

# Farm Crop Queries



Conducted by Professor 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. 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 soil. 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 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 plant food that gives strength to the straw of the grain. This will give strength to the buckwheat vines and will plump the wheat kernels. Silver Hull buckwheat 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

## Poultry

Damp and filth are the two prime causes of disease among poultry. Idleness is a disease breeder, busy fowling, 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.

ute 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.

# 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. Vitro is a good preparation to use for this purpose or arsenate of lead and bordeaux may be used. If vitro 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 vitro 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 milky 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 vitro 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 salt-peter, 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.

Bordeaux 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 bordeaux mixture.



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 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 anything else 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 his 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 direction 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 practicality of the sermon on the mount. They must develop a faith that shall truthfully 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 repetition of words. He was not trying simply to secure assent to an historical Christ and stop there. For him the purpose 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 at 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 cases 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 in the life of the world, 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: 'What call ye me Lord, Lord, and do not accomplish 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.'

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 maturity, partly milk out the udder. In hot weather let the mare rest and cool off a few minutes before the colts suck.

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

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 drows 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 imprudent than pedigree, but it is a wise practice 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

# 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 tumbler 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 at tracts flies, and usually kill them within two or three minutes.

"Reader":—I. 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 cornmeal 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 the 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.

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 pastebords 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 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!

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.

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.

Every 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 were so scarce and high.

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# SCIENCE AND THE EGG.

Eggs are principally composed of lime, nitrogen and phosphoric acid. There are about fifty grains of salt and lime in the shell of an egg. In an egg six per cent. is white, three per cent. yolk, and one per cent. shell. In 100 parts of yolk there is fifty-two per cent. water, forty-five per cent. oil and fat, and one per cent. each of albumenoids, coloring and mineral matter. In 100 parts of white there is eighty-four per cent. water, twelve and a half per cent. albumen, one per cent. mineral, and two and a half per cent. sugar, etc.

An egg is an ounce and a half of concentrated food, made up of lime, soda, sulphur, iron, phosphorus, magnesia, oil and albumen. The yolk of the egg spoils more quickly than the white.

The hen's egg is composed of fifty per cent. water, sixteen per cent. protein, thirty-three per cent. fat. The duck egg is forty-six per cent. water, seventeen per cent. protein, thirty-six per cent. fat. The goose egg is forty-four per cent. water, nineteen per cent. protein, thirty-six per cent. fat. The turkey egg is forty-eight per cent. water, eighteen per cent. protein, thirty-three per cent. fat.

The color is given the shell of an egg by a pigment located in the lower sac of the egg organ. The first colored egg laid in the season may be a rich brown, but with each subsequent egg this coloring matter is largely drawn upon, and the eggs become more pale. This is more noticeable in the case of heavy laying. Size of egg plays a similar part. The first pullet egg is small, and as production continues the size becomes larger until, in the second year, the hen gives an egg almost double the size and weight of the product of her first year. In her first year the hen may lay an egg of good size, but that size will grow smaller.

In Orchard, Field and Garden.

Prune the lilacs and sweet syringa bushes as soon as they are through blooming.

Be sure to make three successional plantings of sweet corn ten days apart. Berries intended for shipment should not be picked when they are wet with dew or rain.

Aphis or green lice on roses or sweet peas may be kept in check by spraying with soap and water.

Deep cultivation in the orchard may do more harm than good. Three inches is deep enough around trees—once in two weeks.

Late or main-crop cabbage and celery plants should not be set until the latter part of June or early in July.

Begin thinning beets early. Then the plants are tender, and grow good tough for greens.

Burn the trash dragged out to the end of the field by the harrow. Don't throw it in a corner to serve as a happy bug and slug harbor.

On nearly every farm there are piles of wood-ashes thrown away and stable manure wasting, while barren fields cry out for both. Put them on the land.

Double-cropping may be followed to advantage in a small garden. Beans, corn, cucumbers, tomatoes and late celery follow the early crops very nicely.

Cultivate the new strawberry bed and the bush fruits about once in ten days. But shallow, please! Surplus suckers in blackberry or red raspberry patches should be treated just like weeds; don't let the rows get too wide nor too thick.

Late cabbage and cauliflower should be set in the field now. If the land was properly cultivated through May it will be in fine condition for the plants. In hot dry weather it is better to do the planting in the afternoon and water the plants as set.

No grain crops should be grown in the orchard. It doesn't pay. Cultivated crops may do while the trees are young and their roots do not need all the space; but that time is soon over, and then the trees should reign supreme.

Tomatoes should be cultivated as long as it is possible to get through without injuring the vines. In dry weather regular shallow cultivation will prolong the season, increase the size and improve the quality of the fruit.

Look out for the yellow striped squash-bugs that attack melon, cucumber and squash-vines when the plants are small. The best preventive is to put a mosquito-netting tent over each hill, using two little sticks as supports, and covering the edges with soil to hold netting in place. Erect these tents as soon as the plants come through the ground, or sooner, and leave them in place until the vines begin to push for room. Then store the netting for future use.

Keep The Weeds Down.

Attack the weeds as soon as they appear in the garden. It is less work to keep a garden clean from the beginning than it is after the weeds have made a good start. Weeds are gross feeders and rob the garden plants of food and moisture they require.

Dandelions, plantain and dock can best be removed from the lawn by cutting them off below the crown. Fill up the holes with earth. Cut the weeds every two weeks and all will soon disappear.