# Farm Crop Queries

**Conducted by Professor Henry G. Bell**

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.**

**M. L. F.:—Can you give me any information about the planting and cultivation of ginseng and Dutch sets? When could I produce the seed for the former?**

Answer:—The growing of ginseng is, to some extent, an art. The first requisite is fairly rich medium loam soil, which has been prepared with great care. The seeds are sown in a special seed-bed and are transplanted in the autumn. As a matter of fact the original seed is sown in the autumn, and is ready for transplanting the following autumn. The plants take about two years from the seed stage till they are ready to set in the permanent bed. The soil of this bed should contain a lot of humus and an abundance of available plantfood. None but plants having strong, healthy roots should be transferred. Great care should be taken to avoid injuring the plants in transplanting. The buds toward the top of the roots should be well covered.

Subsequent care consists of keeping the beds clean of weeds and harvesting the seed from the plants after the crops ripen. When the plants have reached an age of about six years, the roots are ready for harvesting. After carefully washing and drying, the product is ready for marketing.

Dutch sets may be grown in any rich soil. The soil should be plowed early in spring, and worked into a fine mould. In sowing onions for sets, 60 to 80 pounds of seed to the acre should be planted as soon as the frost is out of the ground. For this purpose, in preparing the soil it should be thoroughly fertilized, using as high as 1,000 pounds of a fertilizer containing 3 to 5 per cent. available ammonia, 8 to 12 per cent. phosphoric acid and all the potash you can buy at the present time. Use the spreader on the drill, so as to plant in matted rows two to three inches wide. This system insures small sets and large quantities of them. Pack the soil down on the seed and cover it just deep enough to insure a quick germination. This compacting of the seed-bed is equally important for seed onions and sets.

Reputable seedsmen usually carry ginseng seed.

**C. K.:—What is the best variety of potato for family use? I am a young farmer, can you give me some information regarding the best rotation of crops?**

Answer:—Good varieties of potatoes for home use are: Empire State, Rose's New Invincible, Rural New Yorker No. 2, White Elephant, Green Mountain, Davies' Warrior. Early varieties are, Irish Cobbler, Early Ohio and Stray Beauty.

The large potato growers of New Brunswick and Maine, usually plow up a clover or grass sod and follow it with potatoes. For this purpose the shortest rotation that could be used would be a three-year rotation, grain seeded to clover, followed by potatoes. The fertilizer is always applied to the potato crop, which receives as a rule, from 800 to 1500 pounds of high-grade fertilizer per acre.

**L. S.:—I would like to plant some soy beans with my silage corn. How is the best way to plant them, and what kind would you plant? Are cowpeas a success in Ontario?**

Answer:—Cowpeas are not a success in Ontario. They are indigenous to the southern states. Soy beans, however, do well under normal Ontario conditions. Best yields can be obtained by planting them in drill rows and giving them approximately the same care as ordinary field beans. However, they can be seeded among the corn crop by scattering a bushel and a half to two bushels of seed per acre between the corn rows just before the last cultivation. Thorough cultivation, not too deep, covers these seeds so that they sprout and make considerable growth. However, on account of the shade from the corn plants, the beans do not form nearly as many pods as do those that are grown in rows under normal field conditions. The best varieties, as a result of six years' tests at Ontario Agricultural College, are O.A.C. No. 81, Buckshot No. 17, 251. Other good varieties are Early Yellow, Ito San, and Brown. When planting the soy beans among the corn, it would be well to scatter some fertilizer up the corn rows, say 150 to 200 pounds per acre, of fertilizer carrying 2 per cent. ammonia and approximately 10 or 12 per cent. available phosphoric acid. This available plantfood will give the beans a rapid vigorous start, and will assist the corn.

# THE SCHOOLGROUND'S NEED FOR TREES

**Giant Buildings and Barren Surroundings the Rule—How British Columbia is Helping the Children.**

In common with the lack of interest in shade trees on the part of most municipal councils, one encounters throughout the Dominion an equal lack of interest on the part of school boards and departments of education in the encouragement of tree planting about school grounds, says the Canadian Forestry Journal. This, of course, is an invitation to propagandist work which would well repay the effort. Within the knowledge of most of our readers are beautiful school buildings, erected with every regard for internal completeness, yet displaying in the sehool grounds the barren ugliness of a sand dune. Nearly all schools are surrounded by plenty of ground, capable of growing beautiful trees at trifling cost, yet there would seem a remarkable lack of initiative in leaving such grounds for ten and twenty years without sign of a tree.

British Columbia has been conducting tree planting work on school grounds in such a way as to commend itself to other provinces. The following article by J. W. Gibson, M.A., Director of Elementary Agricultural Education at Victoria, B.C. will be found instructive:

"In 1914 the Department of Education for British Columbia adopted a policy whereby school boards wishing to undertake a scheme of school grounds improvement would receive financial assistance as well as free advice and a supply of ornamental trees and shrubs. For several years the Provincial Government had been supplying ornamentals for the beautifying of its own public grounds in various parts of the province, and for this purpose had established a large nursery in connection with the grounds of the Mental Diseases Hospital at Essondale, adjoining the Government farm. As in other places so it was found here that this horticultural work and the new and healthful interests associating with it had a most beneficial effect on the men engaging in it. On the other hand, it made possible the production of large quantities of valuable trees and ornamental shrubs at a very low cost.

"In the fall of 1914 it was found that the supply of nursery stock on hand was more than sufficient to meet the needs of grounds in connection with provincial public buildings, and it was decided to make donations to school boards entering into an agreement with the Department of Education. This agreement provided for the complete planning, grading, draining, surfacing, and planting of the school grounds, and was included as part of the work of the Director of Elementary Agricultural Education. In two years in the neighborhood of sixty school grounds have been planned and most of the improvements carried out, including the planting of native trees as well as many beautiful horticultural varieties supplied from the schools' department of the Provincial Government nurseries.

"As it takes from five to ten years to raise most varieties of trees to a size fit for permanent planting, a movement was made in the spring of 1915 to provide for larger future demands by starting many of the best varieties of Canadian trees from seed, and also in 1916 by purchasing at a very low cost several thousand three and four-year seedlings which were set in the nursery and will be available for distribution from year to year whilst the younger seedlings are coming on.

"It is the intention of the Department to give more attention in future to the propagation of the best trees and shrubs which are native to British Columbia, not only in the provincial schools' nursery at Essondale, but also in other parts of the province. To this end a campaign has been started in the schools of the province with a view to interesting the teachers and pupils in the flora of their own respective districts. Teachers conducting school gardens are asked to include in each garden a forestry plot or bed for the propagation of native species from seeds and cuttings. During the past year some schools have done excellent work along this line. In this way it is hoped that the schools of the province will soon take on not only a much improved appearance, but also a truly national character, both as to teaching and general external setting.

"We also advocate that cities and municipalities having several schools to provide for should establish small nurseries for the supplying of suitable trees, shrubs and perennial flowers in quantity. Such a school nursery in a city or rural municipality might be directly connected with one of the larger schools. In this way the pupils of such central school would be able to do at least part of the work and would have no small advantage from an educational standpoint as a result of this. Already a move has been made along this line in connection with one of the schools in Vancouver City, and also in one of the schools in the municipality of South Vancouver.

"Most of the provinces in Canada have adopted the policy of supplying free to schools many of the textbooks used by the pupils. It is our intention in British Columbia also to supply in a similar manner that which will make school life more pleasant and less monotonous—good playgrounds, carefully planned, well equipped and liberally furnished with our best Canadian trees and flowering shrubs. Our provincial schools nursery helps to make this possible."

# 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.**

Mary:—You don't have to give up all idea of making marmalade but have you heard anything about the sugarless breakfast marmalades? As this is the season for making this preserve, why not give them a trial? Let the fruits supply the sugar. To one cup of ground seeded raisins add one cup chopped apples and one cup water. Cook until thickened. A little lemon juice and grated rind gives an agreeable flavoring. Cook dried fruit, such as apricots, pears, peaches or prunes may be used in combination with the ground raisins in any proportion desired and three fruits may be combined—such as apricots, apples and raisins. Catsup added to the marmalades makes a simple fruit relish to serve with cold meat. Prune-apricot butter is a simple preserve and very wholesome. Wash one pound prunes and one-half pound apricots; soak over night; stew until very soft in same water. Rub through colander, return to saucepan and cook slowly until thick, being careful that it does not burn. Do not add sugar. Try Scotch orange marmalade, too. It's excellent. To two pints ground oranges (pulp, rind and juice) add two pounds of honey and cook to a thick marmalade.

Mrs. Thrifty:—Whatever wou do, Mrs. Thrifty, don't let your children waste one scrap of bread. Impress upon them that they must not throw away crusts when having lunch at school. Tell them what it means in such a simple way that they will all realize that they must help. A slice of bread measures approximately three inches by two-and-a-half and its thickness is half-an-inch. It is wasted once a day by 8,000,000 people in Canada. If all the slices wasted in one week were collected they would amount to 1,750 tons of good bread wasted, or seventeen shiploads wasted per annum by the people of Canada. It is a serious responsibility when you look at it in this light. Everyone should be eating more judiciously now; most people could get along very well with less than they are accustomed to have. Teach your children to clean their plates, to chew well, to give up sugar candy and to waste nothing. If they feel that they are helping the soldiers they will take pride in their small sacrifices.

Mrs. R. S. A.:—Your question as to whether England will soon be on war rations is answered in a recent statement made by Baron Rhondda. The following are his words: "The food position in this country, and I understand in France also, can without exaggeration be described as critical and anxious. I am now unable to avoid compulsory regulation. I fear it will have to come with long queues of people waiting in the severe weather in practically every town in England for the daily necessaries of life." There is no mistaking that message, is there, Mrs. R. S. A.? When you ask if the same will apply to Canada you are putting a pretty big question. Certainly this country will have to speed up her production of substitutes if this is to be avoided and a heavy responsibility to do, our utmost, whether on the farm or in city cultivation, rests upon all of us.

The Housewife:—"What can I do to help?" you ask. Listen to what Mr. Hanna has said: "If you are a housewife, you can study the situation in so far as it affects your own home. You can economize in the use of wheat, beef, bacon, sugar and fats, and use substitutes for wheat and meat. You can take a greater interest in your marketing. You can encourage the men folk to cultivate and to do their utmost in any campaign for increased food production." And to the farmer in particular he said: "You can put all your effort into the vital work of production. The demands on you are great and you have your difficulties; make them known to business men and others in your locality so that they will feel their responsibility and jointly you can work for greater production. Get in touch with your Provincial and Dominion Departments of Agriculture. Make the best use of the information and experience of others. Plan well ahead."

Betty Brown:—If you live on the farm and want to do something really useful this year why not go in for poultry-raising, gardening, or even keeping a pig? Perhaps the latter idea doesn't appeal to you much but you certainly cannot do anything more useful. Numbers of women have found poultry-raising pleasurable and profitable. And of course the man or the woman who grows potatoes and other vegetables is doing invaluable work in this time of necessity.

# Poultry

January, February and March are the months that demand efficient poultry house ventilation if the stock is to be healthy and if egg production is to be kept at a maximum.

Proof of insufficient ventilation usually is found in damp or frosted walls, damp litter, close or impure air and the presence of colds in the flock, with consequent low winter egg production. The body of the hen constantly gives off moisture, and this accumulates unless there is enough movement of the air to carry it away. Dampness fosters colds, and when a cold is contracted the body is too weak to resist the attack of a contagious disease such as roup.

The house should at no time be tightly closed. The exercise of judgment and a few trials will show how much to leave the windows open at night. Windows should be removable so that they can be taken out during the day if it is not storming. Experience indicates that the birds will not suffer from the cold if they are not in a draught, if they are kept working and if they are not overfed.

Plenty of air may best be had by tilting windows in at the top, as this will not let in the rain or put draughts directly on the floor. There should be a wide board at each edge of the window to keep the rain out; a strip of wood, sash plug or nail on this strip will hold the window at any desired angle. Both upper and lower sash, where there are two, should be arranged in this way to get the best circulation. In a pen ten feet square three or four standard sashes should be so tilted.

Cloth curtains are not recommended, because they soon become clogged with dirt and are then useless. Where they are provided for a good grade of cheese cloth should be kept clean by frequent brushing.

# Hogs

Success in rearing young pigs depends largely on the comfort of the quarters provided for them. Exposure in cold weather will take dollars off their value in spite of the best of feeding.

When hogs are ready for market they yield more meat proportionately than any other animal. They return more profit than other animals because they utilize the feed more thoroughly. One bushel of corn without supplement will yield 10 pounds of pork under ordinary farm conditions, and these 10 pounds of pork will feed more human beings than the same amount of any other meat. Hogs are developed primarily to consume concentrated foods.

The man who stays with the hogs year in and year out will prosper in the hog business. This will give him a most intelligent system on which to build a live-stock industry. The hog will be the market for his farm produce.

He can buy concentrates required and make necessary supplements. He can use what skim milk and buttermilk he has on the farm and purchase tankage, meat meal, and linseed meal. Corn and skim milk are almost a complete ration. No matter what ration is used, hogs will do better if a little skim milk is added. If milk is not available, buttermilk, provided it is not adulterated, may be used.

# Horse Sense

More workhorses are sick on Monday than on any other day in the week. This is good evidence that something is often wrong with the method of feeding on Sunday. One form of illness to which workhorses are subject occurs so often just following the Sunday rest that it is popularly known as the Monday morning sickness This trouble is noted most frequently in those cases where horses are working hard, require heavy feeding, and are given their regular feed on Sunday while they remain idle in the barn.

Another common disorder among workhorses on Sunday and Monday is colic. In most cases it is caused by heavy feeding while idle, but it may be caused by a cold, sloppy bran mash which is a sure trouble maker. A warm steamed bran mash to which a liberal amount of salt has been added is, on the other hand, beneficial.

When the horse is working hard, his Sunday feed should be of the same kind and quality which he receives on other days, but the grain portion of the ration should be reduced one half.

# Bedtime Stories

**The Unhappy Birds.**

Early one winter morning, after a stormy night, a crow woke up and shook from his feathers the fine snow that had sifted through the pine branches that sheltered his roost in the big forest. It was the first heavy storm of the winter, and it put the crow into an ill humor, because he knew that the snow would make it harder for him to find food. For a long time he sat there in the pine tree, scolding softly to himself. Then he stretched his wings and with a loud "Caw! caw!" flew away out of the forest.

First he went to a field where a farmer had left some corn uncut. He had feasted there on an ear of corn the day before, but now the snow was so deep that he could not find a single kernel. Then he flew to other places where he had sometimes found food; but not a morsel could he find, until at last he snatched a crust from some garbage that a housewife had left at her back door. It was little enough for a hungry crow, but it was the best that he could do, and at last he flew back to the forest. There he perched on the limb of a dead tree and fluffed out his feathers and tucked his head under his wing.

But before the crow fell asleep he heard a shrill cry, "Dee! dee! dee!" from a tree near by.

It was a little chickadee, and it was so noisy that the crow became more cross than before.

"What do you mean by bothering me, when I'm trying to sleep, so that I may forget my hunger?" asked the crow in harsh tones.

"I did not mean to bother you," said the chickadee, "but I am very unhappy because I have eaten so much that I can eat no more. I have eaten fat white grubs from the stump of an old pine, and I cannot hold another one!"

"You ought to be happy, then," said the crow. "I am the unhappy one, because I cannot get enough to eat. I wish that I were as small as you are, so that I could be satisfied with a few little grubs, Caw! caw!"

"And I wish that I were as large as you are, so that I could hold more grubs. Dee! dee! dee!"

And there they sat on the bare branches in the storm and scolded all day long—"Caw! caw!" and "Dee! dee! dee!"—and argued which was the more unhappy and which had the harder lot in life.

So you see that the crow and the chickadee are much like some persons. If they are big, they want to be small; and if they are small, they want to be big. And whether they have too much or too little, they manage to be unhappy over it, and each feels sure that everyone else has a happier lot in life.

**A Co-operative Home.**

When school is in session it is a good plan to divide a certain portion of the housework among the children in such a way that the morning's work will be finished before schooltime, leaving the mother's day free for other duties. By early rising and careful planning this can be done in homes where there are several children and where too often they hurry through breakfast just in time to get off to school, leaving the mother all the work to do.

It is good training for a child to have some light tasks to be performed at a regular time. It gives him a feeling of responsibility and increases his self-respect. Make out a list of the duties of each child and try to give each one the share that he likes and can do well. Then, the task once assigned, it should be that child's business, even if at times it seems unpleasant and inconvenient. There is no doubt that the faithful doing of a monotonous task is valuable discipline. No sensible woman wants her children to grow up in idleness and ignorance of the practical affairs of life. Yet, because she wants them to have plenty of playtime or because she does not want to take the trouble to teach them how to do things, she overworks herself while the children drift into habits of indolence.

A child old enough to go to school is not too young to assume a small portion of the housework. Boys who do housework, usually grow up with orderly habits. Certain things must be done every day, and it is a distinct benefit to the mind to have this regular occupation; it establishes orderly thinking and gives executive ability. A boy might greatly dislike to wash dishes, yet he could be taught to do it so cheerfully that a victory would be won which would help him in many hard situations later in life.

The desirable trait of unselfishness is more easily acquired by the child who shares the housework. He sees that he makes Mother's work easier, adds to Father's comfort, and makes home pleasanter for all in it.

Gunns Shur-Gain Fertilizer

**Drafting Farm Experience.**

These days when war has overturned so many well-planned and tested schedules, the ever-pressing need is experienced skill to reorganize and utilize all productive forces now remaining. In no great industry will well-tested skill be quite so scarce and indispensable as on Canadian farms next season if the production mapped out for our farms is to be realized. For never before will there have been so many inexperienced farm hands employed whose unskilled labor can count for but little unless efficiently directed.

From what source can experienced farm skill be expected? There is one supply of ripe experience that is now practically going to waste. Nearly every hamlet, village, and town, and cities as well, have retired farmer residents whose exceptional skill in many instances enabled them to retire soon after middle life and give place to younger or less successful farmers. Some who retired thus have rapidly rusted out physically and mentally, but there are thousands of retired farmers who could furnish the most effective kind of help in directing untrained farm laborers with benefit to themselves in the betterment of health and the satisfaction that would result. There should be a systematic campaign to enlist the help of retired farmers.

It is savings that Canada needs to prosecute the war.

# The Sunday School

**INTERNATIONAL LESSON FEBRUARY 10.**

**Lesson VI.—Jesus Chooses The Twelve—Mark 3. 7-35. Golden Text, Mark 3. 14.**

Verses 7, 8. Withdrew—No doubt to some more secluded part of the lake. A great multitude—From a wide area, north, south, especially from Galilee where he had done such mighty works; from Judea and Jerusalem, whose priestly leaders saw in him a dangerous innovator; from far southern Idumea, the old Edom; and from the Phoenician territory of Tyre and Sidon.

9. A little boat should wait on him—Be in constant attendance so that he might step into it any moment to avoid the crush of the crowd. Lest they should throng him—Literally, fall upon him. Expressing the turbulent eagerness and excited pushing of the great mass of people.

11. Unclean spirits—That is, men possessed by them. Thou art the Son of God—Here indicating his messiahship more definitely than "The Holy One of God" in Mark 1. 24.

12. Charged them much—It would hardly help his cause to have such heralds, and then, it would be inopportune.

13. Into the mountain—Not far from the lake. Luke tells us he went there to pray and remained all night in prayer. Calleth unto him whom he himself would—An event of supreme importance in the ministry of Jesus. It is recorded by all three of the evangelists, though it is not presented by each one in the same connection. Crowds were about him, but he needed a select company of sympathetic followers, to be constantly with him, as companions, and to whom he might impart the full significance of his work and whom he might send forth to proclaim the good news and to heal the sick.

14. He appointed twelve—The number corresponding, in all probability, to the twelve tribes of Israel. They had been his followers, now they were to become his intimate associates and helpers. To preach—Their first duty was to herald the good news of the kingdom.

15. Authority to cast out demons—This is Mark's significant miracle. Matthew adds "to heal."

16. Simon he surnamed Peter—There are given four lists of the apostles in the New Testament (Matt. 10; Mark 3; Luke 6; and Acts 1). Each list begins with Peter and ends with Judas. Peter (Hebrew, Cephas) means "rock." It is the new name for Simon. He was anything but rock-like in his early career.

17. Boanerges—Literally, "sons of uproar," indicating their fiery, vehement temperament. It was these same fiery men, James and John, who wanted to call down fire upon the Samaritan village because of its discourtesy to the Master (Luke 9. 34).

18. Andrew and Philip—Both Greek names. These came from Bethsaida and are mentioned by John (12. 20). We hear no more of Philip in the first three Gospels. Bartholomew—"Son of Tolmai." He is considered to be the "Nathanael" twice mentioned by John (Chapter 1). His full name would be Nathanael Bartholomew, Nathanael the son of Tomai. Thomas—especially prominent in John (11. 16; 14. 5; 20. 24; and 21. 2). James the son of Alphaeus—To distinguish him from James the son of Zebedee, sometimes called James the Less. Thaddaeus—the same as Lebbaeus and Judas. The Cananaean—The zealot (Luke 6. 15), member of a fanatical patriotic party distinguished for its hatred to foreign domination.

19. Iscariot—The man of Kerioth, a village in Judea. The name of Judas almost always is accompanied with the terrible clause—"who also betrayed him."