Farm Crop Queries

Conducted by Professor Henry G. Bell.

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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. 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.

Question—C. K.:—I have a field of about forty acres of heavy June grass sod. The land is mucky, with clay sub-soil. I would like to know if buckwheat would be of any use to subdue the June grass on this land? I have a good crop of beets on this land seven years ago. After the beets I had oats, but they grew rather too rank and lodged, thereby killing out part of the seeding which caused the June grass to take a start and it has been left in that way ever since, so that it is now almost a solid June grass sod. Now if you believe that buckwheat would grow on this land then I would like to know what kind of buckwheat to get and how much to sow per acre.

Answer:—The soil that you describe should produce a rank growth of buckwheat. The crop, however, is better suited to a clay loam. If you seed buckwheat on this soil, it should make sufficient growth to overcome the June grass, if the seed-bed is well prepared. In view of the fact that your grain lodged so badly, I would advise you to apply at least 200 pounds per acre of acid phosphate, which supplies phosphorus, the kind of plantfood that gives strength to the straw of the grain. This will give strength to the buckwheat vines and will plump the buckwheat kernels. Silver Hull buckwheat is considered a good variety and requires about five pecks of seed per acre. Another good crop to use under the conditions you describe would be rape. This can be sown broadcast in rows. Rape requires about five or six pounds of seed per acre if sown broadcast, and three pounds if sown in drill.

Question—A.J.W.:—We expect to erect a silo 10x32 feet. Have six and a half acres, about half of this field is sand loam and the other half is clay loam. We plowed down a heavy June grass and timothy sod last year and it was partly covered with manure. We have covered it again this winter and want to plant it for silage. How should we drill the corn and how much seed per acre? Would it pay to use some commercial fertilizer; if so how much and what analysis would you recommend?

Answer:—In planting corn for silage, both drill and check-row systems are successfully used. The check-row system, which is really the hill system, allows of cultivating the corn both ways. If the land is not very weedy the drill system is satisfactory, drilling it in rows about 30 inches apart. In drills it requires about 10 quarts to the acre.

To make sure of the germination, you would do well to buy the seed on the ear and test the ears for germination. This can be done by taking out six kernels from each ear, two from the tip, middle and butt, numbering the ear and placing the kernels on a square of blotting paper or cloth, numbering the square the same number as the ear. Place the cloth in a pan or large plate where you can keep it damp and warm, and inside of a week the kernels should have germinated sufficiently to tell you whether the ear is strong, weak or dead. Take the medium and strong ears and shell them out together and discard the ears that show very weak or dead kernels. It would surely pay you to fertilize your corn. For this purpose I would recommend the use of 200 to 300 pounds per acre of a fertilizer analyzing 2 to 3% ammonia, 8 to 10% phosphoric acid and 1% potash. This will start your corn crop off strong and vigorous, just the same as whole milk gives a vigorous start to your calves.

Question—A. C.:—I have a five acre field which has a heavy sod about four years old which was turned down and planted to beans last year. On account of wire worms I did not plant to oats or corn this Spring. I have it plowed again and intend planting to beans, but some of my neighbors said they would take the beans. Will they? If so, is there anything I can do to prevent it? I do not find many now. Would the dry weather effect them any? The soil is a clay loam with a heavy clay bottom.

Answer:—The wire worms which effected your crops last year found a suitable home in the sod which was plowed under. You are planning correctly to plant this land to a cultivated crop this year, since through cultivation it seems possible to get rid of the wire worms. It is impossible for me to say whether the wire worms will take the beans or not this year, however, thorough tillage of the soil in preparing the seed-bed will do a great deal to drive them out, as will also the application of 200 to 400 pounds of fertilizer per acre when seeding your beans. The late Prof. Smith of New Jersey, who made a careful study of the life history of the wire worm, strongly recommends fertilizers as a means of getting rid of the wire worm. The wire worm does not like fertilizer, and beside fertilizer gives added strength to the young growing crop and hence helps it to withstand light insect attacks. For your conditions, I would advise a fertilizer analyzing 1 to 2% ammonia, 8 to 12% phosphoric acid and 1 to 2% potash. This should be worked thoroughly into the soil before you plant the beans, by scattering it on the surface of the plowed land and harrowing it in thoroughly or by drilling it in, if you have a grain drill with fertilizer distributing attachment. Cultivation and fertilizers are about the only things that you can do to combat the wire worm. I do not believe the dry weather has had very much effect on them.

Question—R. W.:—We want to use commercial fertilizer on our bean land this year and we don't know just how much is best to put on per acre to get best results out of beans. Also, which would be best, to sow fertilizer broadcast or in the hill with beans? Our land is practically clay land.

Answer:—For fertilizing beans on clay soil, I would advise the use of from 200 to 600 pounds per acre of fertilizer analyzing 2 to 3% ammonia, 8 to 10% phosphoric acid and 1 to 2% potash. This should be worked thoroughly into the soil when you are preparing the seed-bed at least a week to ten days previous to planting. It can be spread with a lime spreader or if you have a grain drill with fertilizer drilling attachment, it is well to apply it that way. The important point is to see that the fertilizer is evenly distributed and thoroughly worked into the soil. It is rich available plantfood if it is worked into the soil where it can dissolve so that the plants can make use of it. It is not best practice to drill the fertilizer in with the beans. Broadcasting has been found to give best results.

THIS IS SPRAYING TIME

Methods of Combating the Enemies of Plant Life in the Garden

As soon as potatoes are well up they should be sprayed. The little flea beetle begins operations as soon as the plants are four or five inches high and so do the potato bugs. Whether or not potatoes have been grown in the vicinity before, the bugs are sure to be on hand early in the season and crops can only be protected by spraying. Then, too, blight must be checked by a spraying every ten days or two weeks. Cover the plants thoroughly with the spray, the upper and lower surfaces of the foliage. Vitrio is a good preparation to use for this purpose or arsenate of lead and bordeau may be used. If vitrio is used ten pounds should be mixed with fifty gallons of water.

For asparagus, beans, other garden vegetables, small fruits and rose bushes, one pound of vitrio dissolved in five gallons of water will produce the desired results.

Place the required amount of paste in a pail and add cold water gradually, slowly stirring until sufficient water has been added to produce a smooth milklike liquid. Pour this mixture through a fine wire strainer into the spray tank, which has previously been filled three-fourths full of clean water.

Cucumbers and melons should be sprayed every ten days. Tomato plants should be sprayed as soon as set out and occasionally as required. Young celery plants should be sprayed in the seed bed and at intervals of ten days with a mixture of ten pounds of vitrio to fifty gallons of water.

Arsenate of lead spray should be used for codling moth, caterpillars, flea beetles, browntail moth, gypsy moth, cucumber beetle and currant worm and curculio. If paste is used three pounds to fifty gallons of water should be used for codling moth and curculio. For canker worms, caterpillars, cranberry insects and leaf eating insects in general use four pounds to fifty gallons of water as soon as the insects appear. Repeat on later broods if needed. Arsenate of lead is deadly to human beings and must be used with care. Fruit and vegetables that have been sprayed must be thoroughly washed before they are used.

For cabbage lice take a lump of saltpeter, the size of an egg, and put in a sprinkler of water. Sprinkle the cabbage once or twice and there will be no more lice on them.

Bordeau mixture is a fungicide and a plant stimulant also, preventing blights and rusts during the growing season.

During the growing season tomatoes, celery, asparagus, small fruits, beans, etc., will be benefited by spraying with bordeau mixture.

The Sunday School

INTERNATIONAL LESSON JUNE 24.

Lesson XIII. The Purpose of John's Gospel—Review—John 21. 15-25. Golden Text John 20. 31.

1. A social faith. Both at the beginning and end of his Gospel John makes it clear that he is not writing simply a human record. Just as the prophet backed his message with, "Thus said the Lord," so John sets forth the eternal sanction behind the life and the teaching of Jesus. Here is "the Word made flesh." Here is the everlasting truth working itself into character. Have we anything to add to that record? Is there any other body of evidence than John possessed which has come to us? Has the Spirit led us in these twenty centuries of Christian development into more truth? What John gave us has now been tested by the human conscience through twenty centuries. It has been further confirmed by the social struggle of that period. John's affirmation is increasingly the conviction of the human race. Most of its leaders turn to-day to Jesus for guidance. The development of human life is not away from his principles, but toward them. With all the cross-currents, the drifts, and the eddies in the stream of human progress, it yet moves clearly forward in the dircetion of his teachings. With an increasing number of people outside of the church developing a clear faith in the leadership of Jesus, it is no time for the people in the church to question the practicability of the sermon on the mount. They must develop a faith that shall triumphantly apply the principles of Jesus to the whole of life.

2. Why believe? John was not interested in developing faith for the mere sake of faith. The belief that he wanted was no mere reptition of words. He was not trying simply to secure assent to an historical Christ and stop there. For him the purpooe of faith was that people might have life. Unless faith transforms life, individual and social, it is not faith at all, but a mere imitation. To-day we need a conviction of the social vitality of Jesus's teachings. We want no mere applause for his leadership, but a faith that will transform his principles into social living.

3. What kind of life? John is not talking simply about life eternal as the end of faith, but of eternal life that begins here and now. The kind of living he wants is the kind that Jesus taught and showed. In his epistles he makes it clear that it is a pure and brotherly life. Those who profess to believe in God and do not love their brothers are liars. Those who do not love do not know God: they are infidels, no matter what faith they may profess. It is an axiom with John that a man who does not love his brother cannot possibly love God. This is to be no vague emotion: it is to be manifested in gifts. It is even to go as far in case of necessity as the laying down of life. Here is the test of faith: it must produce a pure, brotherly, serving, self-sacrificing life. These lives must be joined together in a social order, in states and nations and a world life which is organized in justice and righteousness and peace.

4. The challenge. Is the purpose of John in his Gospel being fulfilled to-day? This is the responsibility which the Gospel puts upon those who hear it. This was Jesus' stern test. Well he knew the fatal facility of humanity to pass resolutions and then forget them. What happened to those who listened to his teachings and did them not, he set forth in the parable of the sower and of the men who built their houses on the rock and on the sand. He requires of those who believe in him that they translate his words into life; how else shall the kingdom of God come? This is his challenge: "Why call ye me Lord, Lord, and do not the things which I say?" Either we accomplish the social living that, he taught, or we fail of fellowship, and the end is, "Ye did it not; depart from me."

Your Problems

Conducted by Mrs Helen Law

Mothers and daughters of all ages are cordially invited to write to this department. Initials only will be published with each question and its answer as a means of identification, but full name and address must be given in each letter. Write on one side of paper only. Answers will be mailed direct if stamped and addressed envelope is enclosed.

Address all correspondence for this department to Mrs. Helen Law, 235 Woodbine Ave., Toronto.

L. T.:—For household use, the most effective and least dangerous of fly poisons is the one-to-five per cent. solution of formaldehyde. To a pint of water add three teaspoonfuls of commercial formaldehyde. It is not expensive, and can be bought at any drug store. Take one or more thin table tumblers and fill each one of them half full, or more, of the solution. Cut a piece of blotting paper into circular form, slightly smaller than an ordinary saucer. Place the blotting paper in the saucer and then invert the saucer over the tumbler; next, holding the hand on top of the tumbler and the saucer, quickly invert them. Then place a match under the edge of the tumbler. That will break the air seal and allow the fluid to percolate slowly into the blotting paper, and to keep it moist, so that the flies can drink from it. This solution attracts flies, and usually kill them within two or three minutes.

"Reader":—1. When a person remarks, "I am very glad I have met you, Miss B—," after having been introduced to you, respond by saying, "I am sure the pleasure is mutual"; or, "I am glad to know you." There is no set phrase for such occasions. 2. To remove tar, apply turpentine or kerosene, followed by soap and water. 3. Almond meal is an excellent substitute for soap for use on the face. 4. To destroy roaches, dip slices of potato in arsenic mixed with sugar. Gather up every morning and drop into boiling water, as some of the insects may still be alive. But never allow poison to lie around if there are children in the house. Paris green is another remedy, and pulverized borax is good.

"Subscriber":—1. The word "Argentine" means "silvered," and is associated with the Plata River because "plata" means "silver" in the Spanish tongue. Thus the name given to the great South American country took another form to describe the land through which the Plata flows. 2. Mercury is the planet nearest to the sun. 3. A panama hat may be cleaned by scrubbing with cormeal and water. 4. Red-bordered towels and naphins will not fade if a little borax is put in the water to set the color. 5. It is said that the juice of an onion will remove scorch marks from silk. 6. An invitation to a church wedding need not be acknowledged unless an invitation to the breakfast or reception is included. Wedding silver, linen, and all gifts intended for the bride should be marked with the initials of the bride's maiden name.

Mrs. T.:—1. To clean a greasy carpet, mix together whiting and corn meal, heat it and sift it thickly over the carpet; then cover with gasoline and rub hard until the gasoline evaporates. Sweep clean and wipe with a damp cloth. This should only be done in the open, as the danger of fire from gasoline is very great. Be careful also in rubbing when the gasoline has been applied. If it is not possible to do the work in the open, use only the powder, allowing it to stand for several days, then remove and repeat the treatment until the grease has disappeared. 2. The red paint marks may be removed from your dark blue wool suit by rubbing the spots with alcohol.

"Lill":—1. No matter how careful one is when sewing, often an oil spot gets on a dress while making, if the machine has recently been oiled. As your fabric is silk, cover it thickly with powdered starch and leave for twenty-four hours. After the starch has been brushed off the stain will not be noticeable.

Mrs. D. P.:—1. There is nothing that will take the taste of leeks from cream or butter. The best way is not to allow the cows to graze in weedy places. It is an argument in favor of cleaning up all the weeds on the farm, isn't it? 2. A good style of dress for a two-year-old boy is dark colored knickerbockers buttoned to a white or light-blue waist with large pearl buttons. Sailor suits of white cotton with navy-blue collar, cuffs and tie are also suitable. They may be had readymade for $1.50 at the large department stores, in sizes for one and a half years and upward. 3. There are two styles of hair-cut for little boys; one being the close shave which the older boys favor and the other the Buster Brown or Dutch cut.

Bedtime Stories

The Daisy Month.

This is the best of all the months,
For school is ending soon;
And that is where it gets its name—
"The daisy month of June"!

O—M—E—H

"O—M—E—H." Dilly said the letters over and over to herself, "O dear! I can never make you spell anything," she thought, as she looked down at the black letters on their squares of yellow cardboard. "Aunt Hannah said if I put you together right you'd make a word, but I've twisted you and turned you and you won't spell a thing! Of course if you didn't have to make a four-letter word, I could spell 'hem' and 'me' and 'he,' but I can't think what you can be when I have to use all the letters!"

Dilly was bending over a beautiful, shining mahogany table in a room where all the colors were soft and rich, and where a silver-voiced clock struck the quarter hours. Aunt Hannah's room was very still, even when she was in it, and now that she was gone Dilly longed to hear some sound.

She thought of the noisy nursery at home, and how she wished she were there! But Billy had measles, and Dilly must stay at Aunt Hannah's until he was well.

O—M—E—H the letters stared up at her, and she looked back at them in bewilderment, for somehow they seemed to be speaking to her in tiny friendly voices.

The big round O spoke first, making Dilly a funny little bow. "My dear Dilly," he began, just as if he were much older than she, "I have known many little girls in my day, and I must say I never knew one with whom I would rather play than with you, Dilly, my dear. If it were possible, my friends and I would rise from our pasteboards and join you in some game, but we are hard workers, hard workers. We must always be busy in books and papers. Did you ever think how very, very many times we letters are used in a day? It is words, words, words, until there is seldom any rest for us. We should like to tell you the word you are trying to make of us, but that would be against the rules. Instead, we shall tell you some of the stories we make in books."

The big O began at once with Old Mother Hubbard, told in a new and wonderful way; then the big M followed with a delightful tale of the garden of Mary, Mary, Quite Contrary. The E had been used so often in the story of The Old Woman Who Lived in a Shoe that he knew the names of all of the old woman's children, and he repeated them so fast that Dilly laughed merrily. At the very last the H told Dilly all about the hill where Jack and Jill had their famous tumble; he had been there and had seen the well. Just as Dilly was imagining that she was looking down into its cool depths something seemed to touch her, and there was Aunt Hannah lifting Dilly's head from the table, where it had fallen when she went to sleep! Aunt Hannah's jeweled hand turned the letters about until a beautiful word lay before Dilly's wondering gaze.

"Yes, Billy is well, and you shall go to-morrow," said Aunt Hannah.

Dilly smiled, for the word Aunt Hannah had given her was H—O—M—E. What friends those letters had come to be!

Horse Sense

Bruises of the heel will be indicated by lameness, tenderness upon pressure of the quarter of the sole, usually the inside. In severe cases where pus is forming there will be tenderness expressed when the heel is pressed.

Remove shoe, pare the sole of the quarter well down to expose the corn and allow escape of pus if there be any, apply hot poultices until soreness disappears, then get shod with a leather sole between shoe and hoof and no pressure upon the quarter of the wall.

When breeding the mares, bear in mind that it pays to have one breed in a community. The greatest progress in breeding is possible where farmers cooperate to produce the best of one breed.

Neither mare nor foal is bettered when the colt follows the cultivator. Keep the colt penned in a roomy, well-lighted and ventilated box stall. Do not keep them apart for a half day the first time.

Long-legged drafts are not what the market demands. Don't breed that characteristic into the young animals. Select a low-set sire.

Let the mare rest several weeks after foaling. Start gradually when putting her to work again.

After feeding and brushing the horses, turn them out in the pasture to rest for the night.

Disinfecting the stables with coal-tar dips will go a long way toward protecting the horses from flies. Clean the stables every day in hot weather.

Condition in a horse is manifested by keenness for work, brightness of eye and bloom of coat. A horse is capable of his greatest effort only when in condition.

Before letting the colt to the mare at mealtime, partly milk out the udder. In hot weather let the mare rest and cool off a few minutes before the colt sucks.

Colic often results from working a horse immediately after feeding. Allow plenty of time at noon.

Poultry

Damp and filth are the two prime causes of disease among poultry. Idleness is a disease breeder, busy fowls, as a rule, keeping in good health. Filthy drinking vessels breed undesirable germs about as quickly as anything, germs often hiding in the scum that is allowed to accumulate.

Keep the houses thoroughly ventilated during the month, for June has some very hot days and nights.

June is a good month for caponizing the young cockerels.

To keep in good health, a hen, in proportion to its size, requires almost seven times the amount of fresh air that a horse needs. The horse sweats through his skin, but the fowl must get rid of the waste of the body by means of the lungs, and therefore breathes seven times as fast as heated, sweating animals.

For winter green feed there is nothing better than lawn clippings. The grass should be gathered as soon as cut, and spread out on a shed roof so both sun and air can strike it. As soon as it is thoroughly dry it should be raked up and packed in barrels for the winter. Care must be taken that it does not dry too much, or it will lose its strength and bleach out considerably. It should, however, be perfectly cured before storing away, or it may heat and spoil.

In feeding, soak the grass in lukewarm water for about twelve to eighteen hours, after which either mix the mash or squeeze out the water and feed in troughs by itself.

Sheep Notes

As long as the teeth of a sheep are strong and in good working order, it is reasonably safe to keep her.

The safety of the flock may be greatly insured by calling up the sheep every night and shutting them into a tight fold. They soon get the habit and are also more docile the year around. A flock of sheep can not be made too tame. A wild flock is of less value and makes less growth and shorter fleeces than a quiet one.

Unless you intend to keep the lambs for home use, let the bucks go the minute they are big enough. More money in them now than there will be after a while.

You are smarter than most folks if you can tell what the wool market will be six months from now. Nine times out of ten it is well to sell your clip soon after shearing.

Keep the little chaps that are thrifty and have a good, thick-set growth of wool on their backs.

If you want to see the lambs grow, give them oats to eat often.

There are less than ten per cent. of all weeds which sheep will not eat. Cattle and horses eat only about half the different weeds.

Hogs

A good pasture is a pig's paradise.

If you want to get full value for your skim-milk, whey and buttermilk, let the pigs handle it for you.

The man who buys the stuff he feeds his hogs has only the feeder's profit. By growing the feed he has the grower's profit, too.

If the corn drowns out, sow some rape for the hogs. Forage helps to put the gains on hogs at the lowest cost.

Put the self-feeder where the pigs can help themselves. Let them do the work until marketing time.

Pigs may be more important than pedigrees, but it is a wise practise to look after both in a pure-bred herd. A pedigree is valuable at selling time.

Hogs do not always use mud-holes as the result of choice. It is often a last resort. A cement tank, sunk ten or twelve inches in the ground and filled with clean cool water, answers much better.

Castrate the male pigs before they are weaned, when they are about six or eight weeks old. Choose a clear dry day for the work.

All whey from cheese factories and butter milk from creameries should be pasteurized before feeding to hogs.

A mixture recommended for hog-pasture is barley and rape, the hogs to be turned on when the barley is starting to shoot. If not overdone, the barley will keep the herd going till odd heads began to ripen, then the grain and rape make a good ration until after frost arrives.

Hogs on pasture require grain for greatest profits in pork production, but a full feed is not economical when pasture is plentiful and grain high priced.

The Dairy

Breed the best to the best.

Raise the calves; quit eating veal.

Type is not the real test of a cow's value. The scales and tester are better indications.

Keep all calf pails, and the utensils with which milk comes in contact, scrupulously clean. Scald them with hot water and then expose them to the sun during the day.

To make a real success at the fall shows, begin now to care for the prospective entries. It is no honor to win on an untrained, poorly fitted animal just because competition is lacking. Make your entry worthy of the red ribbon if it is the only one in its class.

One farmer says that with silage and clover and alfalfa hay he had been able to bring a large herd of dairy cows through the winter in good condition, with fairly heavy production and without much grain.

Where chronic dysentery is present in a dairy herd, try washing the cows' udders with a two per cent. solution of coal-tar disinfectant before allowing the calves to suck.

Evey heifer calf killed means one less cow. Without any restriction, the sale of calves and cows for meat can proceed so far that there will be a serious shortage of cattle. Already, good cows never were so scarce and high.

Any falling off in the production of live stock will be noticeable in grain farming. Without plenty of stock, soil fertility is difficult to maintain and high prices for foodstuffs coming from the soil are more likely. It is apparent that something must be done to keep the productive animals on the farm.

A seed in the ground is worth two thousand on the counter.