Farm Crop Queries

CONDUCTED BY PROF. 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.

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J. C.: I have a piece of sandy ground that is planted to corn. I wish to sow alfalfa on this ground next summer. Would it be right to sow rye this fall and plow under in the spring as cover crop for the ground this winter?

Answer: It would be good practice to sow rye on your sandy ground this fall. The rye will give a covering to the ground and prevent considerable leaching of plantfood during the rains and snows of winter. In the spring the rye should be plowed fairly early, so that the soil will pack and the rye plants will rot and form valuable humus for your soil.

M. P.: Are my potatoes infected with the dry rot? The potato has a small rotten spot and black streaks through the flesh. Some of them are hollow, but none are scabby. What treatment will prevent this? Will they be good for seed? They are the Irish Cobblers and I have raised these for five years without changing seed. Will potatoes run out?

Answer: It is difficult to diagnose the trouble with your potatoes from the description that you submit. It is my opinion that the trouble is late blight, which causes a rotting of the tubers such as you have described.

The only treatment to prevent this blight is to spray carefully during the growing season, starting as soon as the potato plants are 5 or 6 inches high and spraying once every week or ten days after until the plants have made their full growth. The spray to use is known as Bordeaux, which is made up of 5 lbs. of quick lime, 5 lbs. of copper sulphate and 40 gallons of water. Dissolve the copper sulphate and the lime separately and pour them together into 40 gals. of water just before you are going to use the material. Do not allow the mixture to stand for any length of time after copper sulphate and lime have been mingled.

Nothing can be done to prevent the disease in the seed which you have in storage. I would certainly advise you to get some disease-free potatoes and do not use your own seed or you will run the chance of spreading the disease.

Relative to potatoes running out: I would say that if you practice continually picking out small whole potatoes for seed you will very shortly deteriorate the strength of the stock until it will return inferior yields. A change of seed, if it involves the bringing in of good quality material, is highly to be desired.

R. K.: When a sandy garden plot has been well manured in the fall, is commercial fertilizer needed at the spring plowing? The plot is about a quarter of an acre, and is planted with berry and currant bushes, strawberry plants, and fruit trees.

Answer: The manuring of your garden plot in the fall will have the advantage that the manure will be well rotted for next summer's crops. It will also prevent washing out of considerable plantfood, although you will lose some of the plantfood in the manure by this very means. Men who run large areas of bush fruits find it highly profitable to put on manure as you have done in the fall and to give the patch a good application of fertilizer fairly high in nitrogen, potash and phosphoric acid just at the time that work begins in the spring. An application of about 400 lbs. per acre of a fertilizer carrying 4 to 5 per cent. ammonia and 10 to 12 per cent. phosphoric acid has been found to be highly profitable. When applying it around fruit trees scatter about 10 to 12 lbs. per tree around the tree to the extent that the branches reach and work it into the soil by cultivation.

Mrs. S.: I would like some information about some little chicks three weeks old. They have a growth around the bill and eyes, and as I never saw anything like it before, I would like to know if it is catching, as I don't want them all to get it, if it should be or if it is some disorder from feeding, as I understand they have been fed on cracked corn and mixed grain.

Answer: It is difficult for me to diagnose the disease that is affecting your chickens. I would advise you to forward your inquiry to Professor W. R. Graham, Poultry Dept., O. A. C., Guelph, who is an international authority on poultry, and will give your question early attention.

Poultry

Cement floors for poultry houses are very satisfactory, and when properly made are dry and easily cleaned. On one of the poultry farms visited by the writer the foundation for each laying house was made of concrete, six inches wide, set in a bed of gravel. It was deep enough to be below the frost-line and high enough to prevent surface water from entering the house. The floor was concrete, two and a half inches deep, laid over two-ply tar roofing paper and gravel.

Here is a good method of laying a cement floor:

One-inch boards are laid on the stringers and woven wire netting laid over the boards, and a layer of cement, three-fourths of an inch thick, is covered over the surface. In order to have a perfectly solid foundation, the stringers are close together. If not rigid, bridge work is used between the stringers.

After being laid, the floor is protected for several days from direct sunlight and hot winds. For this reason, the roof is put on the house before the floor is laid, but the siding is not put on the building until the floor has set, as there must be light and air for the cement to dry.

Large floors are divided into sections, to provide for expansion and contraction and to prevent the forming of cracks upon the surface of the cement. The sections are uniform in size, 6x6 feet being considered about right. Each section is finished in one continuous operation.

In making forms to provide for this division into sections, strips of wood that are free from warp and strong enough so as not to spring out of shape when the cement is placed against them, are nailed to the board floor, and the nails are left partly projecting so they may be easily withdrawn.

Alternate sections are filled and finished first. When these are sufficiently hardened so that the strips may be removed without danger to the cement, the cross strips are removed and the other sections are filled and finished. This makes a distinct division between sections and provides for expansion and contraction.

A floor of this thickness is laid in one coat. A rather rich mixture is used—one part of cement to three of sand. The sand used is clean and sharp. Also, the strips used as forms are clean. The consistency of the cement is such that it will show moisture on the surface with but little pressure. A wooden float is used to bring it to a uniform thickness and smoothness.

It is a good plan to cover either cement or board floors with several inches of sand, and litter on top of this. This makes a softer floor for the fowls to alight upon.

Seed Grain Distribution.

The annual free distribution of samples of seed grain will be conducted as usual at the Central Experimental Farm, Ottawa, by the Dominion Cerealist.

The following kinds of seed grain will be sent out this season:

Spring wheat (in about 5-lb. samples); white oats (about 4-lb); barley (about 5-lb.); field peas (about 5-lb.); field beans (about 2-lb.); flax (about 2-lb.).

Only one sample can be sent to each applicant.

Applications must be on printed forms which may be obtained by writing to the Dominion Cerealist, Experimental Farm, Ottawa.

As the stock of seed is limited, farmers are advised to apply early to avoid disappointment. Those who applied too late last season are particularly requested to send in their names at once so that application forms may be forwarded to them. No application forms will be furnished after Feb. 1st, 1922. C. E. Saunders, Dominion Cerealist.

On Housing the Boars.

When talking with a successful hog breeder a few days ago he remarked that he always shied at purchasing breeding animals from a breeder who was not particular about keeping his boars securely penned away from his sows. In one instance he stated that a breeder had five or six young boars running in a field with a number of sows, all of breeding age. "How is that breeder to know the breeding of the pigs coming from these sows. On the other hand, when a man has his boars housed in secure pens then I know he is careful and I assume that if he is careful in one thing he is pretty sure to be particular about other matters, so if I find an animal in his herd which suits me I am sure to buy if the price is right. Of the careless man I would not buy breeding stock under any consideration."

In planning rotations build around the legume.

"Be thou diligent to know the state of thy flocks and look well to thy herds."—Prov. 27: 23.

RETROSPECT AND FORWARD VISION AMONG THE NORTHERN INSTITUTES

The Twin Cities Women's Institute Convention

BY GIBSON SCOTT

"We debouch upon a newer, mightier world, varied world,
Fresh and strong the world we seize, world of labor and the march,
Pioneers! O Pioneers!"

How many Ontarians realize the magnitude of Ontario? Something of its immensity dawned on the mind of all those who attended the Second Annual Convention of the Women's Institutes of the north-western area at the Twin Cities on Oct. 6th and 7th.

Here foregathered the grand pioneer home-makers from two hundred and eighty-five miles west of Fort William and Port Arthur, and three hundred miles east. And this is only the first of the five great conventions that will be held in Ontario this autumn to meet the expanding needs of the rural Women's Institutes.

Practical, courageous, enthusiastic, these delegates in concise clear-cut reports made a survey of the achievements of the past year in home, school, community and district development. In admirably brief, witty, and pointed speeches and discussion, they threshed out the needs of the North and the available resources which could be placed at the service of the home-maker through the machinery of the Branch Institute which works so directly and effectively with the Government through the Institutes Branch of the Department of Agriculture.

"We have the resources up here, if we just have enough people of the right sort to know what to do with them," was stated, so their first objective is better homes and better people. Consequently health, education, and recreation were very live topics at this convention. The reports showed that much was being done for the schools by the Branch Institute. Hornepayne had a woman member as school trustee, and as it was impossible to secure buildings enough to cope with the rapidly growing child population, they had interviewed the Railway officials and secured a passenger coach which they had equipped as an extra room for the pupils. Stratton had gained a Consolidated School. The general opinion expressed was that the Consolidated School was the best solution of the northern educational problem. Practically every Branch had done something to bring the home into closer and more helpful co-operation with the school, providing hot lunches, play equipment, giving an annual educational social evening whereby teachers, trustees, and citizens might meet, get acquainted, and find a common sympathetic viewpoint for the ensuring year.

The "Travelling College" or Short Courses put on by the Institutes Branch of the Department of Agriculture came in for decided approval, the only complaint being that there were not enough of them in Sewing, Home nursing, Domestic Science, and Millinery.

"We are the most economically run department on the continent," was one statement made.

"Too economical—there was just what it costs to build three miles of provincial highways, or even less, spent on all the Women's Institutes of Ontario last year. We should think we might have as much as six miles spent on us this year without being unduly reckless in our demands," was the conclusion of the delegates. "We do not want fewer good roads but more good homes and healthy, well educated home-makers, for after all, it is the home-makers who are doing the really great work of nation-building."

Health was another moot subject. There is no hospital between Fort William and Winnipeg, a distance of 450 miles. One woman reported being 45 miles from the nearest doctor. Another had been in her district for 14 years and this year for the first time had a road to come out on. The feelings of the mother of small children who realized that she or they might any day fall seriously ill under such conditions were vividly pictured and the need of community nurses was strongly emphasized. It was hoped the Department of Public Health could find a way to co-operate with the Institutes to bring about some practical and efficient solution of this problem. A resolution of thanks was sent to Dr. Helen MacMurchy, Chief of the Division of Child Welfare of the Federal Department of Health for the direct helpfulness of her department to the pioneer mothers. The available help from the Ontario Department of Health was also discussed and a request was to be sent to the Minister of Labor to extend and strengthen the rural services.

Able addresses were given by the Medical Health Officers of the Twin Cities, Drs. Oliver and Laurie, who promised active co-operation, also by Hon. Dr. Manion of the Dominion Cabinet.

Home and School Clubs were heard from but it was decided that a Home and School Committee in the Institute met the needs of the country better than a separate organization.

"The efficient Institute" came in for a good deal of attention, as this was felt to be the most effective bit of organization at the service of the home-maker and should be studied carefully with a view to making it greater as to membership, number of branches in the north, program planning, community service, and knowledge of how the country is governed with the help forthcoming from the various departments of state to the people in the homes of rural Ontario. Miss Emily Guest of the Department of Agriculture was present at all the sessions for advice and conference, speaking on the origin, vision, and achievements of the Women's Institutes of Ontario in the twenty-five years since the first one was formed at Stoney Creek, the present needs, the possibilities of development, and the vision of the future. There are now over 900 branches with some 29,000 members.

Mrs. B. O. Allen of Fort William, beloved and efficient secretary of the north, gave a valuable demonstration of how to perform the work of Branch Secretary.

One of the girls, Miss Annie McLennan, spoke on the Canadian Girls in Training and their idea of four-fold development, mental, physical, spiritual and social. This aim met with the approval of the Convention and co-operation was favored by the Branches.

Two banquets, one at Fort William and the other at Port Arthur, were tendered the delegates by the Women's Institutes of these two cities. These, with the community singing, lent a happy social touch to the proceedings and cemented the warm bond of union between town and country, which is so marked a characteristic of the north.

The men, too, are vigorously behind and with the Institutes. As did the women of a quarter of a century ago, women of to-day believe in the co-operation of men and women for better homes, better people, a better community, better and happier social life, and a better and more scientific agriculture.

This the country women carry to a logical conclusion in all they do, home, school, Farmers' Clubs and Institutes, conventions, Government departments.

A resolution was passed expressing deep appreciation from the women of the north of the services being rendered to the rural home-makers by the Ontario Department of Agriculture through the Institutes Branch, coupled with the wish that this service might be still further extended. A special vote of thanks was given to the Superintendent, Mr. G. A. Putnam, to whose wise guidance in the past so much of present day success was due.

"These women are statesmen doing nation-building of the highest order," commented an observant man. "I used to think the millenium would come through the work of the church. Now I begin to think it is coming through the women."

"This work is like the St. Lawrence River system," said the President, Mrs. Todd, in her address, "every little stream, every little drop, contributes its part to making the magnificent whole. Every girl, every woman who loves the home and its human contents is a part of this Women's Institutes' work with its great dreams and practical realizations."

The first of the five, this Convention sends down a breeze of inspiration as exhilarating as its own bracing air.

"We are going back to raise money this year to send not only the delegates but all members possible as well to next year's convention," said the women as with locked hands they sang "Auld Lang Syne" before parting.

The other Conventions of 1921 are: North Bay, Oct. 18-19; Ottawa, Oct. 25-26-27; London, Nov. 1-2-3; Toronto, Nov. 15-16-17.

When to Plant Potatoes.

Some interesting and valuable tests are being conducted by the Horticultural division of the Dominion Experimental Farms as to the best time to sow potatoes. These tests or experiments, up to last year, have been going on for twenty-two years and are still in progress. According to the Report of the Dominion Horticulturist, it has been found that the best time for sowing, at least in Eastern Ontario, is between May 10 and 17, especially for the Irish Cobbler variety. Farmers, as a rule, the annual report states, sow too late for the largest yield. In every case for the last four years potatoes planted in May yielded the best. Of course the seasons varied in yield, but in every instance May has proved to be the best month for both Irish Cobbler and Green Mountain. Sixty-six sets of each variety were planted on each of the dates given in the report with the result that the best yields of Irish Cobbler were from potatoes planted in 1915 on May 15, in 1918 on May 14, in 1919 on May 31, in 1920 on May 17. Of Green Mountain the best results were obtained from plantings in 1915 on May 12, in 1918 on May 14, in 1919 on May 31, in 1920 on May 3, although in the latter year sowing on May 17 and 31 proved almost equally prolific.

Bad roads keep folks apart as effectively as bad temper.

The Sunday School Lesson

OCTOBER 30.

Strong Drink in a Nation's Life. Isa. 28: 1-13. Golden Text—Hab. 2: 15.

Time and Place—About B.C.725 and B.C. 704; Jerusalem.

Lesson Setting—The great prophets of the eighth century B. C. (Amos, Hosea, Isaiah, Micah) lived in a degenerate age. A period of great prosperity was passing, and the sins of prosperity and civilization were ravaging the lime of Samaria and Jerusalem; luxury and extravagance, drunkenness and greed were undermining the foundations of morality and religion. With sin came God; he came to punish: that was Isaiah's word or warning. Could the people not hear the tramp of Assyrian horsemen? The Assyrians were the scourge in Jehovah's hand. City after city of Syria fell before their terrible onset. At length they encamped within sight of Samaria, the capital of the Northern Kingdom of Israel: in these circumstances Isaiah delivered the oracle in vs. 1-4.

Samaria fell in B. C. 722, and Judah, for the time, made her peace with the invader, at a great price. But Isaiah, the great prophet of Judah, warns his own people that a like doom to that of Samaria will come upon them, also, unless they forsake their sins.

I. The False Security of Drunkenness, 1-6.

V. 1. **Woe to the crown of pride;** not a wish, but a warning. The prophet has no pleasure in foretelling the doom of the sinful people, but, speaking for God, he must point out the certain end of their course. **Drunkards of Ephraim;** that is, Israel, here named from its chief tribe. Amos had indicted the people of Samaria thirty years before for luxury and debauchery, Amos 4: 1; 6. 1, 6. **Isaiah saw their vices ripe for judgment, the people as good as ruined. Glorious beauty;** the magnificent and luxury of Samaria. **A fading flower.** The wreath is already withered. **The head of the fat valley** (Rev. Ver.); the beautiful and fertile valley over which Samaria looked. **Overcome with wine;** literally "wine-stunned."

V. 2. **A mighty and strong one;** that is, Assyria, Jehovah's instrument, as in ch. 10: 5, for the punishment of sinful Israel.

Vs. 3, 4. **Trodden under foot** (Rev. Ver.); crushed by the remorseless invader. **Hasty fruit;** Rev. Ver., "first-ripe fig," which might appear in June, while the proper fig season was not till August. These early figs were counted a great delicacy. **Seeth . . in his hand . . eateth it up.** So swiftly and greedily will Assyria devour Samaria.

Vs. 5, 6. **In that day.** This points to the coming Messianic age. **Lord . . crown of glory . . diadem of beauty.** Jehovah will replace the false glory of splendor and luxury with the true glory of righteousness and purity. **The residue;** not merely the remnant left after the Assyrian conquest, but a remnant turned to Jehovah. **Spirit of judgment.** Jehovah, the true glory of his people, will guide his people's judges. **For strength.** He will also give valor to his warriors. **Turn back the battle** (Rev. Ver.); repel invaders.

II. The Foulness of Intemperance, 7, 8.

Vs. 7, 8. **They also;** the people of Judah as well as Israel. Nearly twenty years had passed since the fall of Samaria in B. C. 722. "There," said Isaiah to the people of Judah, "is a mirror for you to read your own character and destiny." Judean nobles, priests and prophets, too, were drunkards (see ch. 5: 11-17, 22, 23). But in their self-confidence they laughed at Isaiah's warnings.

III. The Insolence of Drunkenness, 9-13.

Vs. 9-13. **Whom shall he teach knowledge?** Did he take them for children, the drunkards asked, excitedly, when he surprised them at a carousal, that he should repeat over and over his preachments, v. 10. Isaiah turned on them with a terrible threat: "Jehovah is at hand. You stammer now with your wine-thick lips. Jehovah will answer in a stammering tongue (the barbarian accent of Assyria). And when he speaks to you in a stammering tongue, you will remember his plain words of promise and cheer, v. 12. Your ridicule the A. B. C. of his deeds—judgment upon judgment, decay and ruin, slow, relentless, sure."

Application.

Strong drink in an individual's life is not a source of strength in any particular, but a source of weakness. Its habitual use tends to diminish the power of body, mind, heart, will and conscience. The use of strong drink offers no substantial gain, and does inflict, as a rule, untold loss. It is, therefore, a bit of speculative folly to take to strong drink at all as a beverage. This experiment is altogether one-sided. Everything to lose and nothing to gain.

What then is the true course for every boy and man in the nation? Is it not the free course of total abstinence? See how athletes, who perhaps make no pretence to religion at all, give up the drinking habit absolutely during their period of training in order that they may have a better chance of victory. Is it not a shame that men are not more willing to deny themselves for the sake of success in the greatest game of all—the game of the life indeed—the game that wins that true cup of satisfaction which brims full forever. If we only knew how to omit, how rich life should become. "Look not thou upon the wine when it is red."

Easy Methods of Ice Storage.

Farmers and dwellers in small towns can provide themselves with a supply of ice for domestic purposes with very little trouble or expense. As the Dairy and Cold Storage Commissioner for the Dominion states in a bulletin on "Simple Methods for the Storage of Ice," any corner of a shed will serve for the purpose. A rough board enclosure ten feet square and eight feet high will hold sufficient ice to provide 50 pounds for each of 130 days, or about three tons and a half, after allowing for a reasonable amount of wastage. The smaller the quantity stored the greater proportionately will be the waste. Cover the bottom of the enclosure with a foot of sawdust. If the soil underneath is impervious clay a few inches of gravel under the sawdust is advisable. Leave a space of one foot between the boards and the ice and stuff with sawdust and cover the ice to about the same extent. The dryer the sawdust the better. If a special enclosure has to be built, any kind of a shed that is weather-proof will answer the purpose. If sawdust cannot be obtained for packing, planer mill shavings or marsh or any other fine wild hay that grows in low places can be used, but in the last mentioned case the hay should be well packed two feet thick. The bulletin gives plans, specifications and details of everything required for construction and storage. It also deals with the ice-wells that are used in the prairie provinces for making ice in the winter and storing for the summer.

Bedtime Stories

At Bedtime.

I go to bed at seven;
My friend, the night wind, sings
A happy little good-night song
Of happy little things;

Of birds up in the tree tops,
White sheep beyond the stile,
Of stars that watch the night world
He sings to me a while.

I never beg an encore;
My wind friend could not wait;
He's off to sing to bigger lads,
Who go to bed at eight!

Don't mine your fields, farm them.

Diversified farming is the highest type of agriculture.

The thing of greatest importance on the farm is the folks who live there.

Protect next year's garden crops by carefully cleaning up and burning this season's garden refuse.

A Dangerous Menace to the Corn Crop.

The European Corn Borer, discovered in Canada for the first time in 1920, is spreading with great rapidity. Prompt measures are necessary for its checking and control, and every corn grower should learn how to identify it. According to a leaflet just issued by the Entomological Branch of the Dominion Department of Agriculture, this pest, although previously identified in the New England states, was discovered in Canada only last year, its haunt then being revealed in five townships of Welland and Haldimand counties and twenty-nine townships in Elgin, Kent Middlesex, Huron, and Oxford, all in Ontario, a total of 3,770 square miles being infested. This year it has been identified in twenty-two additional townships, Norfolk, Brant, Lincoln and Wellington being added to the counties previously mentioned. Table sweet corn and Flint are the varieties most affected. The first sign of infestation appears when the corn is from two to three feet high, small rounded areas about the size of a pin's head being visible as having been eaten out of the surface of the upper leaves. Just now it is interesting to know that the winter is passed by the pest as dirty white, brown-headed caterpillar, one inch or so long, in burrows in corn stalks, corn refuse, unburied stubble and in some of the stouter weeds. As control and preventative measures the Dominion Entomologst recommends cutting the corn as soon as ready and as close to the ground as possible; never pasture off corn or stalks after husking with cattle or hogs; ensile the entire corn crop wherever possible; where no silo is used, shred or cut fodder corn before feeding; collect in heaps all parts of the plant not eaten and burn; see that the heaps are not trampled on by the stock; do not use the stalks for bedding and throw them into the manure; plow and roll all corn land as soon as possible after harvest and don't harrow until the spring; pull up and destroy kitchen garden sweet corn stalks as soon as dry; plow down table sweet corn fields and roll immediately the crop has been harvested. As, precautions for next year, collect all uneaten and refuse corn stalks before the first of June and destroy; burn weeds and grass along fences adjacent to the corn fields before cultivation, and delay the planting of corn in infested or near infested districts as long as it is safe to do so.

After all, the best and biggest market is the home market.

Nicotine sulphate is not so efficient in the control of the codling-moth as powdered arsenate of lead, it has been shown in recent experiments.