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Farm Crop Queries

CONDUCTED BY PROF. HENRY G. BELL

The object of this department is to place at the service of our farm readers the advice of an acknowledged authority on all subjects pertaining to soils and crops.

Address all questions to Professor Henry G. Bell, in care of The Wilson Publishing Company, Limited, Toronto, and answers will appear in this column in the order in which they are received. When writing kindly mention this paper. As space is limited it is advisable where immediate reply is necessary that a stamped and addressed envelope be enclosed with the question, when the answer will be mailed direct.

Lime and Liming.

"Well! When is the expense going to stop? What with high grade seed, new machinery and well bred livestock, the end of expenses seems never to be in sight, and now they tell us we have to put on lime on our land and even some say use fertilizers. We never did this in the good old days, but it is pretty hard to get the yields we got then." Have you ever heard a man make such statements at a Farmers' Institute or other gatherings? He is looking at his problem from the wrong angle. Everything that costs money is catalogued as an expense, rarely as an investment. In his grandfather's time he quite agreed it was good business to spend money to clear up the field, and build new fences, but as time has gone on he fails to appreciate the fact that we never can stand still, progress must be made or we go backward. Hence a good many of his fellows are taking up with this idea of good drainage and the use of lime, etc. But just as in other walks of life when men become impressed with the fact that there are a good many avenues where progress can be made they sometimes do not take care to get a clear picture in their minds of just what the various lines represent.

What I am driving at is a blunder I came across the other day. A man in one of our good counties had used "agricultural" lime. For some reason, most likely that of bad drainage he did not see much result from the application of lime, hence he is down on the use of fertilizers. He thinks they are an unnecessary expense and possibly thinks that they are somewhat of a fake. You may know the difference, reader, between lime and fertilizers, but for the sake of at least half a dozen men in the province that should know better I wish to take time to explain that liming is not fertilizing, never was and never will be.

Cleaning out the cow stable isn't feeding the cow. Putting lime on the soil to make the home of the plant right is not feeding the crops. This is the big point to get clearly in mind. Lime is a house cleaner. When the folks at home twist the furniture all out of place, put your hat and coat on a different peg and entirely upset the order of things in the house in spring, you notice they usually whitewash the walls. This is partly to make them clean and bright and partly to make the room sweet and healthy. When you put lime on the soil you do it for very much the same reason. As the plant matter in the soil decays it very often produces conditions in the soil which we call sour soil. Under such conditions good clover will not grow, neither will many other crops do their best. If you add lime it sweetens the soil and makes conditions proper for the millions of small forms of life or bacteria to go ahead with their work in the soil breaking down plant and mineral matter so that it can dissolve in the soil waters and be used to feed your wheat, oats, corn and other crops. But the lime itself does not feed crops. Whitewashing the kitchen didn't get your meals, but it made conditions a whole lot more pleasant when things were straightened away so that your household enjoyed their meals better. Beside liming the soil you must add plant-food either in the form of barnyard manure or fertilizers if you are going to get largest and best quality crops.

Now never be caught saying that because you used agricultural lime you have fertilized your soil You might just as well condemn the use of automobiles because you had a rough ride in a wheel-barrow sometime or other. Lime on the soil makes better yields even where no plant food is used, and equally as well where plant food is added. This has been proven by many tests. Ohio Experiment Station in a field test extending over more than 20 years shows that by liming the soil once in a five year rotation the yield of wheat was increased from 10.65 bus. per acre to 14.98 bushels or 41 per cent. This was where lime was added without any barnyard manure or fertilizer. Where fertilizers were added alone the average yield of fertilized wheat rose to 25.04 bushels per acre, but where lime was added two years before the fertilizer was used the fertilized yields rose to 29.49 bushels per acre. You see then that lime is responsible for an increase in wheat of about 4 bushels per acre. New York Agricultural Experiment Station aptly summarizes the value of lime as follows, "The Ohio experiment illustrates the fact that lime does not take the place of other fertilizers or manures but supplements them."

The next time you hear a fellow talking about fertilizing his soil with lime take time to explain the difference. Fertilizers carry nitrogen, phosphoric acid and potash. They do not sweeten the soil only in so far as they may contain a little lime in their composition. Fertilizers feed the soil and crops. Lime supplies carbonate of calcium or magnesia which does not feed the crops but corrects soil sourness. For best results your land should be limed as well as fertilized, but do not mix lime with fertilizer or put it on at the same time. If you do there is danger of some of the available plant food of the fertilizer going back to the unavailable form due to chemical action between the fertilizer and the lime. Put the lime on a week or so previous to the fertilizer or any time during that period of year when the crop is not growing. Put the fertilizer on when you are preparing to plant the crop. But above all things, remember that liming is not fertilizing.—Henry G. Bell.

Three Ways of Lighting the Farm Home

BY D. WILLIAMSON.

On my own farm, I have a very good system—a small air-cooled kerosene engine with a thirty-two-volt, electric generator built into it. The storage batteries are so large that I need to run the engine only once or twice a week—about four or six hours at a time. My home is quite good-sized, but two or three gallons of kerosene a week give me all the electric light I can use.

Some years ago, I had another system; the generator was driven by a belt from a line-shaft. Just which is the better depends on circumstances; the built-in system uses less fuel, takes less space and has a self-starter; the belt-driven system does not need a separate engine, but is run from the same power that does your pumping, grinds your feed, etc. A four-horse engine is needed to run the line-shaft, I have found; a smaller one can be used if the generator is belted direct to the engine pulley.

Don't make the error of buying too small an outfit; I did that the first time. My storage batteries had to be charged every day; consequently, they wore out in three years or so. My present plant has been in service nearly as long, and the batteries are as good as new.

If you have a fair-sized brook running through your farm, you can easily drive your electric generator with a small water-wheel; several concerns make a specialty of farm water-power plants. The more fall you have, the better, but four feet will run a breast-wheel, provided you have a good volume of water. A very small stream, with eight or ten feet of fall, will drive an overshot wheel.

The first cost of a water-driven outfit is usually about the same as an engine-driven one, unless you have to build an elaborate dam, sluice, etc. The great saving comes in the operating cost; water is decidedly less expensive than gasoline or kerosene. I know one farmer who did not buy any storage-battery; his stream is so large that he lets his generator run all night, and uses the current direct.

There have been some attempts to use windmills for running generators, but I believe these attempts have not been very successful. At any rate, there are no wind-driven electric outfits on the market, so far as I know. Nansen, the Arctic explorer, lighted his ship from a windmill. Some day this system will no doubt be perfected for ordinary use.

But, maybe you prefer gas instead of electricity—some of my neighbors do, at any rate. They have acetylene generators installed in small frost-proof buildings, for if the water in the generator freezes, gas stops flowing, of course. Acetylene gas, you know, is produced by letting water come in contact with lumps of calcium carbide. The generators are so built that when you turn on a gas-burner anywhere in your house, the lessened pressure lets the water flow against the carbide. Shutting off the burner raises the pressure and pushes back the water. The whole thing is perfectly automatic. Acetylene gas gives a beautiful, clear, white light—very pleasant to read or work by. It is quite possible to cook with gas, too; meet city people do that in the summer-time, you know. A gas-stove is run on the same principle as an oil-stove, but it is less trouble, and does some things (like broiling or toasting) rather better.

Some people still use the old-fashioned gasoline-gas system; it certainly has some good points. Gasoline can be had anywhere, and quite a small amount will make a large volume of gas. For cooking, it is rather better than acetylene, but the light is not quite so brilliant, even when a mantle is used.

So here are three different lighting systems—electric light, acetylene gas, gasoline gas. Take your choice.

The Sunday School

INTERNATIONAL LESSON.
FEBRUARY 1.

Peter and John in Samaria—Acts 8: 4-39. Golden Text—Acts 1: 8.

4-8. Philip has already been mentioned as one of the "seven men of good report" chosen to have charge of the distribution of aid to the poor from the funds so generously provided by the willing gifts of the Christian community. Like Stephen, who was also one of the seven, Philip was a zealous missionary and advocate of the new faith. Long afterward Paul visited him at Caesarea, where he was known as "Philip the evangelist," and where his four daughters were co-workers with him in the church of Christ.

See 6: 5 and 21: 8-9. Philip "went down to the city of Samaria," in spite of the fact that the Jews disliked and would, ordinarily, have no dealings with the Samaritans. The Spirit of Christ was working in the hearts of these first followers of the Cross, over-coming ancient prejudices and hatreds and breaking down the barriers of race and religion.

The multitudes gave heed. The Samaritans also were expecting a Saviour, and the visits of Jesus had prepared the minds of many of them for the gospel which Philip now preached to them. And where the gospel was received it brought then, as it brings to-day, healing and "much joy."

9-13. Simon, known to the early Christian church as Simon Magus, or Simon the Sorcerer, acquired considerable notoriety, and was regarded by the Christian folk of the first centuries as a very bad man, first of all heretics and "first-born of Satan." Justin Martyr, a writer of the first part of the second century, says that the Samaritans worshipped him as God, because of his successful practice of magic arts. The fact that he was baptized by Philip is good evidence that, while baptism accompanied the public confession of faith in Christ and was regarded as the sacrament by which a person was admitted to the Christian community, it did not necessarily involve regeneration or guarantee his entrance into the Kingdom of God. Though baptized he received no gift of the Holy Spirit, and Peter, when he came, declared that he had "neither part nor lot in this matter."

14-25. They sent unto them Peter and John. The apostles first prayed for the new converts that "they might receive the Holy Ghost," or, as we would say, "the Holy Spirit." This they regarded as the prime necessity of the Christian life, first and greatest of the gifts of God. It was, whatever form it might take, an assured certainty of the spiritual presence of Jesus Christ with them, or of God in Christ, and, consequently, an experience both of joy and power. It brought also a clearer understanding, a more vivid realization, of what the life of the Lord Jesus Christ, His death, and His resurrection, meant to them and to the world, and so a glad and whole-hearted giving of themselves to His service. See John 14: 16-27; 15: 26; 16: 13-14; Rom. 8: 14-17. In the teaching of the apostles the Spirit of Christ is the Spirit of God (Rom. 8: 9), and is regarded as dwelling in every true follower of Jesus (1 Cor. 3: 16; 6: 19; 2 Cor. 6: 16; 2 Tim. 1: 14; Jude 19), and as leading him in the way of faith and righteousness (Rom. 8: 14; Gal. 5: 18.)

Simon coveted the joy and power of this new life, filled with the Spirit of God, and thought that the power to bestow it could be purchased, as no doubt the secret of his own magic art could have been purchased. Peter's answer to his presumptuous request is an indignant reproof and denial. The gift of God is not bought and sold. His counsel to Simon is "Repent," and "Pray." For he is still in the "gall," or "bitterness," of iniquity and in its bonds.

26-29. An Angel of the Lord Spake Unto Philip. The ardent evangelist felt himself divinely guided and was sped upon his way by heavenly voices. So he goes, like a Knight of old, from one high adventure to another, winning ever fresh victories for the Kingdom of his Master. Now it is the Ethiopian officer of Queen Candace to whom his errand brings him; afterward to Azotus and "all the cities" till he came to Caesarea.

Learning Aright.

The lessons of the passing year,
If learned aright, should surely give
Ability to better serve
This world of ours in which we live;
To do the right and never swerve;
To hear Life's call with willing ear;
To give and in the giving live;
To live and in the living give.

YOUR PROBLEMS

BY MRS HELEN LAW

Address all communications for this department to Mrs. Helen Law, 236 Woodbine Ave., Toronto.

Blue Bonnet: Please give suggestions for a kitchen shower.

Use correspondence cards for your invitations, pasting a little picture of a kitchen utensil or household article in the upper left-hand corner of each card.

When the guests arrive, take their gifts into the room set apart for the presentation, and to each article attach a card with a suitable jingle and the donors names written upon it. The guests should assemble in another room, and the first hour might be devoted to games.

When all have settled down for a pleasant afternoon, a sudden knock at the door or the ringing of the door-bell should be answered by the hostess. After a short interval, the hostess should return to her guests announcing that an automobile has been sent for the "bride" who is needed elsewhere and, "will she and the other guests please come into the other room at once?"

On entering the "other room" they should find an automobile, contrived by assembling a number of household articles. A clothes-basket mounted on a box serves as the body of the car, a bread box makes an excellent hood, and pie plates serve as wheels.

Hanging over the automobile is a card on which is printed in large letters:

Honk! Honk;
On the road to happiness,
Off for woe or weal;
They will safely make the trip
With Cupid at the wheel.

After the guests are seated, the guest of honor taking her place beside the improvised automobile, the gifts are handed to her one at a time. The examination of the gifts and the reading of the verses will cause much merriment.

The following rhymes and jingles were used at a similar affair. An aluminum kettle was accompanied by this verse:

I shall dine with you often,
So think I will settle
My fears, by presenting
An extra-size kettle.

A mixing bowl brought this message:

I didn't know what to give you,
I didn't upon my soul:
So I said, "I don't think any one else
Will send her a yellow bowl."

Good advice came with the chamois:

Polish your happiness every day;
Shine it with love, in the good old way.

With the nutmeg grater came this:

May your love be as warm as the old equator,
Use this charm and you'll find it grows grater and grater.

A dish mop and set of tea towels announced the following:

We are practical and plain,
Have no reason to be vain;
But you'll find us might spry
When it comes to wash and dry.

The glass pie plate brought more advice:

When husband comes home
In grouchy style,
Set him down to a pie
And watch him smile.

Likewise the duster:

Wedding things must keep their lustre
Please accept this little duster.

The lemon-squeezer's remarks are of course facetious:

If you should grow extravagant
And for large sums a teaser,
On husband waste no arguments
Just use this little squeezer.

The frying pan put itself into the same class with the lemon-squeezer:

Use it as a frying pan,
Or—it is very cute
When branished by the handle
To settle a dispute!

With the bread box came this appeal:

My dear, here is a bread box,
And every time you bake
Rush to the phone and call me up
And ask me to partake.

Refreshments follow and might consist of chicken salad, brown bread and butter sandwiches, olives, salted peanuts, "Golden Promises," (cornflake cookies) and tea.

Up to Date: Kindly give suggestions for a Leap Year party.

Arrange to have guests come in a large bus or in automobiles, the girls starting out in groups and calling for the young men at their homes. On arrival at the place of entertainment, the men seat themselves about the room, while the girls either congregate in corners or doorways, just as their brothers do at parties, or move about, placing chairs, performing introductions, and speaking to those who seem shy, teaching in an indirect way the art of being agreeable and gallant.

The girls also wait upon the young men when refreshments are served, seeing that no one is overlooked. Use games and contests recently printed in these columns.

Doubtful:—I have been keeping company with a young man for about two months, and when I was out with him last, I understood that we were to go out together again. Two nights later he went out with another girl. What am I to do? He did not tell me that he did not wish to keep company with me any more.

The young man probably knows more about conventions than you do, and knows that "keeping company" is no longer a popular phrase nor a popular pastime, but that the young men and young women of the present day have the right to associate with as many friends of the opposite sex as they choose to cultivate.

If you and the young man are not engaged to be married, he is entirely within his rights when he goes out with another girl, and you are just as free to go out with another man, or to receive visits from another man. People are beginning to realize that it is foolish to think that because a man calls on a girl for a short time he must have no other friends, and that the girl should deny herself the opportunity of meeting other people also.

It is not necessary for the man to inform you, orf or you to inform him concerning other engagements. Of course, neither of you need make any mystery of it, but should you go out with another man or receive another visitor, you can refer to the affair in a casual way. Young men nowadays usually ask a girl if she is going to be at home on a certain evening, in order that they may find out if that evening is open and free.

You ask what is best for you to do? There is but one thing, and that is to put as good a face upon the matter as possible, and act as if you knew of the change that is gradually coming over the relations between young men and young women; you surely do not want to be considered a back number? Greet the young man pleasantly when you see him again, and make no reference to his having gone out with the other girl.

President Ladies' Aid: Can you suggest some clever invitations and features for an apron social?

Make a number of doll-sized aprons, placing a pocket on each one, and send the aprons out accompanied with the following verse, written or printed on cards:

APRON SOCIAL

"This little apron is sent to you,
And this is what we want you to do:
Measure your waist-line inch by inch
And see that the tape line does not pinch;
For each small inch that you measure around,
Place one penny in the pocket sound,
And the money that you so freely pay,
Will be used by our "Aid" in the wisest way."

Add date, hour and place of meeting and serve simple refreshments, for which no extra charge need be made. Sell home-made cakes, candy and pies, as well as aprons of all sorts. Provide for an entertainment, or better still make a social evening of it, using games and contests in which all can join.

Poultry

A self-feeder for hens that costs practically nothing, never clogs up, and never wastes feed is somewhat of a boon, according to my experience. It consists merely of a light wooden box about four inches deep suspended four or five inches from the floor, and a piece of one-inch-mesh poultry netting cut to fit loosely into it. This wire is to be put on top of the feed. It settles down as the feed is consumed, and effectually prevents any from being thrown out. If a piece of heavier wire is bound in around the edge, this added weight will keep the piece of poultry netting in place even when the box is nearly full. The idea in having the whole thing suspended is to keep the hens out of the box, which it does.

These feeders are so inexpensive that there is no excuse for not using enough of them to give even the more timid hens access to feed at all times, thus doing away with one of the chief causes of lowered egg yield in large flocks.

Acid phosphate is a fertilizer that can be used with considerable profit on corn, potatoes and oats, and in orchards, gardens and on lawns, and for top dressing wheat and pastures.

For health's sake drink plenty of water; six glasses a day are not too many; and eat plenty of fruit and vegetables. This will be found far better and more conducive to long life than to neglect this simple, natural method, relying on drugs to correct the careless treatment of the body.

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