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.

G. O.:— I have fourteen acres of rolling clay soil to plant to beans this year. Would like to get advice as to fertilizer. Would you advise using fertilizer on this land, and if so, how much per acre, and what kind?

Answer:—Large bean growers have obtained very satisfactory results from proper fertilization of their bean crops. On clay soil I would advise using from 200 to 400 bushels per acre of fertilizer carrying 1 to 2 per cent. ammonia, 10 to 12 per cent. available phosphoric acid, and 1 per cent. potash. Best results are obtained by applying this fertilizer through the fertilizer section of the grain drill. Many bean growers recommend spreading the fertilizer 7 to 14 days before planting the beans. If you do not have a grain drill with fertilizer dropping section, any broadcasting machinery such as a lime spreader will distribute the fertilizer on top of the plowed ground. Careful harrowing and disking will work it in. When fertilizers are applied through the grain fertilizer drill it should be allowed to drop through the hoe on each side of the one dropping beans, but not in the hoe that is dropping the seed. If fertilizers are carefully applied as described, they supply available plantfood to the young growing crop and give it material assistance. Do not drop the beans on the fertilizers.

H. P.:—I have ten acres of clay loam soil that I intend to sow to oats. I have sown alfalfa on this same piece of ground two previous years to inoculate and I wish to sow alfalfa with the oats this year. Could you advise me if lime sown with the oats would injure them? Would lime help to stiffen the straw so they would not lodge? What kind and how much lime to sow? How many pounds of alfalfa is necessary?

Answer:—It will help your oat crop and greatly assist the catch of alfalfa to apply lime to your soil at the time you are seeding your oats. Lime will help strengthen the oat straw. Possibly the best form of lime to use is ground limestone at the rate of one to two tons per acre. Successful alfalfa growers use from 15 to 20 pounds of good seed per acre.

P. F.:—We are contemplating growing a small acreage of sugar beets the coming season and as it will be our first experience along this line we would like to have your advice as to what analysis of fertilizer to use. One field is heavy ground with clay subsoil. The other is black ground with gravelly bottom.

Answer:—For fertilizer for sugar beets use from 400 to 800 pounds per acre of fertilizer analysing 2 to 4 per cent. ammonia, 8 to 12 per cent. available phosphoric acid, and 3 to 5 per cent. potash. The higher potash fertilizer should be used on the black ground since muck soils are always short of this type of plantfood. For best results apply 200 pounds of fertilizer through the fertilizer attachment of your sugar-beet drill when planting the seed. The remainder of the fertilizer should be spread on the ground by the fertilizer dropper grain drill or a broadcast lime-and-fertilizer spreader. If it is applied through the lime spreader the ground should be thoroughly disked and harrowed before the beets are sown so the fertilizer will be well worked into the soil.

R. S.:—I intend sowing a small strip in my garden this spring with alfalfa and orchard grass in alternate rows. I thought as they came on about the same time they would make a good combination for cow feed. What do you think of the plan and how far should the rows be apart?

Answer:—Alfalfa and orchard grass ripen about the same time. Grass of any sort tends to kill out alfalfa. You will do better to sow rows of alfalfa if you want to grow this crop or if you want a maximum quantity of feed I would advise you to sow ensilage corn. If you are sowing alfalfa put the rows 12 to 18 inches apart.

Subscriber:—The rhubarb here has been planted several years, seems to be thriving well but appears tough and lasts but a very short season and requires to be peeled for cooking. can not you state the cause and advise me some means of making it O.K. for this season and when to reset?

Answer:—It may be that your rhubarb is not of the most tender variety. However, if you know that it is, the probabilities are that the plantfood necessary to produce an abundant and tender crop is lacking. At any time now sow fertilizer at the rate of 50 lbs. to a space measuring 20 feet by 30 feet between the rows of rhubarb. Do not let the fertilizer drop immediately on the rhubarb, but keep it about 3 to 5 inches away from the plants. Follow the application with thorough raking or digging, at a depth not to exceed 2 to 3 inches, so as to work the plantfood into the soil. Just after you have begun to pull the rhubarb scatter a few handfuls more of the fertilizer among the rows and rake it in. This additional plantfood will assist the growing crop. The reason the rhubarb fails to yield and gets tough is because its supply of plantfood is running short. When autumn comes give the rhubarb bed a good top-dressing of manure.

Reader:—1. I have a piece of clay ground which I have had in potatoes for two years and I intend sowing wheat on this year, and I ask your advice in regard to best results. Would it be wise to put any more manure on? 2. What would be a good mixture of grass seed to sow for hog pasture? 3. What do you think about sowing oats on sod which has to be plowed this spring?

Answer:—1. If you manured the potatoes heavily I would not advise your adding more stable manure in preparing it for wheat. I would advise adding about 200 to 300 lbs. of fertilizer carrying at least 1 to 2 per cent. ammonia, and 10 to 12 per cent. available phosphoric acid. The reason for the advice is that stock manure is weak in plant ripener—phosphoric acid—and the addition of the fertilizer in question will greatly assist your crops in rapidity of growth and maturity and will also give plumper grain. This fertilizer should be scattered like ashes over the plowed ground and worked in by careful harrowing. If you have a lime spreader this machine will distribute the fertilizer evenly. If, however, you have a grain drill with fertilizer dropping compartment, of course the application of fertilizer through the grain drill equipment will give the best application possible. 2. For pasture for hogs, alfalfa is generally advised. It will not make immediate pasture but should have at least one season's growth, so the crop will be well established before turning the stock on it. The alfalfa mixture makes abundant growth and quality of the forage is such that brood sows can to a large extent, be maintained on the grass and hay. The Experimental Farms report advises the growing of oats and peas or peas alone. Of course the grain of the peas is high in protein and the pea vines along with the green oats forms a nutritious fodder. A mixture of peas and oats will give pasture this summer, while the crop of alfalfa as stated before, should have sufficient time to become established before the stock is turned on it. 3. Oats may be sown on sod land which has been plowed this spring. However, the plowing should not be too deep or else the water supply for the oat crop might be seriously impaired. I prefer using plowed sod for potatoes or some other cultivated crop since cultivation gives chance to rid the soil of weeds before the grain and grass crops are sown.

The Boy and His Calf.

It is a long time since we heard the first story about the farmer who gave Bill a calf and then sold it and pocketed the money when the calf became a cow. In the last chapter of this story, Bill is tearfully bidding his mother good-bye at the garden gate and is headed for the "wicked city." No more farming for him if father is going to confiscate his calf business. We have not heard that story in quite a while and believe that the organization of boys' and girls' clubs and the general tendency to interest boys in farm life is doing a good work. The daily press is filled with daily accounts of boys who have made good with their live stock, and between the lines everyone can see that it is due to the fact that honest fathers are giving the boys a chance to learn something about the farming business.

Lemon jelly is good served with sliced bananas.

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How and When To Spray

(Continued From Last Week.)

Apple Scab

Apple scab causes small circular spots on leaves, causing them to drop. On fruit it causes small circular dark spots, which grow and cause the fruit to crack. Scab is worse during wet, cool seasons.

Dilute commercial lime sulphur with two pounds of arsenate of lead and spray just before the blossoms buds begin to open; spray again just after the blossom petals fall, beginning when two-thirds of the blossoms have fallen, and again two weeks after the petals fall. Spray before rains, not after.

Pear Slug and Psylla

Pear slug attacks pears, apples, plums and cherries, skeletonizing the leaves. It is a small slimy black worm about half an inch long. Spraying with two and one-half pounds of arsenate of lead to fifty gallons of water will kill the larvae.

Pear psylla, a small winged insect one-tenth of an inch long, lives over winter in the crevices of the bark. Lime sulphur, one part to eight parts of water, sprayed while the trees are dormant is the remedy, and the pear leaf blister mite, which causes reddish blisters on the leaves, later turning black, will be controlled by the dormant spraying for the psylla.

Brown Rot

Brown rot attacks cherries, peaches, plums and other stone fruits. Small brown spots on the fruit enlarge until the entire fruit rots. Spraying to control curculio also keeps this under control. If necessary use self-boiled lime sulphur with two pounds of arsenate of lead to fifty gallons of the solution just as the calyces or shucks are falling from the fruit. Two or three weeks later spray again.

Peach Leaf Curl

This disease causes light green, yellowish or reddish, wrinkled or swollen leaves, which drop early. Spray with commercial lime sulphur, one part to fifteen parts of water. Spraying for scale in the spring will control peach leaf curl.

Miscellaneous

Gypsy moth, tussock moth, brown tail moth and cankerworm are checked by spraying with arsenate of lead when caterpillars first appear. Elm leaf beetle should be met with arsenate of lead sprayed on the under side of the leaves as soon as the leaves have developed.

Never spray peach trees with Bordeaux or commercial lime sulphur when the foliage is on the trees. Self-boiled lime sulphur is supposed not to injure the foliage of the peach, but should be tested carefully, and unless the user is confident from experience that he can safely use it better omit. Arsenate of lead should be used only with three or four pounds of lime slaked and added to each fifty gallons to counteract the burning tendency of the lead.

SPRAYING TIME TABLE

Apple

First. Spray in winter or late spring when trees are dormant. Boiled lime sulphur.

Second. Just as the leaf buds open and before blooming time. Bordeaux 4-4-50 and two pounds arsenate of lead.

Third. Just after petals fall from blossoms. Same spray as in second. Use high pressure on sprayer.

Fourth. Ten days after third. Same spray.

Peach

First. Winter, or spray before the buds begin to swell. Lime sulphur 8-8-50.

Second. At the time the calices of the fruit are dropping. Arsenate of lead two pounds, lime two pounds, to fifty gallons water.

Third. A month after the petals drop. Lime sulphur 8-8-50 and two pounds arsenate of lead.

Fourth. A month before fruit ripens, lime sulphur, 8-8-50.

Cherry

First. Late winter or early spring.

Second. Just after the blossoms fall, Bordeaux, 3-3-50, lead arsenate, three pounds to fifty gallons.

Third. Ten days later. Lime sulphur, 8-8-50.

Fourth. After fruit is picked. Bordeaux, 3-3-50.

Pear

First. Winter or early spring, before buds open. Lime sulphur, 8-8-50.

Second. Just before the blossoms open. Bordeaux, 3-3-50, and arsenate of lead, three pounds.

Third. Just after petals fall. Bordeaux, 3-3-50, and arsenate of lead three pounds.

Fourth. Ten days later. Same spray.

Plum

Plums are sprayed the same as peaches. Bordeaux is likely to injure the foliage of Japanese plums. Use lime sulphur.

Grape

First. Before buds open. Bordeaux, 5-5-50.

Second. As buds are swelling. Bordeaux and arsenate of lead, three pounds to fifty gallons.

Third. Just before the blossoms open. Bordeaux, 5-5-50; arsenate lead, three pounds to fifty gallons.

Fourth. Just as the fruit sets. Same spray.

Fifth. Ten days later. Same spray.

Sixth. The first of July. Same spray.

If there is black rot, spraying must be done after each rain.

Very often the first two sprayings can be omitted.

Raspberry and Blackberry

First. Early spring when canes are dormant. Lime sulphur, 8-8-50.

Second. Just before leaves appear. Bordeaux, 3-3-50.

Third. When buds are swelling. Same spray.

Fourth. When the young canes are six to eight inches high. Lime sulphur.

Currant and Gooseberry

First. Early spring before leaves open. Lime sulphur.

Second. As the leaves are opening. Bordeaux, 3-3-50.

Third. Two weeks after leaves start unfolding. Bordeaux, 3-3-50, arsenate of lead, 3 pounds to 50 gallons. If washed off by rain apply again.

Fourth. Two weeks later. Lime sulphur.

Try potatoes in some new way two or three times a week.

Arthur peas stand to-day among field peas as the earliest in commerce that will give profitable yield. There are earlier field varieties and very early varieties among the garden sorts, but they will not return, when grown for general purposes, a commensurate profit on the labor expended.

Sheep Notes

Start With Grade Sheep.

The inexperienced man should start with grade sheep. If after raising grades for a time he finds that he likes sheep and knows something about them, he may establish a pure-bred flock. In establishing a pure-bred flock one should first decide on the breed to be handled. A breed should be selected that is adapted to the local climatic conditions and is popular, in order that a ready market may be available for the surplus stock.

The most important consideration in establishing a pure-bred flock is the selection of the foundation ewes. Few people realize the importance of good ewes.

Ewes typical of the breed they represent, and uniform in size and conformation, should be selected because they will raise more uniform lambs; and uniform lambs find a market much more quickly than lambs that are off type and lacking in uniformity. Ewes that have a feminine, motherly appearance should be selected, as this is an indication of prolific breeders and good mothers. The eyes should be large, clear, and bright, yet placid, indicating a kind disposition.

The ewes should show plenty of constitution by a wide spring of ribs, and a deep, full chest. They should have a strong back with a thick covering of natural flesh. A little more length of coupling is desirable in the ewe than in the ram, and the hips should be wide apart and the hind quarters full. The body should stand squarely on the four legs, and the feet and pasterns should be strong. The wool should be dense and have quality, strength, and lustre.

When establishing a grade flock it is well to choose good, strong ewes and a pure-bred ram of mutton type. This makes an excellent foundation. The ewes should be young, uniform in size and build, and show constitution and vigor. Each individual sheep should be examined for age, and only those with good mouths should be chosen for breeding purposes.

Severely cold weather is likely to kill corn seed. A large amount of corn exposed to the weather in cribs last winter was killed. Keep seed corn in a dry place over winter where the temperature never goes below 35 or 40 degrees.

CANADA'S PRIDE

CANADIANS have good reason to be proud of the position Canada holds in the world today. This pride is justified by the activities of her people, by her unlimited natural resources, by her splendid institutions, *and particularly by her Industries.*

Facts about the immensity of some Canadian industries would astonish most people.

These industries, when viewed in the light of comparison with other countries, are simply tremendous.

The growth of any industry is limited to the number of people it can serve, and that is a fact not often properly appreciated when Canadian industries are compared to similar enterprises in, say, the United States.

For example: the population of the United States exceeds 100,000,000. Opportunity for industries there is almost unlimited. In comparison, Canada with its seven million population is a small country—yet in spite of this comparatively small population, Canada possesses several industries which in actual size rank among the biggest in the world.

In shoemaking, one Canadian concern has developed a volume of business and a service to the Canadian people which is not equalled by another shoe manufacturer anywhere in the world. This concern, if located in the United States, would rank as one of the twelve largest out of some two thousand shoe manufacturers there.

While the sales of the largest shoe manufacturer in the United States—selling to the American people—do not exceed twenty-five cents per capita per year, the sales of Ames Holden McCready to the Canadian people last year were approximately *eighty* cents per capita.

In a comparative sense, therefore, this Canadian concern is greater than the foremost American shoe manufacturer in the United States.

Thus Ames Holden McCready truly merit the distinction of their title "Shoemakers to the Canadian Nation."

Just imagine for a moment the enormous work of supplying a large portion of Canada's 7,000,000 people with its boots and shoes:

—*it requires*—huge up-to-date factories equipped with the most modern machinery able to turn out 8,000 pairs of shoes a day.

—*it requires*—a variety of nearly 800 different styles to meet the requirements of all classes of people, for different grades, shapes and kinds of shoes.

—*it requires*—the maintenance of six large distributing branches in principal cities from coast to coast, and in these are carried over a million dollars worth of stock, ready for quick delivery to retailers.

—*it requires*—sixty travelling salesmen to call on the retail trade, because out of approximately 10,000 retail dealers who sell shoes in Canada, more than 5,000 handle A.H.M. Shoes.

—*it requires*—many other details of organization and equipment, but this brief outline will give you some slight idea of the part that this great shoe concern is playing in the business of supplying footwear to the Canadian people.

You will be interested in these facts, because the next time you buy footwear bearing the A.H.M. Brand, you will know that they are the product of a large and efficient organization making shoes which will in every case give you the greatest value for your money.

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