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.

Question—W. K.: — I have a meadow seeded down last spring, but, owing to the extreme wet, followed by a drought, there is only half a catch. The clover mostly lived but the timothy is nearly all dead. Should I plow them up in the Spring, or would it be advisable to go over the ground with a drag harrow and sow timothy by hand?

Answer:—If the clover has lived through the winter in sufficient quantities I would advise re-sowing timothy seed in the spring and at the same time top-dressing the seeding with well-rotted manure or about 200 pounds of fertilizer. The fertilizer should be high in ammonia. I think you would do well also to add three pounds of meadow fescue grass per acre. This is a rapid-growing grass and should make a valuable addition to your meadow. After this has been applied I believe it would be advisable to harrow the seeding lightly, making sure to harrow it with the grain drill rows instead of across it. If the spring is normal this should get you a good catch and make a satisfactory seeding.

Question — M. L. S.:—I purchased a farm on which only 6 acres were plowed and part of this was done two years ago and left to grow to weeds. A small part of the field was planted to potatoes, but it also is very weedy. The land has had very little manure in the last five years. Plowing for spring crops must be done this spring as we were unable to do any plowing last fall. We purpose sowing barley and oats, and would like to know whether it is advisable to seed this land with clover this spring or plow the stubble after the grain is harvested and seed to rye, and then sow the clover a year from this spring. We have no barn-yard manure to apply to the land.

Answer:—In my opinion it would be well to seed your barley and oats with clover this spring. The soil is evidently run down and you should, as soon as possible, establish a system of cropping where you could plow under a second crop of clover. This will add organic matter, or humus, to the soil and will also make some addition of nitrogen. In order to make sure of a satisfactory catch of clover and at the same time greatly assist your barley and oats seeding it would be well to apply 200 to 300 pounds of fertilizer to the acre at the time of seeding the crop, since you have no barn-yard manure to apply to your land. This fertilizer should carry at least two to four per cent. ammonia and from six to eight per cent. available phosphoric acid. It will not only help the grain crop but will do a great deal to insure a satisfactory stand of clover.

Their Fathers are Fighting For Right, SHALL THEY STARVE?

Here are two little Belgian refugees two of thousands upon thousands whose fathers have answered the call of duty and are fighting with their Allies for the liberty of peaceful nations. Those fathers did not wait to count the cost or to find out how much help they were going to receive from outside their borders. They perhaps believed that great nations like Britain and France would not stand by and see them crushed, and that the people of these wealthy and friendly countries would not allow their children and their wives to starve while they were away. But all that they really knew was that they heard the call of duty and rallied to their King.

Of course their faith in the nations who guaranteed their neutrality was not misplaced unless they had faith in Germany. Great Britain and France did rally to their side and with them are putting an end to the Teuton dream of World conquest. And their children and their wives have not been allowed to starve. The two shown in the picture, healthy and happy enough, are in England, at Stretham. So are many others, and it is comparatively a simple matter to care for them.

But there are left in Belgium more than have been or can be taken to England.

What of them? The Belgian Relief Committee has answered that question most efficiently. It has fed them ever since they were driven from their homes to shift for themselves. It has been enabled to do this through the response of Canadians, with the people of the Motherland and the United States, to the call of the Belgians' need.

The Committee's needs grow greater rather than less as long as Germany rules the occupied parts of Belgium, and so long as the need lasts the friends of freedom-loving Belgium are asked to open their hearts and loosen their purse-strings. Contributions should be sent direct to the Central Beligan Relief Committee, 59 St. Peter Street, Montreal, or to the branches in each locality.

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, 75 Castle Frank Road, Toronto.

E. F. A.:—1. Vegetables are more wholesome and better flavored when steamed than they are when boiled or fried. Besides, there is much less waste than in boiling, as much of the nutrition of the vegetables is thrown away with the water in which they are boiled. The water should be saved and used in soups. 2. If linen is moistened along the line the threat is to be pulled, the task of pulling threads is easier. 3. A large pair of scissors is a convenient kitchen tool, especially in preparing lettuce and other vegetables. Of course, they must be thoroughly washed, as are other utensils, after every using. 4. When plaster cracks, add enough vinegar to plaster of paris to make a mixture like thick putty, fill the crack, and smooth off with a knife. If water is used the plaster hardens too quickly. 5. Before storing a stovepipe away for the summer, rub it well with coal oil, stuff the ends with newspaper to keep out any moisture, and there will be no rust in the autumn.

R. S.:—1. There is a clear amber shade between yellow and brown that would be excellent for the walls of your living-room with the Northern exposure. Have the ceiling of a deep ivory tone, dropped down to meet the picture molding which should also be deep ivory. Plain oatmeal paper is best for walls which are to serve as a background for pictures. With plain walls one may have figured madras curtains, but hemstitched scrim in ecru or cream would make very suitable curtains for this room, and scrim wears and launders better than madras. Dip the ecru curtains in strong tea and dry in the shade. A suitable rug would have the amber shade of the walls mingled with blue and terra cotta. 2. Subdued colors are always most restful. I would not advise papering any room in red as it is considered by physicians to be very trying on the nerves. 3. Yes, Nottingham curtains are satisfactory, especially if you possess curtain stretchers. They do not iron well. 4. The tendency is towards simplicity in house furnishings now; as few draperies, cushions and ornaments as possible, and all articles are intended for use and not merely for show. It certainly lessens the housewife's task of cleaning, and is conducive to the family health.

H. D.:—1. The trenches on the western front extend about 750 miles. 2. Probably "The New Housekeeping," by Mrs. C. Frederick, will supply the information you require in household matters. 3. The Provincial Board of Health of Ontario will furnish you gratis a booklet, by Dr. Helen MacMurchy, entitled "A Little Talk About the Baby", which you will find valuable.

W. W.:—1. The new collars are nearly all of the sailor variety and of very sheer materials such as ninen, and georgette crepe. They are hemstitched or edged with lace or silk braid, and some have tucks or insertion set in. 2. Handbags are seldom of leather, but are elaborate affairs of silk, or beads, or are knitted or crocheted in bright hues of crochet silk. You might make a round bag of a strip of silk like your dress with a circle of cardboard covered with silk ot form the bottom, and then crochet on a top of a contrasting color about an inch wide, through which to run a silk cord.

D. V. C.:—When your time is limited, it is best to plant flowering shrubs rather than annuals. Once carefully planted in good soil, the shrubs require little attention and are beautiful and permanent additions to the home grounds. Some of the best shrubs are: Spirea van Houeeti, Flowering Almond, Japan Quince, Tartarian Honeysuckle, Syringa, Lilac, Snowball, Hydrangra, Rose of Sharon. These will give you a succession of bloom from May to October. Flowering vines, such as Clematis, Wistaria, Dutchman's Pipe, Trumpet Flower, and Climbing Roses, are easily cared for. It is best to buy large three-year-old plants.

Poultry

The hen that gets cold feet through exposure these raw days is apt to give her master cold feet when it comes to marketing her eggs. Keep the hens in till the ground is warmer.

When you turn chickens out for a run during mild days, throw some meat scraps, which are too large for them to swallow, within their reach. The ones that are lucky (?) enough to secure a morsel will be chased by the others, thus affording abundant exercise for all.

The egg-laying season among geese practically begins in March, although frequently eggs will be dropped in January and February—much depending upon the age of the geese and the condition of the weather.

An abdominal pouch of great size indicates great age, a pointer well worth remembering in purchasing breeding birds.

If you want to know what hen manure will do for fruit, plant some plum trees in the yard where hens run. Trees that bore very few plums, and none that were sound, have been made to bear bushels of fruit, just by letting hens run around them at will.

The Dairy

A pound of meal before the cow freshens is worth as much as three pounds after she freshens.

Water basins, with a supply of water always before the cows, means less labor in milking and a greater quantity of milk in the pail.

Cows fed a ration composed largely of silage produced 17 per cent. more milk and 28 per cent. more butter fat than those given a ration consisting mainly of grain.

Let your cows know you and study their wants. A finely bred dairy cow is a sensitive and high-strung animal and quick to respond to kind and considerate treatment.

So far as possible turn the water out of your barn-yard, so that the cows may not slip and bring on trouble.

A wire barn-yard fence is pretty cold comfort for a cow on a raw March day. Cold and comfort are not on speaking terms in the dairy.

The sire which has brought you good calves is worthy of the best care you can give him.

Sheep Notes

If a ewe loses her lamb, keep her milking as a foster-mother.

If she objects to mother a strange lamb, put her in a narrow stall, specially prepared, until she becomes reconciled. With gentleness, a ewe will soon take kindly to the situation.

One night out in a cold March storm may cost you several lambs and perhaps take the vigor out of a nice ewe.

Are the droppings hard and like bullets? A little more laxative food and not quite so much timothy hay will correct this. The best physic for sheep is wheat bran, with frequent rations of vegetables.

The humble sheep is getting a great deal of attention just now. Scarcity of wool means higher-priced clothing.

Horse Sense

Chronic swellings, puffs, etc., which are usually a sequel to some acute disease or injury, have their beginning in enlargement, either hard or soft, without pain or heat.

The remedy is either repeated blistering or the use of absorbents, as the daily application with smart friction of a little of a liniment made of 4 drams each of iodine and iodide of potassuim and 4 oz. each of alcohol and glycerine.

Begin fitting the work horses for the heavy spring tasks before the work begins.

After a winter of comparative idleness it is unwise and unprofitable to put a team in heavy work without preparation.

Now that heavy plowing is about to start, remember that prevention is the best cure for sore shoulders in horses.

If it doesn't do the horse any good to have you say a kind word to him as you pass, it does you good.

Plenty of sunlight and abundance of fresh air are two prime requisites in any stabling proposition.

The horse's feet should be washed occasionally with soap and water.

Bone spavin can often be traced to working the colt at too tender an age, or fast driving over roads that are slippery, or too suddenly stopping or jerking the colt.

For growing colts there is no better grain ration than equal parts of corn and oats ground together. This feed supplies the elements required for the production of fat, bone and muscle.

Hogs

Bowels in good working order lead to a good time at farrowing.

Pigs have short legs and not much strength. They can't wallow around in long straw. Run the straw through the cutting box and then scatter it about the pen, good and deep.

A sow that has just brought her pigs to town doesn't need much, if anything, to eat for a while. When she acts as if she was getting hungry, make her a nice soup of wheat middlings, bran and oats. But we need to be careful not to give too much at once; better to feed often.

Bad results sometimes come when pigs are due, because of disturbances in the vicinity of the sow's quarters. So far as possible give her a chance to be quiet.

Hogs fill a very important place in the economic world, and will doubtless long continue to do so, the more especially when we succeed in reducing the death rate in the hog kingdom to a reasonable figure.

Newly planted hotbeds will run high in temperature when the sun shines and the plants within the frame will become spindling unless enough air is given to keep the temperature down. During bright days and at other times when the temperature is high, lift the sash a little at the bottom to keep the heat below 90 degrees. In ventilating at this season be careful not to permit the cold air to blow directly in upon the plants, otherwise they will be checked in their development.

POTATO SEED SELECTION AND DISEASE CONTROL

The Fourth of a Series of Five Special Articles by Henry G. Bell, Agronomist.

To the British nation potatoes constitute one of the great articles of diet. History records the disaster of the great potato crop in Ireland, and the present shortage gives the Britisher of to-day an idea of the importance of this common but very valuable crop.

Few Canadians realize that almost one acre in 40 under tillage in this province is normally planted to potatoes. The value of the 1914 crop totalled nearly $12,000,000.

When the Canadian potato grower considers the yield per acre he is obtaining as compared with yields in England, Scotland, Holland, Northeastern United States and other parts of the world, he must be impressed with the opportunity he has in increasing yields.

The average yield for Ontario is less than 160 bus. per acre, while England is growing over 300 bus. per acre, Holland 290 bus., and Maine over 250 bus. per acre.

One of the reasons that these other parts of the world are exceeding Canadian yields is that they are selecting good potato seed, and not relying on small nondescript stock.

There are three grades of seed selection in potatoes. Field choice is first. By field selection I mean simply watching the growing crop to see that it is a pure variety. First start by planting a pure variety and then save seed from all the plants having the same colored flowers and the same characteristic spread of potato vines. Dig the pure stock first and cull out the small inferior potatoes. Discard these and do not plant them for seed potatoes. You don't save the calves of the small, weakly heifers in order to build up your herd. Don't plant small inferior stock and expect to get good, strong, heavy yielding crops.

Plant selection is the second step in potato improvement. While the crop of pure variety potatoes is growing, go through the field and mark off the strongest best plants by putting a stick in beside the growing hill. When the crop is ripe dig the marked potatoes separately. Save for seed only those which have the largest number of well-formed tubers. Keep these for next spring's seed. Plant only the best potatoes from these.

Individual tuber selection is the most effective means of improving and purifying potato seed. Tuber selection starts with seed of a good variety if possible. Choose a number of potatoes of good marketable size. Cut each of these tubers into four pieces and plant each four pieces from one potato in a hill, or plant the four pieces of the same potato in a row. When the crop is ripe, dig these sister hills or plants in groups of four. Save only the potato "families" that yield the largest number of good marketable stock. Keep the "families" separate and plant a drill of each the second year. Choose again the best yielding, good quality stock and a good selection is started. A Michigan potato grower found a difference of 110 bus. per acre in the crop from selected stock compared with the crop from mixed seed grown on the same ground. The selected crop yielded 360 bus. per acre and the mixed stock produced 250 bus. per acre.

The methods of seed improvement outlined apply equally to early and late varieties. The Ontario Experimental Union has tested a great number of varieties throughout the province. Prof. Zavitz reports that as an average of 40 tests with two leading varieties he finds Davies Warrior to yield 131.95 bus. per acre and Extra Early Eureka 126.59 bus. per acre.

Before planting the selected seed, it should be dipped in a mixture of one pound formalin and 20 gals. water for 20 minutes. This treatment will kill scab spores or seeds which may be attached to the seed tuber. After this treatment if the selected stock is planted on ground where potatoes have not been grown for some time, it is likely no scab will appear on the product.

Special seed stock should always be grown on good, well-prepared ground, and should receive careful attention while the crop is developing.

Much can be done to protect the growing crop from blight and other diseases, but this subject of disease control must be treated in a succeeding article.

HENRY G. BELL.

Keep Dairy Records.

Your cow that stands in the third stall may have deceived you. When she freshened last June very likely she gave about thirty-five pounds of milk a day, and you thought her possibly the best cow out of the eighteen you own. But she may have dried off rather early and you overlooked that fact in the light of her good flow in June; you remember she was 9 years old and a fine-looking, quiet cow, easy to keep.

Now think of Eliza Jane, homely, eleven years old, who never made any big record for a day or a week. But recall the fact that she stuck to the job splendidly and gave a fairly good mess per day right through her ten months.

Two actual records in an Ontario herd received by the Dairy Division show that, with milk at $1.60, cow No. 3 brought in $72.66 from her 4,541 lb. of milk and 148 lb. of fat; but cow No. 14 brought in from her 6,675 lb. of milk and 225 lb. of fat, just $106.80.

What About That Silo?

From time to time we have pointed out the advantage of having a silo. Experiments have shown that cows receiving some sort of succulent feed during the winter will give several pounds more milk than those fed dry roughage. Succulent feed is not only better digested than if the feed were dried before feeding, but it aids in the digestion of the other feed that is fed as well. We must have succulent feed for profitable milk or beef production, and the question is what kind of succulent feed is best. In the Old Country roots have been the standby, but many farmers over there now are learning from their American brethern and considering the advisability of putting up silos.

In this country there is no question which is the cheapest feed to grow. At Central Experimental Farm, Ottawa, in the season of 1913, 17 tons of mangels were grown per acre as against 12 tons of silage. The mangels cost $2.14 per ton to produce, whereas the silage only cost $1.84 per ton. On an average there is no reason why 15 tons per acre of silage should not be produced. In good years as much as 20 tons per acre should be produced. A silo is a paying proposition.

Fresh milk is shipped long distances in Brazil in perfect condition in sealed cans with insulated walls, blocks of frozen milk being placed in it to keep its temperature down.

This is a good season to make labels and stakes and point them. They will be wanted during the season when the garden occupies the full time of the gardener.

Pruning young apple trees during the dormant state is effected at less expense in vitality of the trees than the removal of twigs and branches during the growing season. Moreover, summer pruning does not, according to experiments, hasten fruit bearing.

The Sunday School

INTERNATIONAL LESSON
MARCH 25.

Lesson XII.—Jesus The Way, The Truth, And The Life (Review).
Read John 14. 1-14. Golden Text John 14. 6.

1. The way. That Jesus is the way to eternal life for the individual has long been the confident conviction and the triumphant experience of the church. We are now engaged in discovering the same thing for human society. Men have ever thought an ideal community life. They have called it the brotherhood of man, the co-operative commonwealth, the kingdom of God, and through many ages have looked for the way that led there. For this also Jesus is the way, even as for the individual. Following his teachings, men come to the land of their desire. The world wants peace, but it developed nationalism where he taught international brotherhood; it followed gain where he taught service, and in such a world there is no peace. A prominent Hebrew recently declared: "We shall never get out of war except by following the teachings of Jesus." Following those teachings in a new treatment for the criminal has turned the enemies of society into its friends and helpers. When the nations of the earth are willing to follow the same principle of loving their enemies, of returning good for evil, will not the same transformation occur in the external enemies of the state?

2. The truth. To the world of Jesus's day the truth was an abstraction. "What is the truth?" said Pilate with a sneer, thinking he had before him only another splitter of logical hairs, but instead he had the truth incarnate—a very different thing to face. The Logos—the eternal truth—says John, became flesh, that men could touch it and understand it; so that we might have with it the kinship of common experience. Does the world doubt that it is possible to walk in the way that Jesus showed, that so we might come to righteousness and brotherhood and peace? He himself walked in it. Are his teachings a vain dream? He himself lived the truth that he taught. Does he say that impossible thing, "Love your enemies," and turn them into your friends? Listen to him upon the cross: "Father, forgive them, they know not what they do." The truth here is not a cold formula, but a living force. When the nations seek after a better world-life, they can walk not alone by faith, not simply by reason, but by sight.

3. The life. In his immortal story John Bunyan made his pilgrims run away from the city of destruction, crying "Life, Life, Eternal Life." That is what the race needs even as the individual. The great lack of to-day in the world is not more technique for better living, but more power; not more machinery, but more dynamic. There is knowledge enough to build a better world to-morrow, but not to animate it. On paper to-day you can draw a better community life than now exists in your neighborhood, but can you get it to-morrow to walk and act in the market place? This is what makes Jesus the great hope of the race. He does put power into life for better living. His contact with the Father, the source of all energy, is such that he is able to transmit that eternal power to human life as none other ever has done it. The mystery is greater than our definition. "Do the will," he says, "and ye shall know the truth." He did the will and found the power. So also he gives the power. Those who will live with him and with the Father, doing the will in all faithfulness—they shall know—men and nations—that he is the life eternal.