

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—H.S.S.:—Can I sow acid phosphate with a force feed drill? It has no fertilizer attachment but I thought possibly it might work.

Answer:—You can sow acid phosphate with a force feed drill if the acid phosphate is dry and finely ground. Such a method of application would not allow you to sow but a very light application. Be very careful to thoroughly clean out and oil the drill after use for acid phosphate sowing, otherwise the metal part will rust. If you have a lime spreader I would advise your spreading the acid phosphate with this implement and then thoroughly work it into the soil by disking and harrowing. This will give a better application than applying acid phosphate through the seedling attachment of the seed drill.

Question—J.H.S.:—I have eighteen acres of oats. I intend to sow wheat after oats. The field is somewhat run, I have plenty of marl near the river. Would it pay me to top-dress the wheat with marl? If so, how much to the acre? Would it be all right to spread with a shovel? Soil isn't heavy nor light.

Answer:—Would advise you, after

the land is plowed, to top-dress it with marl at the rate of about two tons to the acre. If you have a lime spreader and the marl is dry, after it has been pulverized it can be spread with the lime spreader to best advantage. You can spread it fairly well with a shovel but you will not get it sufficiently evenly distributed. After the lime has been spread work it into the ground by thoroughly disking at least a week before the wheat is planted.

At the time of sowing wheat I would advise adding 200 to 300 pounds of fertilizer to the acre in order to give the young crop a vigorous start. The fertilizer should contain from 2 to 3 per cent. ammonia, 8 to 12 per cent. phosphoric acid and from 1 to 2 per cent. potash would be valuable if it can be obtained. This fertilizer can be applied at the time the wheat is sown or spread in the same way as is advised for lime and worked into the soil thoroughly just before the wheat is sown. If the grain is seeded to a mixture of clover and grass seed the addition of the marl will make the soil sweet in reaction and the fertilizer will have a very beneficial effect in insuring a good stand of grass.

The Dairy

Steers which have been kept on a low plane of nutrition (maintenance) for a considerable time make more economical gains when put upon a full-feed ration than steers which have been upon full feed for some time. However, steers receiving more than a maintenance but less than a full-feed ration make no more economical gains when put upon full feed than steers which have already been on full feed. Whenever beef advanced in price a demand goes out for calves that will stop the slaughter of young animals. Since the reason always given for high-priced meats is the decreasing number of beef animals, it would seem the wise thing to bring more calves to maturity. And so legislators and congress debate the advisability of prohibiting the killing of calves under a given age.

Would such action bring the desired results? Would the passing of veal from our tables make meat any cheaper? Would an order to the farmer to mature his calves stimulate him to raise beef or would it result in his selling off his dairy or feeding fewer animals than ever? In all probability the latter is exactly what would happen. The milk

business and raising calves are incompatible. The milk that calves use is also needed by milk consumers, many of whom are babies. And so the calves must go. There is another reason why the farmer knows better what to do with his young animals than the public, or even the legislator.

It takes pasture and feed to mature beef. Every successful dairyman is using all his land to feed his cows. If he were compelled to feed calves he could keep fewer cows and beef would be grown at the cost of a scarcity in milk.

More calves should be grown to maturity. There is no doubt of that. But legislation prohibiting the killing of young animals is not the way to increase the supply of beef animals.

During the summer while cows are in pasture or on green crops a balanced ration can be maintained by combining with the green food the following concentrated feed mixture recommended for summer feeding: Three hundred pounds wheat bran, two hundred pounds gluten feed, one hundred pounds hominy, corn-meal or ground oats. Mixed wheat feed may be used in place of wheat bran. More gluten might well be added to the combination when cows are carefully watched.

Poultry

Market Calendar.

In August all surplus Leghorn cockerels and cockerets of other light weight breeds should be marketed as broilers. They are of little value as roasters.

Green ducks are young ducks from 8 to 12 weeks old. They should be sold before they moult.

Ducks on the Farm.

The keeping of ducks calls for little outlay in the matter of building houses. Any kind of a house, so it has a good roof, and dry floor, will do. A plain shed with dirt floor, and having the south side entirely open makes an excellent duck-house.

The floor of the duck-house must be kept dry and should be well littered with clean, dry straw. Strange as it may seem, while ducks will thrive if they have access to a stream of water or pond, they must have dry quarters at night. Ducks compelled to spend their nights on damp floors or on damp litter, will surely contract rheumatism.

Ducks are conveniently kept in flocks of about thirty. A house fifteen

by ten feet is large enough for this number. When kept in flocks of thirty or more one male should be allotted to each seven or eight females. It is never advisable to keep ducks and chickens in the same house or run, for the reason that the ducks will keep the drinking water in such a constant state of filth that the health and life of the chickens are endangered.

Ducks require a much more bulky ration than hens. A good ration is as follows: Two parts bran, one part each of middlings and corn meal, one-half part of beef scrap and five parts of green food. This green food may be most anything—chopped turnips, beets, pumpkins, cut clover, etc. As the breeding season approaches it would be advisable to increase the beef scrap to one full part. Little whole grain should be fed. If on range during the spring and summer months ducks require little feeding.

Any of the larger breeds of ducks will yield quite a great deal in the way of feathers in a year's time. Feathers should not be plucked during the cold weather. When ready for picking, the feathers will pull easily, without leaving blood on the end of the quill. If not picked when "ripe" the feathers will fall out and be wasted.

Earning Money at Home.

Very often a girl who has been wishing for some way in which to earn a little money suddenly finds a good idea close at hand in homely disguise. Not long ago one girl noticed, in wandering about the home farm, that a large amount of the fruit on the trees was dead ripe and about to go to waste. She went to her father with a question:

"May I have a box of berries out of every four that I pick, and one basket of plums, one of peaches and one of apples on the same basis?"

He was skeptical but also a little relieved, for the prospective loss of the small fruit was worrying him. "Go ahead and see what you can do," was his reply.

What the girl did was to get down to business at once. She gathered and sorted diligently, with a well-defined scheme in view for every pound of her own share. The fruit that fell to her lot she put up in the form of jelly, apple butter, and peach and plum marmalade, which found a ready market. The project is still flourishing. She buys her jars and glasses at wholesale prices, and makes a point of getting such as are of odd, attractive shapes. On each one she pastes a label bearing her name and guarantee. She has never yet had anything returned as inferior or spoiled—a fact

that, taken in connection with her success, is quite significant.

By picking the fruit at just the right time and handling it carefully, she has greatly increased her father's sales, while her own income from the business is forty dollars a month, earned, for the most part, out in the sunshine and open-air.

PETAINE'S PROPHECY.

French Commander-in-Chief Tells When the War Will End.

Here is a story about General Petain which I have had on good authority. If there is one thing more than another that the General dislikes it is being asked when the war will be over. Only foolish, ignorant people ask such a question he has declared. But some little time ago he met an English lady at dinner in Paris who put the question to him.

Now General Petain is incapable of replying rudely to a lady. He turned to his questioner and said with a smile, "I shall tell you, only you must not tell anyone."

"Oh, certainly not," said the lady eagerly.

"Well," continued the General, "the war will be over when I shall have the pleasure of sitting next to you at dinner in Berlin."

KEEP THE POTATOES GROWING

Notes on the Cultivation of This Valuable Crop and How to Protect It From Its Enemies.

Many are growing potatoes in Canada this year, for the first time, and as a result of the greatly increased number of growers the crop will probably be greatly increased. But to insure a good crop there must be an abundance of moisture in the soil and the tops must be protected from insects and disease.

CULTIVATION:—The soil should be kept cultivated with the cultivator or hoe until the tops meet sufficiently to shade the ground. As most of the tubers develop in the three or four inches of soil nearest the surface, and as the tubers will not develop well in dry soil, quite shallow cultivation is desirable at this season of the year. In soil which is dry there may be good development of tops but there will be few tubers. The roots in such cases have gone down deep into the soil to obtain moisture but the tuber-bearing stems, which are quite different from the root system, do not develop well. Where the soil is loose, sandy loam, hilling is not necessary and may be injurious, as the soil dries out more than if left on the level. In heavy soils it is desirable to hill the potatoes as it will loosen the soil and the tubers will be shapelier than when the ground is left level. When there is sufficient rainfall and moisture in the soil hilling is likely to give best results in all kinds of soil as the soil will be looser and the tubers can push through it readily. As a great development of tubers takes place during the cooler and usually moister weather of the latter part of summer, it is very important to keep the plants growing well until then. In one experiment it was shown that during the month of September there was an increase of 119 bushels of potatoes per acre.

PROTECTION OF POTATO TOPS FROM INSECTS:—It is very important to prevent the tops of potatoes from being eaten by insects, particularly by the Colorado Potato Beetle. The old "bugs" do not do much harm to the foliage, as a rule, and usually the plants are not sprayed to destroy these, although the fewer there are to lay eggs the less difficulty there will be in destroying the young ones. These begin to eat rapidly soon after hatching, and close watch should be kept so that the vines may be sprayed before much harm is done. Spraying green kills more rapidly than arsenate of lead but does not adhere so well, and in rainy weather it is desirable to have something that will stay on the leaves so that they will be protected until it stops raining and thus prevent the tops being eaten. At the Central Experimental Farm a mixture of Paris green and arsenate of lead is used in the proportion of 8 ounces Paris green to 1½ pounds paste arsenate of lead (or 12 ounces dry arsenate of lead) to 40 gallons of water in order to get the advantage of both poisons. It may be that it is not convenient to get both poisons when either 12 ounces of Paris green or 3 pounds paste arsenate of lead (or 1½ pounds dry arsenate of lead) to 40 gallons of water could be used, or in smaller quantities, say 1 ounce Paris green to 3 gallons

or ¾ ounce paste arsenate of lead to 3½ gallons of water. An experiment conducted for six years at the Ontario Agricultural College, Guelph, showed that, on the average, where the tops were sprayed to kill "bugs," the yield was 186.9 bushels per acre, while where the tops were not sprayed and allowed to be eaten, the yield was only 98.2 bushels per acre. It is desirable not to stop with one spray which usually does not kill all the bugs but to spray several times, if necessary, so that as little foliage as possible is eaten.

PROTECTION OF THE POTATO PLANTS FROM LATE BLIGHT AND ROT:—In some years the crop of potatoes is much lessened by the Late Blight disease and when rot follows little of the crop may be left. This is, therefore, very desirable to prevent this disease from spreading. This is done by keeping the plants covered with Bordeaux mixture from about the first week of July, or before there is any sign of the disease, until September. Sometimes the first application of Bordeaux mixture is made before the potato beetles are all killed when the poison to them may be mixed with the Bordeaux. While the disease is not very bad every year it is well to be prepared. There was an average increase per year of 94 bushels of potatoes from spraying with Bordeaux mixture in three years. The formula for Bordeaux mixture for potatoes is 6 pounds copper sulphate or bluestone, 4 pounds freshly slaked lime to 40 gallons of water. While the bluestone will dissolve more quickly in hot water; if it is not convenient to get this, it may be suspended over night in a cotton bag in a wooden or earthen vessel containing four or five or more gallons of water. The lime should be slacked in another vessel and before mixing with the copper sulphate solution should be strained through coarse sacking or a fine sieve. The copper sulphate solution is now put into a barrel, if it has not already been dissolved in one, and enough water added to half fill the barrel; the slaked lime should be diluted in another barrel with enough water to make half a barrel of the lime mixture. Now pour the diluted copper sulphate solution into the diluted lime mixture and stir thoroughly when it is ready for use. The concentrated lime mixture should not be mixed with the concentrated copper sulphate solution, as, if this is done, an inferior mixture will result. If the barrels are kept covered so that there is no evaporation, stock solutions of the concentrated materials may be kept in separate barrels throughout the season. It is important to have the quantities of lime and copper sulphate as recommended, but in order to be sure that enough lime has been used and there is no danger of burning the foliage, let a drop of ferrocyanide of potassium solution (which can be obtained from a drugist) fall into the mixture when ready. If the latter turns reddish-brown, add more lime mixture until no change of color takes place.

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, 233 Woodbine Ave., Toronto.

E. L.:—1. A wrist-match with an illuminated face, a pocket flashlight, a pocket drinking cup or a solidified alcohol burner are useful gifts for a man who has left for a military training camp. 2. To disinfect a room thoroughly proceed as follows: If possible, mattresses and comforts should be taken off. Wet everything else well with a bicarbonate solution, boil and sun the blankets. Scrub the walls and ceiling, wash with bicarbonate; also the floor and woodwork, then scour with carbolic soapsuds. Fill cracks with fresh putty, shut the doors and windows tight and paste strips of paper around them. Close doors should be inside. Place three bricks in the middle of the floor, put an iron pan on them, into which a pound of flowers of sulphur has been placed, wet the sulphur with alcohol, stick in a short length of fuse, light it, then go out quickly, being careful to see that the door is also made tight. Leave undisturbed for twenty-four hours. The fumes will bleach any colors in the room. Dishes may be disinfected by boiling for 5 minutes.

H.R.:—1. Bureau drawers which stick can be made to slide easily by first rubbing over the edges with sandpaper, then soaping them. 2. A garment that has had an overdose of bluing may be whitened by boiling. 3. Brown sugar can be substituted for white in pickling. 4. Try benzine to remove the tar stains from your silk dress. 5. To make oatmeal gems, soak one cup oatmeal over night in one cup water. In the morning stir together one cup flour and two teaspoons baking powder; add a little salt. Mix meal and flour together, wet with sweet milk to a stiff batter, drop in gem pans and bake immediately. 6. It is said that before eating is a good time to sleep, but not immediately after a meal. 7. Yes, raw tomatoes are good for almost everybody who does not have ulcer of the stomach so that the use of the tomatoes gives him pain. If they do not cause pain one need not be afraid to eat them. 8. The diet of a child of two years should consist of fruits, grains, a moderate allowance of pure cream and cow's milk and vegetable purees. Purees of spinach and other "greens" are particularly good.

Eva:—1. It is said that freckles can be bleached out by applying the following mixture to the face, being careful to keep it away from the eyes: two ounces of buttermilk or sour milk, two drams of grated horseradish, six drams cornmeal. Spread the mixture between thin muslin and allow it to lie on the face at night. 2. The following method of cleaning black satin is given by some authorities: Boil three pounds of potatoes to a pulp in one quart of water, strain through a sieve and brush the satin with it on a board or table. The material must not be attractive conditions on the farm, and among the many suggestions the use of electricity should be considered. Electric power is a great convenience in the farm home, and saves much time to the farm help. The farm or country home situated within the area of an electric system of transmission or distribution is fortunate, but the vast majority must look to the small isolated plant. This alternative, however, is now much more promising than a few years ago. Many factories manufacture this type of equipment, the operation of the plants has been simplified and cost has been much reduced. These small plants may be advantageously used for many domestic purposes in addition to lighting, such as ironing, washing, toasting, pumping water, etc.; and also for the very important use of charging storage batteries.

SCORE OF BANDS AT "EX."

Innes, the Bandman, to Head Unusual by Good Musical Programme.

"Innes, the Band Man," who will head the musical programme this year at the Canadian National Exhibition, with his famous band of soloists, is an Englishman, a graduate of the London Conservatory of Music, and the Band of the Life Guards.

Later he went to Paris, where he attracted the attention of the late Pat Gilmore, the greatest of all American leaders. He accompanied Gilmore to America, and has proved a worthy successor to the old master. Innes' band was acclaimed the finest of the many fine bands heard at the Panama Pacific Exposition.

He it was, also, who planned and carried to success the remarkable series of festivals which made the Alaska Yukon Exposition, notable among all other exhibitions for its musical programmes. Innes will give two free concerts daily, and, in addition, there will be concerts by a score of other bands day and night.

Electric Plants For The Farm.

One of the recognized necessities in connection with our increased agricultural production is better and more

wrong, but folded down in cloths for three hours, then pressed on the wrong side.

Reader:—1. Bavaria is the largest state in the German Empire after Prussia. 2. "Sinn Fein" is Gaelic for "For Ourselves". 3. Inflamed eyelids should be bathed several times a day with a solution of half a teaspoonful of boric acid in a cup of hot water. 4. To test nutmegs, prick them with a needle; if they are good, the oil will spread around the puncture. 5. "Neither he nor I were there" should be "neither he nor I was there." 6. The 400th anniversary of the Reformation will be celebrated October 31.

Cook:—Perhaps the following notes may be of assistance: Salads and vegetables neutralize usual tendency of the body toward acidity, facilitate the elimination of waste products and poisons, and thus incidentally postpone the coming of old age. Salads cool and purify blood and freshen complexion, give jaws and teeth exercise necessary to development without which latter decay, facilitate digestion by encouraging mastication, promote oral hygiene by leaving mouth and teeth physiologically clean at end of meal, counteract tendency to anaemia, scurvy, gout, rheumatism, are rich in lime, so necessary to bone-building; also valuable laxative. Green vegetables are particularly valuable in cases of anaemia and of other diseases which are ascribed to diet deficiencies.

Vegetables are deteriorated by the loss of their salts in boiling water. Not only do potatoes lose much when peeled, but carrots, as usually cooked, lose nearly 20 per cent. of their total food material when cut into small pieces. Cabbage thus treated loses about one-third of its total food materials, especially its ash or mineral matter. On the average 30 per cent. of the total salts is extracted when vegetables are boiled in water for thirty minutes. When, on the contrary, they are steamed they lose only 10 per cent. Hence vegetables should be either steamed or stewed in a casserole or covered earthenware vessel, so popular in France. If boiled the water should be saved for soup or sauces.

Beetroots, carrots and parsnips contain a large amount of sugar, and when served at a meal there is less of a desire for excessively sweet desserts. Cabbage, as usually cooked, is not digested for some five hours, but eaten uncooked in salad it takes less than three.

Salads, like vegetables and fruits, have little body-building and tissue repairing material, hence require to be supplemented by foods rich in these and in fat, such as eggs, meat, cheese (grated by choice or the cottage variety) and nuts.

Two-thirds of the population of Denmark are engaged in agricultural pursuits or in handling agricultural products. A rancher from Islay, Alberta, recently returned from Iowa, where he purchased thirty head of pure bred Aberdeen Angus cattle, paying as high as \$1,000 each for some of the cows.

Health

First Aid to Heat Victims.

In order to give proper aid to persons overcome by the heat, it is first essential to distinguish between sunstroke and heat exhaustion, which are the two forms of symptom groups presented by excessive heat and high humidity.

In the case of sunstroke the patient first complains of a tired feeling, accompanied by a sense of oppression in the head. Dizziness followed by unconsciousness may soon follow. The face is deeply flushed, the breathing labored and the skin is dry and hot. The pulse is irregular and weak.

The symptoms of heat exhaustion resemble very much those of sunstroke at the onset. The skin in this case is cold and clammy and the body temperature is below normal. The patient may succumb quickly if proper treatment is not administered.

The first-aid treatment rendered to a heat victim should be to remove him to a cool, shady place and to loosen his clothing. One should next ascertain whether the surface of the skin is hot or cold. If the former, the patient should be sponged immediately with ice water. When removed to a more favorable place indoors, a plunge in a tub of cold water should be given. Ice cold cloths or an ice cap can be applied to the head. As soon as consciousness is regained, cold drinks may be given freely. The patient should be kept in a quiet and cool room.

Heat exhaustion, on the other hand, calls for rapid stimulation. By touching the skin of the patient and finding it cold and moist, we can readily come to the conclusion as to treatment. The patient should be covered immediately with blankets and hot water bottles applied to the feet. Hot drinks, such as tea, coffee or lemonade, should be administered if the patient is conscious. Aromatic spirits of ammonia placed on a bit of cotton may be held near the nostrils of the patient.

Every effort should be made to have the patient sent to a hospital at post-haste speed, where the facilities for treatment are the best. Outdoor laborers should wear proper headgear to protect the head from the sun's rays. A small luncheon is preferred on the hot days. Alcoholic beverages increase the likelihood of sunstroke. Persons who experience a sense of severe exhaustion during the hot spells should moderate their work, wash their hands and face with cold water at frequent intervals and lie down in a cool room from time to time during the afternoon when the temperature is at its highest level. It is hardly necessary to emphasize the use of light, loose clothing. Dark clothes are actually warmer than light-colored garments.

Cheaper Poultry Feed.

On account of the scarcity and high price of feed the poultry industry of this country is threatened by the prospect of the wholesale slaughter of laying stock and a serious falling off in the number of pullets to be matured.

The necessity for retaining, for milling every possible bushel of wheat suitable for that purpose need not be emphasized. To provide poultrymen with feed for rearing their young stock without unnecessarily lowering the supplies of milling wheat, the federal Department of Agriculture has requested millers throughout Canada to put on the market the cracked and shrunken wheat removed from grain before it is milled.

In addition to small and broken wheat these cleanings consist chiefly of the seeds of wild buckwheat, a near relative of the cultivated buckwheat. The Poultry Division of the Central Experimental Farm has used wild buckwheat in feeding experiments and reports it to be a highly satisfactory poultry feed and has ordered two cars of buckwheat screenings for the Central and Branch Experimental Farms from the Canadian Government elevators at Fort William. Fowls used to good grain do not take to it at first but when they become accustomed to it they eat it readily and do well on it.

The mill cleanings from local flour mills also contain traces of many other weed seeds, including several kinds of mustards. These, however, would not as a rule amount to more than two or three per cent. of the cleanings in the case of the standard grades of Western wheat. This material is specially recommended for backyard, suburban and professional poultrymen. On farms the cleanings from yards and poultry houses where it has been fed would have to be disposed of so as not to disseminate noxious weeds in grain fields. Those interested in obtaining this class of feed should immediately arrange with local mills or feed dealers for a supply. The mills cannot be expected to keep this material for poultry unless it is demanded for that purpose and that rests with the poultrymen themselves.

He'd Be Too Polite.

"What dirty hands you have John," said his teacher. "What would you say if I came to school that way?" "I wouldn't say nothin'," replied John. "Id be too polite."

