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. When writing kindly mention this paper. As space is limited it is advisable where immediate reply is necessary that a stamped and addressed envelope be enclosed with the question, when the answer will be mailed direct.

A. M. P.:—What is the best method of fertilizing an orchard?

Answer.—In fertilizing an orchard there are two things to keep in mind. One is that the organic matter of the soil must be maintained, and the other is that the plantfood balance should be so established that the trees make a vigorous wood growth, but not an excessive growth. Latest investigations show that on most healthy trees the leaves retain a vigorous green color until late in the fall and the fruit makes normal maximum growth. To obtain the results indicated it is well to resort to cover cropping so that green manure may be turned under as soon as the crop is harvested, and thereby add considerable organic matter to the soil. Excellent results have been obtained by applying about 10 lbs. of fertilizer to each tree, scattering the fertilizer within a circumference of a circle which has about the same diameter as the spread of the tree. Scatter the fertilizer toward the outer edge of the circle rather than in near the foot of the tree, since the tiny vigorous feeding roots are toward the outer expanse of the root system. Fertilizers carrying 3 to 4% ammonia, 10 to 12% available phosphoric acid, as well as 1 to 2% potash if obtainable, give excellent results. As to the time of application of fertilizers, customs differ, but good results are obtained from applying the fertilizer at the time of first cultivation in spring.

R. M.:—Can you tell me whether I can start new grape vines by burying the ends of the runners or not?

Answer:—New grape vines are not started by burying the ends of the runners in the soil. The common practice is to take cuttings from grapes at the time of pruning. In the spring place these in the soil in a row, when they will take root and start new vine growth. One of the best treatises available on Grape Culture in Ontario is O.A.C. Bulletin No. 237 which you would do well to obtain.

P. J.:—Is spring or autumn the best time to plant raspberry canes?

Answer:—Raspberry canes may be planted in fall or spring. Speaking generally the spring planting gives better results. The soil that is used for raspberry planting should be well prepared and if possible should have been occupied by a cultivated crop the year previous to the planting of raspberry canes. The success of the crop will be greatly assisted if the ground has been thoroughly fertilized for the cultivated crop. If not, in the spring you will do well to drill in at least 300 or 400 pounds of a fertilizer analyzing 2 to 3% ammonia and 8 to 10% phosphoric acid, at the time you are preparing the seedbed for the canes. Such plantfood will be readily available for the young roots when they start growth, and should greatly assist in obtaining satisfactory wood growth and strengthening the crop for its first winter.

E. B.:—I have an old orchard that has been badly neglected. Some large limbs have been sawed off, and nothing put over the place. This fall some squirrels started to gnaw holes in those places and have eaten into the heart of the trees. Will you please advise me how to fix those places? Also, some of the trees seem to have a rotten heart.

Answer:—I assume from what you say of your trees that the hearts of the fruit trees are considerably decayed. If this is incorrect however, I would advise you to cut out the decayed wood until you come to strong healthy wood, paint over the inner side with ordinary paint or coal tar and then fill up the spaces with a rich mixture of cement. Unless the trees are moderately healthy they will rarely pay for this work and better results can be obtained from grafting trees below the decayed portion and cutting off the dead and dying wood as soon as the grafts have made sufficient start.

R. B.:—I have three acres I wish to put in potatoes next spring. It had oats this year. What is the best way to prepare the soil and the best variety to plant?

Answer:—Your question is difficult to answer since you do not give your location nor the general character of your soil. If it is of a medium loam type, I would advise you to have the patch fall-plowed fairly deeply. At the time of fall plowing, work in all the leaves and strawy manure you can get hold of. Leave the land in the rough. In the spring work it down smooth and mellow by disking and harrowing. When you strike out the drills for the potatoes apply fertilizer down the drills at the rate of about 600 pounds to the acre, using a mixture analyzing about 3% ammonia, 8% phosphoric acid and 2 or 3% potash. Follow the application by pulling in some soil on top of the fertilizer then drop the potato pieces on the soil and cover as usual. Be sure to treat the potatoes to prevent scab, before cutting them. You can do this by putting them in a mixture of formalin and water, one pint of formalin to 20 gallons of water. Leave them immersed for about 20 minutes. They will quickly dry off when you take them out and will soon be ready for cutting and planting. As soon as the crop is up about 4 inches, and at periods of about a week or ten days thereafter, spray them with Bordeaux mixture which consists of 5 lbs. copper sulphate, 5 lbs. of lime, 40 gallons water. Dissolve the lime and copper sulphate separate and dilute with water, using it immediately. This spraying controls potato blight. Of course use enough Paris Green to keep potato beetles in check. One of the best varieties of early potatoes to grow is Irish Cobbler. For late variety, there are few that excel Green Mountain or the Carman No. 2.

Reader:—What kind of soil is best adapted for wheat? What is the best way to prepare the land?

Answer:—Wheat thrives on a medium clay loam soil. It is a medium deep rooted plant, requiring fairly substantial plantfood in order to develop a good growth of strong straw and a satisfactory filling of the heads. For spring wheat, if possible have the ground fall plowed at a medium depth. In spring, work the seedbed down by alternate disking and harrowing also rolling if the soil tends to be lumpy. At the time of drilling the wheat, apply 200 to 300 pounds of fertilizer analyzing about 2% ammonia and 10% phosphoric acid. The best application of fertilizer is obtained through the fertilizer dropping attachment of the grain drill. Such a drill seeds the wheat at the same time that it applies the fertilizer.

MULCHING STRAWBERRY PLANTS

Mulching strawberry plants in the fall is necessary in this climate. The prices at which strawberries have been selling for the past few years have shown the grower that he can well afford to do everything possible to his plants to increase their bearing. The mulching in the fall is one of these points to increase the bearing power of the plants, because it protects them during the cold winter months and keeps the berries from coming in contact with the ground and thus decaying. The four main objects for mulching the strawberry plants are: (1) prevents winter injury to the plants by freezing and thawing; (2) maintains a low soil temperature and thus retards growth during the cold weather; (3) keeps fruit clean by preventing its coming into contact with the soil, and (4) increases the yields of the strawberry plants.

The mulch may be provided by the application of any one of several materials if free from weed seeds and of such a nature as not to pack firmly. Wheat straw probably is the best, but any kind of grain straw will be sufficient. In some sections marsh hay has been used and it is very satisfactory as a winter mulch. Three or four tons of straw per acre should be used and it should be spread over the strawberries to a depth of about two inches when packed.

This mulch should be applied in the fall as soon as the ground is frozen so a cart or wagon is easily held up. Some growers put the mulch on before the ground is well frozen, but it will be more successful to put the mulch on after the ground is well frozen. Then in the spring about the time growth of the plant starts, all the mulch should be raked off between the rows except a very little which is left under the plants to keep the berries off from the ground. By all means mulch your strawberry plants this fall and you will find the mulch is one of your best profit makers.—A.P.

Horse Sense

Oats in comparison with any of the grain rations is the best single ration for mature horses, colts, or mules. There is no other grain so safe to feed and from which such satisfactory results are obtained. It is absolutely necessary that the oats be free from smut and be clean to obtain the best results in feeding to colts. Musty oats are dangerous feed for colts.

Here is a good oats ration for colts after weaning: Up to one year of age, from two to three pounds a day; from one to two years, four to five pounds a day; from two to three years, seven to eight pounds daily.

The best way to feed oats is in the whole grain. The expenes of crushing is not justified unless colts suffer in teething, in which case it is advisable to feed steamed crushed oats, which are very appetizing. It is a good plan to feed plenty of roughness to growing colts.

The feeding of concentrated feeds to excess is discouraged, as it is important that the digestive tract be developed by distending it during the growing period.

Ungainly, large-barreled colts may annoy the feeder, but this condition always disappears with maturity. Proper feedinig of colts should always be accompanied with plenty of exercise out of doors. In no way can a colt be ruined so easily and surely as by a liberal feeding with lack of exercise. Close confinement and the rearing of good colts do not go together.

The Sunday School

INTERNATIONAL LESSON NOVEMBER 10.

Lesson VI. Jacob's Deception—Gensis 27. 18-29. Golden Text, Eph. 4. 25.

Verse 18. Who art thou, my son?—Isaac seems to have been totally blind, the sense of hearing also probably dull; touch and taste still acute.

19. I am Esau, thy first-born—The utter deliberation of this lie shocks the Christian conscience exceedingly. Duplicity seems to be a besetting sin of Orientals. Some allowance must be made for the low state of primitive morality, but the record nowhere countenances the lie.

20. How is it that thou hast found it so quickly, my son?—Isaac had doubts concerning his identity to start with, but they were intensified by the speed with which the venison had been killed and prepared, on the face of it an improbable thing. Because Jehovah thy God sent me good speed—Jacob met the objection with the pious sounding observation that the Lord had prospered him in his hunt. He was a master of religious sentiment.

21. Isaac said unto Jacob, Come near—He still doubted. This pathetic struggle with intrigue is wonderfully worked out in the narrative. He hoped to find out the truth by the sense of touch. Rebekah had put the shins of kids upon the hands and neck of Jacob. It is difficult to see how this strategem could succeed unless Isaac's sense of touch was also dull.

25. I will eat my son's venison—Skillfully prepared with spices and rich seasoning, the flesh of a young goat might pass for venison.

27. He smelled the smell of his raiment—The garments were the official robes of the first born, probably kept in a special place with aromatic herbs to sweeten and preserve them. Isaac was familiar with the smell of the garments and was finally convinced of the identity of his son.

28. God give thee of the dew of heaven, etc.—It is said that the fall of dew is copious and of great value in Palestine, especially in the summer months when the rainfall is scarce. Temporal blessings occupy a large place in the Jewish conceptions of the favor of God. So the first part of the blessing refers to the gifts of nature. In this Esau also shared (verse 39), but the possession of the land was in a peculiar sense the heritage of Jacob. Such was the promise made to Abraham.

29. Let peoples serve thee—The second part of the blessing relates to the political and national future of the descendants of Jacob. It is the supremacy of the Israelites over surrounding tribes, whether kindred or alien. Cursed be every one that curseth thee—Taken literally these words do not harmonize with the spirit of Christ. The form of the expression is according to the ancient Hebrew point of view, but the essential meaning is true. The purpose of God to the human race through the descendants of Jacob could not be defeated. In them all the families of the earth would be blessed. Israel stood for righteousness, and all who stood for righteousness would be blessed, but all who arrayed themselves against the kingdom of God would be crushed in the end. It is simply the doctrine that wrong and wrongdoers cannot go unpunished. It may be that God's judgments are delayed sometimes, but sooner or later cruelty, barbarism, injustice, and everything that turns against God will be overwhelmed. The curse is upon evil, and there is no escape from the curse except to cease to do evil.

Distribution of Seed Grain From the Dominion Experimental Farms, 1918-19.

By instructions of the Hon. Minister of Agriculture, a free distribution of superior sorts of grain will be made during the coming winter and spring to Canadian farmers.

The samples for distribution will consist of spring wheat (about 5 lb.), white oats (about 4 lb.), barley (about 5 lb.), and field peas (about 5 lb.). These will be sent out, free, by mail, from the Central Experimental farm, Ottawa by the Dominion Cerealist, who will furnish the necessary application forms.

Only one sample can be sent to each applicant. As the supply of seed is limited, farmers are advised to apply very early.

J. H. Grisdale,
Director, Dominion Experimental Farms.

A handy pocket for storing paper bags, strings, etc., can be made by tacking a square of stout material on the pantry door.

YOUR PROBLEMS

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.

Bride's Mother:—A plain linen tablecloth, well laundered, would do as well as a lace-trimmed one. Place a broad, shallow pan in the centre, and fill it with dahlias or chrysanthemums. The candle-shades and bows made of crepe paper should match in color. Small cakes are placed in glass baskets. The long ones are tied together like a bundle of fagots and laid on plates. Small dishes for olives, salted nuts and bonbons are also placed upon the table. The refreshments should be served from the kitchen, placing a croquette, salad and a roll, together with a fork, on each plate. They are carried into the dining-room and handed to the guests. When this course is finished the plates should be collected and others containing ice-cream, several small cakes and a spoon should be sent in. Olives should be passed during the first course, the nuts at any time and the bonbons last. A simpler way is to place a couple of olives and a small paper cup containing the nuts on the first plate, and a large "after dinner" mint on the plate with the ice-cream. Coffee is poured in the kitchen and served last, a tray holding cream and sugar being passed with it. The wedding cake may find a place on the sideboard; the bride cuts the first slice, the cake is then removed to a convenient place where any competent person cuts it in pieces suitable for serving.

Hostess:—Animal blind man's buff requires from ten to thirty players. One player is blindfolded and stands in the centre of a circle with a wand, stick or cane in his hand. The other players dance around with him in a circle until he taps three times on the floor with his cane, when they must stand still. The blind man thereupon points his cane at some player, who must take the opposite end of the cane in his hand. The blind man then commands him to make a noise like some animal, such as a cat, dog, cow, sheep, lion, donkey, duck, parrot. From this the blind man tries to guess the name of the player. If the guess be correct, they change places. If wrong, the game is repeated with the same blind man. The players should try to disguise their natural tones as much as possible when imitating the animals, and much sport may be had through the imitation. Players may also disguise their height, to deceive the blind man, by bending their knees to seem shorter, or rising on their toes to seem taller. Where there are thirty or more players, two blind men should be placed in the centre. There is much sport in this game for either children or adults or both together.

Reader:—1. The bride's mother rides to the church with any of her other children or relatives who are not in the bridal party. This carriage leads the procession. The bride and her father come last. 2. To salt almonds, cover them with boiling water and let stand, pushed back on the stove for ten minutes. Then slip off the skins and dry for several hours or overnight. Melt a tablespoonful of butter for a cupful of shelled almonds. Mix them well in this with a teaspoonful of salt. Spread out in a pan and let bake in a slow oven for fifteen or twenty minutes. Stir occasionally.

Westerner:—New Brunswick is in the van in adopting a plan for voluntary home rations. Clergymen, school teachers, women's organizations and every person having influence to frame public opinion or to lead a community movement, have been enlisted to help. The ration plan proposed by the old Loyalist province has been approved by the Canada Food Board and a similar scheme will be carried into effect in the other provinces when the time is ripe.

M. M. M.:—1. With care, hyacinths may be grown in water from the ordinary hyacinth bulb. Fill the glass with water so that the bottom or root part of the bulb is covered; then place it in a cool, dark room or closet, and leave it there until the roots touch the bottom of the glass. Remove the hyacinth and glass to the light, but place a paper cone over the top for about two weeks in order to cause a rapid upward growth of the spike. Change the water about once a week. Better results are also secured if a few pieces of charcoal are placed in the water. Glasses for growing hyacinths in water from bulbs are made especially for the purpose. 2. A khaki toilet set makes an excellent Christmas gift for the Boy Scout. It is fitted up with military brush, towel, soap, toothbrush, etc. and has a strap that can be attached to a belt. This is very practical for the scout's camping trip.

Poultry

Charcoal helps to keep the flock in healthful condtion at all seasons of the year. During the summer and fall much of the charcoal can be supplied to the birds by burning stumps, the prunings from an orchard or scrap of various kinds, but when the birds are in the laying houses they should have a supply of clean dry charcoal always available. The charcoal absorbs acids and gases and helps to keep the bird in condition when heavy feeding might bring on indigestion. Some poultrymen place the stove ashes in the poultry hoppers after they are cool and free from live coals and from these ashes the birds seem to get plenty of bits of charcoal to keep them in good condition.

In the gizzard of the fowl the feed is prepared by a grinding process for further digestion. If grit is absent the gizzard cannot function properly. Many farm flocks do not receive a sufficient supply of grit. They cannot use their food to the best advantage and the health of the flock and the egg production will drop. Hens crave grit and it should be constantly supplied them. I remember seeing a flock which had been in winter quarters for several months without grit in hoppers. They had cleaned up gritty substances from the floor and were becoming decidedly worried for lack of "teeth." We found an old broken vinegar jug in the scrap pile and pounded it up. In less than two minutes the flock had eaten the jug and they picked it up more eagerly than they would have eaten the finest quality of corn or wheat. The hen's instinct is all right even if her brain appears to be somewhat lacking.

Calves dropped in the fall are apt to do much better when turned on grass in the spring than those that come along later in the winter.

Azoturia rarely appears among horses at pasture or among those doing regular work; but almost invariably during exericse after a period of idleness on full feed which has succeeded a previous period of work.

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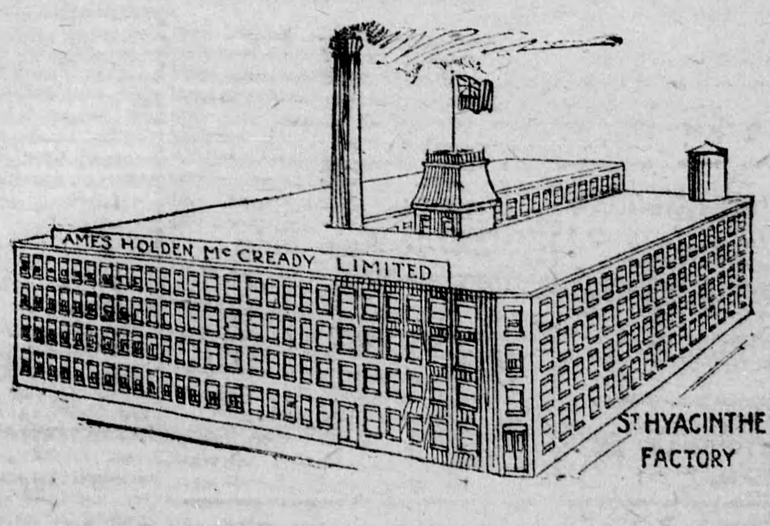

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