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.

S. J.—1. How does twitch grass grow—from the roots or from seed? Can it be spread through the manure? How can it be destroyed? 2. I wish to seed a field for four years' pasture. It is a little springy in some places but otherwise it is fairly well drained. What kind of seed and how much per acre should be used? I thought of oats as a nurse crop.

Answer:—Twitch grass or couch spreads generally from root stalks. Any small root section that contains a bud is sufficient to start a new growth of this troublesome weed. In some of the warmer sections where seeds mature it is also spread by seed. Under the latter conditions of course it could be spread through stock manure, but not under the former conditions. It is usually spread by a small patch getting started in the hoed crop such as potatoes or corn, the farmer when cultivating spreads the root pieces as they cling to the teeth of the cultivator. To kill out this troublesome weed the ground should be plowed just as soon as the summer crop is harvested. This should be followed with disking and the roots of the twitch grass should be raked together with a hay-rake and burned. Every time the remainder of the grass shows green, the ground should be cultivated and raked again. In the spring the same operation should be carried on until seeding time. If possible, seed the field to buckwheat or rape, sown broadcast and thick. This will smother out the grass. 2. In seeding your field to permanent pasture see that the seedbed is well prepared, then apply the following mixture: 2 lbs. common red clover, 2 lbs. white clover, 2 lbs. sweet clover, 6 lbs. timothy, 4 lbs. redtop, a total of 16 lbs. per acre. This can be sown with oats as a nurse crop, but I prefer barley, since barley ripens a little quicker and is shallower rooted than oats and will also be better on soil where drainage conditions are not perfect. In order to insure a good catch you will do well to apply about 200 lbs. per acre of fertilizer carrying 2 per cent. ammonia and 10 per cent. phosphoric acid.

L. D.—Having read several of your articles on fertilizers and having failed so far to find my particular case I am writing you personally. A few weeks ago I purchased 1½ ton of 1-8-2 fertilizer which I intend to use on corn land. Is this a good grade for corn? The soil it is to be used on varies from light sand to stiff clay, well drained. The main reason I am writing is to find out which is the best method to put the fertilizer on the land—sow it broadcast before planting or put it in with the planter along with the corn. I have no fertilizer attachment for my planter and was thinking of broadcasting it. I have been told that this is not satisfactory. What is your opinion on basic slag for small grains? I also have 1 ton of it that I intend to use on barley land.

Answer:—Under your conditions I believe you would do well to apply the fertilizer close to the hills of corn at the time you are planting. Since you have not a corn planter with fertilizer dropping attachment, you will have to apply the fertilizer broadcast. If you have a grain drill with fertilizer sowing compartment, drill the fertilizer in so that it will fall close to the rows of corn. This should give you good results if carefully done. When fertilizer is broadcasted and not thoroughly worked into the damp soil it does not have opportunity to dissolve and supply quickly digestible food for the young corn crop. However, if you apply as indicated I believe you will get good results. Basic slag applied to small grain will give some results, especially if the soil is acid, since the slag carries some quick lime. The phosphoric acid of the slag is in the slowly soluble form and will not give you as quick results as will the phosphoric acid that comes from acid phosphate, or from bone. In a 20-year experiment carried on by the Ohio Experiment Station in applying a fertilizer where the phosphoric acid was supplied in the form of basic slag along with available nitrogen and potash, the station got an increase of 14.67 bus. of oats per acre, against an increase of 19.02 bus. of oats per acre where the phosphoric acid came from acid phosphate. When the value of the returns was averaged up for the 19 years on all the crops of the rotation the average net gain for the plot that received basic slag along with nitrogen and potash was $9.92, against that which received acid phosphate with nitrogen and potash, which was $17.63. The slag applied to the barley land should show some results, but not as good results as a fertilizer containing acid phosphate or a straight acid phosphate alone.

The Dairy

The best method of managing the herd bull is to keep him in a strongly built box stall, with a small yard outside, where he can exercise and see the other members of the herd. The fence around the yard must be well built and braced. Strong cement posts with iron pipe set in the cement connecting the posts makes an unbreakable pen. If a stout board fence is used, do not make the boards so high that the bull cannot see what is going on outside.

A sire that is not at least one year old is too young for breeding, and the first year that the animal is used for breeding, the amount of service should be limited. Because a bull seems strong and vigorous is no reason why its breeding powers should not be protected as carefully as is the case with other kinds of farm animals.

All bulls should be dehorned. This is a protection for the caretaker, and in addition the bull without horns is less apt to develop a pugnacious disposition. The bull should always be ringed and led with a staff, and if it is exercised by driving or using on a tread mill, the greatest care must be taken to avoid injury to men working around the animal.

When we consider what a poor sire can do to a good dairy herd and what a good sire can do for a poor herd, it is evident that more consideration should be given to the dairy bull. When every farmer realizes how much cash is thrown away by accepting service from scrub bulls, the dairy business will become more profitable, breeding fees will be paid with less grumbling, and all dairy organizations will develop more rapidly.

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The Sunday School

INTERNATIONAL LESSON
APRIL 6.

Lesson I. God Our Heavenly Father —Gen. 1: 1, 27; Psalm 103: 1-14; Matt. 6:24-34. Gol. Text, Matt. 6:9.

Gen. 1: 1, 27. In this great classic of the Bible, the first chapter of Genesis, it is declared both that "God created" the world, and that He "created man in His own image." This, in the mind of the Hebrew teacher, must have been the spiritual image of God, not a material or physical likeness, for the religion of Jehovah set itself against all images or material representations of Deity. It was in mind and heart that man was like God, for "there is a spirit in man, and the breath of the Almighty giveth them understanding." The book of wisdom (2: 23) says that God "made him an image of his own proper being." And so it is said of Christ that He is the effulgence of his glory, and the very image of his substance." God was in Christ. In His human nature, not in physical form but in mind and heart, He revealed God. Two great truths became clear to the Old Testament teachers, from this fundamental fact of God's creation. The first is that expressed in Psalm 24: 1, that the earth and all the people in it belong to God, and the second is that God is the Father of His people (Isa. 63: 16; Deut. 32, 6), or that He is like a father in His relation to them (Hosea 11: 1; Psalm 103: 13; Mal. 3: 17), or that, in the largest sense, He is Father of all men (Amos 9: 7; compare Acts 17: 24-29). This sublime fact of the universal Fatherhood of God, realized through faith and to be made known to all the world as humanity's birthright, is most clearly revealed to us in Jesus Christ.

Psalm 103: 1-14. Bless the Lord. This psalm is one of extraordinary beauty and simplicity of faith. It is marked by tenderness, trustfulness and hopefulness. Throughout there is the sense of the fatherly goodness, compassion and gentleness of God. He forgives, He heals, He redeems, He crowns "with loving kindness and tender mercies." He is gracious, slow to anger, and merciful. "Like as a father" He pities His people in their weakness and in their sorrows, for He who made us "knoweth our frame." No human friend knows us so well; and because we are His children and are like Him He knows intimately our feelings, our secret thoughts, our aims, our ambitions, our loves and our hates; and knowing these, He knows we trust Him.

Matt. 6: 24-34. Two Masters. This is one of the greatest lessons taught us by Jesus Christ. He Himself served God only. His one purpose in life was to do His Father's will (John 4: 34; 5: 30; 6: 38; Luke 22: 42). This purpose He pursued with unswerving steadfastness, courage and faith, even when the way of His ministry led to the cross. His example is surely for us to follow. The high service of God and of His kingdom calls us, and every other aim, or purpose, or duty, or task, must be secondary and subservient to this.

The origin of the word "mammon" is unknown. Some think it to be an old Phoenician word meaning "gain." Others suppose it to be a title of Pluto, the god of wealth. Here it evidently means worldly wealth or success. The man who puts gain, or wealth, or success in material things, first, is practically the servant of that which he seeks. He cannot serve God.

"Be not anxious," therefore, for these things. One may labor for worldly good, and use skill and energy and zeal and steadfast purpose in that labor, without becoming its slave. He may consecrate all his life and all his labors to God. He will "take thought" then, chiefly, how he may best serve God, and so serve his fellowmen, content even if such service should close the way to worldly prosperity or wealth.

Just as "the life is more than the food, and the body more than the raiment," so the things of the spirit are more than material things. "For the things which are seen are temporal, but the things which are unseen are eternal." And the unseen things are those in which our kinship lies to God, our Father in heaven.

"Your heavenly Father." All material good is in His hand. The man who does well his daily task, seeking always through truth, and honor, and fidelity, and kindness, to serve God, will not lack in material good. The God who feeds the birds and clothes the lily will care for him. "Seek ye first His kingdom and His righteousness."

The more the farmer and his wife work together, he helping her in-doors, she helping him out-of-doors with whatever task she can, the happier and more prosperous they will be. To pull together harmoniously is the great thing.

Children sometimes develop a sudden dislike for milk, especially when they are first allowed to sit at table and partake of solid food. A judicious mother will not increase the child's dislike for milk by forcing him to drink it, but by carefully concealed persuasion will endeavor to get him to take it of his own accord.

Aside from the incalculable good done by the Red Cross in its care for our sick and wounded soldiers has been its beneficial results in uniting the interests of women, in bringing country women in closer touch with those in town and village, and in the mutually helpful and businesslike way the work was done. The required accuracy gave added efficiency and fresh ideas to women who ordinarily work alone. In all the allied countries the great war has given new value to women's work both in the home and in outside labor. The training in nursing will benefit many a home; and surely the shattered men who have passed through the ministering hands of a woman's hospital unit must wonder that medical training was so long denied to women.

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.

Ontario's Daughter writes:—Please tell me the use of place cards; and what is meant by "favors"? How should wedding announcements be answered?

Place cards are used at more or less formal dinners and luncheons. They are prettily or cleverly decorated, usually in harmony with the event or the other decorations. The names of the guests are written on the cards, which are then placed on the table to indicate the place each guest is to occupy. On entering the dining room the guests seek the cards containing their names and seat themselves accordingly. Favors are little gifts which may form part of the decorations, and are to be carried from the entertainment as souvenirs of the occasion. Pretty little baskets holding salted nuts or candies are frequently used for the purpose; but toys, especially those having some significance in connection with the affair, person, or times might be used.

Answer the announcement of a wedding with a note of congratulations, if you know one or both of the contracting parties well; if not, send your card to the bride, if the announcement gives an "at home" date and address, mailing it so that it reaches her on that date.

Worried asks for an outline of a club paper on economy.

Outline your subject something like this:

Economy of money: it is necessary to keep books on the farm so as to know where the leaks are and stop them; the children's allowances.

Economy of food: how to prevent wastage whether at the table, in the orchard or from the grain bins.

Economy of clothing material: saving woollens by remaking and dyeing; purchasing good materials instead of cheap.

Economy of fuel: indicate how in a practical way certain rooms of the house can be entirely shut off in winter and not used and left unheated, thereby saving coal; show how kerosene or gasoline stoves and fireless cookers should be used in cooking to save coal.

Economy of time: draw up an exact schedule of work for a whole week, showing how, if a woman will plan her work this way in advance and work absolutely according to schedule she will not fritter away time.

Economy of strength: show how the use of labor-saving devices (carpet sweepers or vacuum cleaners, kitchen cabinets, bread mixers, soap compounds, patent egg beaters and so forth) are all savers of strength, show also how the use of labor-saving methods such as rearrangement of the kitchen so as to have stove, table, kitchen cabinet and sink within reach of each other and many other practical little methods that you yourself and every practical housewife can think out and share with her friends, will save strength; show how each woman should have a daily period of rest, an hour if possible when she can be absolutely alone and quiet either lying down, reading or resting in some other way.

Dairymaid says:—"We have just bought a new cow; her milk is rich and the cream heavy. After the first churning, which was not very fine butter, I have failed to get any butter after churning hours. I am an old butter-maker and cannot see why this is so. Can you help me?"

Perhaps your cream gets too old before churning, or you do not have it the right temperature. It is hard to say what is the trouble, not knowing the exact conditions. Cream is harder to churn when the cow is well along towards freshening, due to the greater fineness of the fat globules. Do you know how long she has been milking? Is she in good thrifty condition, and was she tested for tuberculosis when you purchased her?

Try sterilizing all milk utensils thoroughly, clean the cow when you milk, use a thermomenter to be sure the cream is the right temperature, and do not let the cream stand too long. Have you a county representative? Get in touch with him and he can perhaps give you expert advice or he will secure it for you from the college.

Housewife has a large supply of feathers and wonders if it is possible to make a quilt similar to those made of down.

Down quilts are filled by machinery, the down being forced into the stitched covering by air pressure. You can manage nicely, though, by making bags of a convenient size to handle, using a closely woven but lightweight material. Percaline would do nicely. Fill the bags half full with feathers, fasten the opening securely, then quilt in squares about five inches each way. Prepare two pieces of material for the covering; arrange the bags upon one piece so that the edges touch each other, tacking them securely in place. Add the cover for the other side and tack it in place. Finish the edges in the usual way.

Lena:—If you are willing that he should do so, just smile and say "Thank you." If you have made other arrangements, tell him so in a pleasant manner. 2. The girl should step ahead when passing others in the street. 3. If you are going to an accustomed pew, you should enter first, if not, the young man might lead the way up the aisle, standing aside when the pew is reached. A girl should provide her own offering. 4. In making introductions the name of the older person or of the lady is mentioned first, as: "Father, this is Mr. Smith," or "Mrs. Jones, let me present Mr. Smith," or "Mary, let me introduce Mr. Smith; my sister, Mr. Smith," or "Mr. Smith, this is my brother George." 5. Acknowledge an introduction by a smiling "How do you do, Mr. Smith." 6. Just a few words of thanks and appreciation for your friend's thoughtfulness. 7. It would not be necessary to make any remark. There would be no opportunity at that time. 8. Each wedding gift should be acknowledged as soon as received, by a short note from the bride-to-be. 9. Your question is not clear. If you refer to plans for your entertainment made by your hostess you should certainly be willing to do your part in making them a success. 10. Certainly speak to the acquaintances you meet in the street, merely bowing and saying "How do you do, Mrs. Jones," or "Good evening, Mr. Brown. 11. Note answer to 4. Your sister's name should be mentioned first when introducing a young man.

Bedtime Stories

"WHITE FOX."

"I wish your father was home," mother said to Jim, looking anxiously out at the storm. "He went out early this afternoon with the dog sledge. Still, we'd better sit down to supper. Probably he'll be along soon."

Father and mother and Jim lived far away in the cold country of Labrador, and like all the other men on that lonely coast, father was out fishing or hunting every day of his life.

Mother and Jim were scarcely seated at the table, however, when there came a loud scratching at the outside door.

"White Fox!" said Jim, jumping up and throwing open the door. A blast of driving snow blew in and there on the threshold stood the big leader of father's dog team. "But where's father?" said Jim. "And where's the rest of the team?"

White Fox gave a low whine. "She wants me to go with her, mother," Jim went on. "Father's in trouble."

Mother looked at Jim and then at the dog. Father must have help, but how? There were no neighbors within many miles. She would have been so glad to go herself, but she could not. Jim, she knew, was wild to be off, but could she let him? He was only fourteen. Suppose he got lost, too?

White Fox whined a third time and then mother spoke. "I'll have to let you go, Jim," she said. "Take father's lantern."

By this time Jim was half into his oilskin suit, skin mits and moccasins. He was ready to start. But mother called him back. "Jim," she said, "we'll kneel down and ask God to be with you to-night and bring you safely back with father."

When mother had prayed and Jim had listened with all his heart, he started out into the dark, the dogs hitched together and White Fox leading. It was a bitter night. Jim floundered and fell, got up and fell again, but good old White Fox never once fell or even halted. She knew just where she was going.

On they ploughed through the heavy snow—not a sound but the moaning of the storm—when suddenly White Fox gave a leap forward. Father must be near! "Father! Father! Father!" Jim shouted. In a moment more White Fox had jumped into the bushes and there lay father.

There were three happy people at daybreak next morning when the faithful dogs pulled up beside the doorway where mother was waiting. White Fox and Curly and all the rest had some special tidbits for breakfast and no one could praise them enough. But father and mother believed it was something else that really saved father and Jim. They think it was that prayer that mother made. And Jim thinks so, too.

"He who is pleased with himself grows no more."—Alexander Maclaren.