water that is suspected of contamination:

(1) Boiling for ten or fifteen minutes all water required for drinking and culinary use. The boiled water may be aerated by cooling in the open air, and thus freed from insipidity.

(2) Chlorination. A level teaspoonful of chloride of lime is rubbed up with a little water to the consistency of cream. This thin paste is diluted and thoroughly mixed with one pint of water, bottled and securely corked. This stock solution will keep for at least a week. A teaspoonful of this solution should be added, with stirring, to each two gallons of the water to be treated. After fifteen minutes all disease germs present will be destroyed.

The Old Apple Tree.

A hundred years or more it stood,
And braved the winter's snows,
A splendid bit of hardihood,
It fears no wind that blows.

It stands alone upon the hill,
It's rough, old arms tossed high,
For winter winds are sharp and chill,
And they pass not kindly by.

But when the springtime breezes free,
Come whispering in May,
Behold the rough, old apple tree,
Is one huge, sweet bouquet.

All through the long, hot summer day,
It lends its shade to all,
And there the children love to play,
There sounds the night bird's call.

Oh, dear, brave, kindly apple tree,
So staunch and true and fine,
You're like an old, old friend to me,
May I make thy standard mine?

—Bernice Cornell.

To mend a small hole in an umbrella, take a piece of black sticking plaster and soak until quite soft. Place under the hole and allow it to dry.

I am wondering if the milk pail does not come from the stable where the cows are placed in comfortable and attractive surroundings, a little fuller than it does where the barns and yards are constantly in the height of disorder.

MERCHANDISING EGGS

By a Merchant.

I am a merchant and, as alert merchants at times do, look about for other merchandise worlds to conquer. I find the merchandise that is most easily sold is that which the greatest number of people use, and for which there is the greatest demand. Of course, it takes a layman, such as I, to know that if the eight millions of our population consume but two eggs each daily, there is a wonderful outlet.

Take myself, for example, I like fresh eggs; in fact I have eaten two eggs for my breakfast daily for over thirty years. Yet I look upon every egg placed before me with the thought in my mind: "I wonder if it's fresh?"

The good wife buys her eggs from a high-grade grocery and the sign states, "Strictly Fresh Eggs." Still I never believed in signs and my disbelief is heightened by those eggs I occasionally open which belie the sign.

If some up-to-date farmer would secure my name and arrange to ship me a dozen fresh eggs so they reach me twice a week, and I knew where the eggs came from, saw a photograph of the farm, a few pictures of the prize hens, knew by the farmer's advice on the subject how well-cared for the hens were, how they roosted in the most approved sanitary henhouses, and many other things that would influence my taste and digestion, wouldn't I just enjoy eating those eggs for breakfast? Indeed I would, and so would most every other man, woman and child in this great egg-eating country of ours.

Then why no., Mr. Egg Producer, secure a list of persons, such as I, by advertising for them, and arrange to ship eggs fresh from the nest, in containers which Jack Canuck permits to be sent via the handy parcel post, and reap benefits accordingly.

As soon as I had a fairly large list, I would send with each shipment a little booklet telling how to prepare eggs in various forms. Perhaps the reader may think every one knows how to cook eggs, but a leading chef states: "Eggs can be prepared in over seventy different styles."

If in my list of customers there were those who kept store, I would ask to be allowed to display a few photographs of prize hens, my egg farm, as well as other graphic demonstrations of my product. This would not take more than a foot or so of space, and few men would refuse this.

My next move would be to specialize on eggs for individuals. This can be managed by reading the local news in nearby towns and sending a letter to the family of the person which the notice states is convalescing from illness, or is under the doctor's care. To each the letter would read: "The eggs have been selected with the object of placing 'Farm Fresh Eggs' in the possession of those to whom such eggs would be welcome and a blessing."

I would wrap every egg, sent to the above list, in tissue paper, pack in cotton, and affix to each box a postcard with a return coupon, so more eggs could be ordered. In this connection I would also send to every person why buys my eggs the same kind of a card, stamped and self-addressed. I buy apples from an out-of-town dealer who never fails to send an order post-card, and he has kept my trade for ten years solely by this method.

Last, but by no means least, I would provide the store-keepers to whom I sold my eggs, for resale purposes, a series of signs to place over the eggs on sale. The usual sign simply reads "Fresh Eggs," which means nothing, and in time the sign gets dirty, fly-specked and dog-eared, which belies the freshness of the eggs.

My signs would read: "Farm Fresh Eggs," "Fresh Eggs from the Folloy Farm," "Fresh Eggs Laid by Prize Hens," and others. These signs I would print on black cardboard with white letters instead of the reverse, because the black card keeps clean longer and makes a better appearance; besides, the photo of one of my hens which would grace each sign, would stand out better.

MUSSOLINI'S TRIBUTE TO BRITISH DEAD

Mussolini, who is known as the "Cromwell of Italy," was caught by the photographer in a reverent mood before the cenotaph in London. He had just deposited a floral copy of the Fascisti emblem at its foot.

The Dairy

The auctioneer says: "Gentlemen, this cow is a regular artesian well. Gives six gallons a day when she's fresh. Be fresh in March. What do I hear?"

Then I want to know what is in those six gallons. How much butterfat will she turn out in a year? I have in mind a big, fine-looking cow that produces five gallons a day. She was picked because she was a big milker. Tests show that her milk averages 2.2 per cent. butterfat. It looks like a lot of water was carried to her and then milked out again.

I was a cow tester several years before I started farming for myself, but I can't tell by looking at a cow how she will test.

When I first started farming I bought a fine-looking cow without inquiring about her test. She was injured later, and had to be sold at a sacrifice. Yet I would have been money ahead if she'd hurt herself at once. Her test I found out was under three per cent.

However, high tests do not always mean a good cow. At the same time one can't have a good cow without a good test. Persistent milking and a good average butterfat test make the real cow, provided other points are normal. This holds with all breeds.

Farmers who milk a few cows, but cannot be classed as dairymen, are numerous. Far too often their cows are valued by the amount of milk they give. We ought to ask ourselves: "How much butterfat does this cow give in a year?"

Butterfat is what records are made of, and is what most farmers sell in the cream can. Butterfat in the milk also has a relation to the protein percentage of the skim milk. Farmers who sell butterfat usually feed the skim milk. This is a factor in the value of the cow.

Take Care of Your Seed Corn.

With the advent of the cold frosty days of November and December begins the danger period as far as climate is concerned for stored corn that is to be used for seed purposes.

In the areas that we consider the seed corn growing section of the country there is less danger of damp or insufficiently ripened corn being stored. Even in these more favored areas, however, damp fall weather or improper methods of storing frequently means poor vitality in the seed crop thus handled. This low vitality of seed corn offered for sale each spring is reflected in decreased yields because of poor stands of corn.

Each year good seed corn is scarce. The truth of this statement is not commonly appreciated because many do not realize the serious loss to themselves and the country as a whole by planting inferior seed. It is true that a full stand may be obtained by planting seed of poor germinating qualities but the yield will be lower than good seed would have produced.

A great deal of the very best seed is available at ripening time. The problem is then to keep the corn from harvesting time until planting time the following spring in such a manner that it will retain its full productivity. One of the main considerations in this connection is keeping the corn thoroughly dry. If the drying has been done immediately after harvesting so much the better. Artificial heat is not necessary in drying unless the harvesting weather has been very damp.

A cheap and satisfactory method of storing seed corn for the winter is by using chicken wire of a mesh which will accommodate the cobs of the particular variety of corn being stored. This wire may be nailed perpendicularly to scantlings in a dry room or out-building, and it will be found that by the use of such wire a great deal of corn may be stored in a comparatively small space.

Corn intended for seed purposes should not go into the winter with more than 10 to 12 per cent. of moisture unless it is kept in a heated room during the season of severe frosts.

Before the real severe winter weather arrives it would be well worth while to examine your seed corn supply to see if it is perfectly dry. If it is not it would pay well to remove at least enough to a heated room to supply the growers own needs, if it is impossible to dry the whole amount. Careful, thorough drying immediately after harvest time to a moisture content of 10 to 12 per cent. and the use of a storage method that keeps the individual ears in a well ventilated and dry condition is the secret of producing seed corn that will give satisfaction as far as vitality is concerned.

The community, twenty years hence, is measured by its schools of to-day.

Jenks could not put in a regular ventilating system in his old barn, but he found that the cows thrived better when he covered three of the windows with muslin and kept the glass open nearly all the time.

SMOKE
OLD
CHUM
The Tobacco of Quality
½ LB. TINS
and in packages

THE SUNDAY SCHOOL LESSON

JANUARY 28

The Rich Man and Lazarus, Luke 16: 19-31. Golden Text —Charge them that are rich in this present world, that they be not highminded, nor have their hope set on the uncertainty of riches, but on God, who giveth us richly all things to enjoy.—1 Tim. 6: 17 (Rev. Ver.).

I. The Gulf That May Be Bridged, 19-21.

V. 19. **A certain rich man . . fared sumptuously;** a man whose every want is abundantly satisfied. He has a full wardrobe, a groaning table and an assured future. All that wealth can secure is his. There is nothing to imply that the wealth has been wrongly made.

Vs. 20, 21. **A certain beggar named Lazarus.** This man is leprous. He is hungry. He is lonely. There is a gulf between the experience of the two men, but the gulf might have been crossed by the rich man, had he had love for his fellows. It was not an impassable gulf. **Laid at his gate.** The rich man could not plead ignorance. He saw Lazarus every day. **Fed with the crumbs.** The Orientals used no knives or forks. They wiped their fingers on pieces of bread which were thrown out on the street and devoured by beggars or dogs. **The dogs . . licked his sores.** The only ministry of kindness he received was from the dogs which were regarded as unclean animals. The eastern dog was the village scavenger. The sin of the rich man is the sin of neglect. He did not build a bridge between him and Lazarus while it was possible to do it.

II. The Gulf That Cannot Be Bridged, 22-31.

V. 22. **The beggar died . . Abraham's bosom.** "Abraham's bosom" was one of the phrases by which the Jews described the future state of blessedness. This blessedness was not because of his poverty, but because of his character. The name Lazarus means, "God is my help," and would seem to describe the character of the beggar. He had not lost his soul in his poverty and misery as the rich man had lost his in his wealth. **The rich man also died, and was buried.** Rich and poor share in the same great experience.

V. 23. **in hell . . lift up his eyes;** "and in Hades," the unseen world of the dead. These expressions of description are not to be taken literally. Nevertheless the figures must convey spiritual facts. The one outstanding fact is that a life of selfishness carries within itself the seeds of future misery and unhappiness. The rich man had barred himself from Abraham's bosom and from all the blessedness that is the certain fruitage of true life. **Seeth Abraham . . and Lazarus.** The conditions of himself and Lazarus are strangely reversed.

V. 24. **Father Abraham . . send Lazarus.** The man who ignored Lazarus now entreats his good offices. The man who denied Lazarus crumbs of bread, now begs of him drops of water. Jesus here makes use of current popular belief regarding the future state, one feature of which was that the abode of the doomed was nigh the abode of the blessed. The rich man who would not look at Latarus lying at his gate, cannot help seeing him lying in Abraham's bosom.

V. 25. **Abraham said, Son, remember;** an appeal to common justice. While on earth the man who was blessed did nothing to alleviate the misery of the other. Then why should the man who is blessed in the future state do anything for the misery of the other. Lazarus received nothing on earth from the rich man. Why should he bestow anything, now that conditions are reversed. This is not the real reason for refusing the request of the man in misery. It is only a reason that might be expected to suggest itself to Dives when he remembers the past.

V. 26. **Between us and you . . a great gulf fixed.** This is the real reason for refusal. This life is the time for bridging gulfs. The future life has no such opportunities. Dives has had his great opportunity. He ignored it. The consequences of a selfish life are irrevocable. This is the whole point of the parable. We reap as we sow. Lazarus was the rich man's opportunity on earth. He is his condemnation in heaven.

Vs. 27, 28. **Send him to my father's house . . I have five brethren.** This request of the rich man seems one that does him credit. He is solicitous for the welfare of his brethren. He seeks to save them from his fate. But behind it there lies a subtle insinuation that if he had had a clear and unmistakable warning while on earth about the dangers of selfish wealth, he might have lived a different life and avoided his present fate.

V. 29. **They have Moses and the prophets.** Abraham's answer is that he himself has had, in the past, and his brethren have now in the present, all the warning and teaching that is necessary for life. In the law and the prophets the full duty of life is laid down. **The necessity of love for God and man, the results of sin are clearly set forth for him who is willing to give heed. The five brethren have the law and the prophets to instruct them. They have still the poor as their opportunity as he had his in Lazarus.**

V. 30. **If one went . . from the dead, they will repent. Once again the rich man pleads for himself, while pleading for his brethren. Once again Abraham says that not lack of knowledge, but lack of willingness lies at the root of all.** If Lazarus in life does not awaken pity, Lazarus from the dead cannot awaken fear.

Application.

Nothing is said as to the means by which this rich man accumulated his wealth; he is not charged with injustice, but his sin was heartlessness. He feasts with his friends, he pampers himself with luxuries and delicacies, and "costly his habit as his purse can buy," but he had no heart of compassion, no feeling of brotherhood for his hungry, needy neighbor. It is the bright glory of Jesus that he not only spoke great things, but lived them and died for them: "Surely he hath borne our griefs, and carried our sorrows." "Christ pleased not himself." And if the study of this lesson does not make us all more tender and pitiful, more sensitive to other people's troubles, we have somehow cheated our souls of the grace that Christ purposed for us.

We shall do ill if we miss the very terrible truth that there is remorse and torment for souls who live in this life in selfish indifference to needs of suffering people about us. Read Matt., ch. 25, specially the latter part of it. Such words of Jesus should startle us into thoughtfulness. Now have we these opportunities of honoring Christ by living in his spirit and according to his command, and soon they will all be past, and cannot be recalled. It is a sobering thought.

Health is wrapped in the apple skin.

Legumes pay their board and leave buried in the soil a valuable, if not an appreciated gift.

Orders for nursery stock sent to reliable companies now will bring the goods when they are wanted.

While enjoying the fireside, the comforts of the animals in the barn should not be forgotten.

The greatest success in the dairy business comes when a pure-bred dairy herd gets into the hands of a "pure-bred" dairyman.