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.

R.B.:—Last fall I plowed seven acres of clay loam. Has been in sod for ten years I understand. I intend putting it in sugar beets if I can get a "contract" from the factory. If you think it advisable. I can manure part of it by hauling it from city, four miles. Would you fertilize the rest of it?

Answer:—I believe it surely would pay you to fertilize your sugar beet ground in addition to such manure as you may be able to obtain to put on it. Quoting from actual tests the Wisconsin Experiment Station reports that it obtained an increase of 49.1 per cent in yield and 47.3 per cent in sugar content by fertilizing sugar beets. The Division of Chemistry at Ottawa quoted in 1916 an experiment which mangels where without fertilizing they got 81 bushels to the acre. By the use of 1331 lbs. of high grade fertilizer per acre they increased this to 676 bushels to the acre.

For fertilizer on beets I would advise you to use a mixture containing from 3 to 4 per cent ammonia, about 8 per cent phosphoric acid and about 3 to 4 per cent potash. See that this is worked into the soil thoroughly at the time the seedbed is being prepared for the sugar beets. Apply the fertilizer at the rate of 500 lbs. per acre.

Certainly under normal circumstances if you are not too far away from the factory sugar beets is a good crop to grow. The cultivation cleans your soil of weeds and the deep-rooted nature of the crops st'rs the soil so that the mechanical condition is greatly benefited by growing this crop. A medium clay loam supplemented with fertilizers as indicated should produce a large tonnage of high grade sugar beets.

L.J.:—Will you tell me how much seed of the various clovers and grasses to sow per acre, and whether different soils need different amounts? Also, if there is alfalfa that will not heave out. We got a good catch, but the next spring it heaved out until it didn't amount to much. Our soil is a gravelly clay.

Answer:—It is common to sow from 10 to 18 lbs. per acre of the various clover seeds, although fairly good catches have been obtained under conditions of superior soil preparation by a less amount. When grass and clover is mixed it is common to use about 8 lbs. of clover and about 4 lbs. of grass seed per acre. The fact that the seed is being sown on different types of soil has not as much to do with the quantity as has the nature of the soil preparation. Of course if the soil is not in first class mechanical condition it is necessary to increase the amount you mention so as to allow for some of the seed not germinating. There is no alfalfa that may not be heaved out of the soil by the action of freezing and thawing. The thing to do is to drain your soil. It is pretty clear proof if the clover or alfalfa heaves that the water which comes from the fall rains, stands in the soil, where it freezes and heaves the crops. Draining is the only cure for such a condition.

Subscriber:—I have five acres of sandy soil from which I took off a crop of rye last year. What can I plant this to next spring to get a crop of hay the same season?

Answer:—The only mixture that will give you a crop of hay the same season that you sow it is a mixture of such grain as barley and oats or peas and oats. These may be sown at about the rate of a bushel each to the acre. If cut when green they make a good quality of nutritious hay, especially the mixture of peas and oats.

H. J.:—Can you give me full directions about spraying an apple orchard. Also about pruning. The orchard on this farm has been neglected for years.

Answer:—Space would not permit our giving full instructions for the spraying of the apple orchard. Indeed you would do much better to write the Ontario Agricultural College and ask them for their spray calendar also their literature regarding pruning. These will give you exact information regarding the question in hand.

Beside spraying and pruning you should look to the fertilization of your orchard if you expect to bring it back quickly to the most prolific bearing. Neglected orchards in Ohio were made to yield 145 per cent more by proper fertilization of the crop. A prominent apple grower of Blenheim, Mr. W. M. Grant, renovated an old orchard of 4½ acres so that now it is yielding over 1600 bushels of apples. He used about 12 lbs. per tree of a high grade fertilizer, scattering it around about the area covered by the branches of the tree and working it into the soil as the orchard was tilled.

W.W.:—I have an old meadow that I want to put into wheat in the spring. What fertilizer is necessary to get it into good shape? It was not plowed last fall.

Answer:—After spring plowing your meadow I would advise you to use a fertilizer from 2 to 3 per cent ammonia, 8 per cent phosphoric acid and 1 to 2 per cent potash, applying it to the soil at the rate of about 250 lbs. to the acre. If you have a grain drill with fertilizer sowing compartment you will get the best application by putting the fertilizer on in this way. If you cannot get such a drill, fairly good application can be gotten by broadcasting the fertilizer before the last disking and harrowing.

R.B.:—Would you advise buying a tractor for a hundred-acre farm, fairly level? Would I need to remove many fences? I have never used a tractor. Is it hard to manage? Full particulars will oblige.

Answer:—It is hard to answer your question regarding the advisability of buying a tractor. Provided a considerable amount of the land on your farm is under tillage and you are near enough to town so that you can grow considerable money crops I believe a tractor is an economy. It can be handled most profitably if the fields are of a shape that farm machinery can be used without much end-turning. As a rule the average tractors on the market are comparatively easy to operate, especially if the operator is somewhat of a mechanic and is willing to give sufficient attention to keeping the parts of the machine in good shape. For definite information I would advise you to apply to the Farm Mechanics Department of Ontario Agricultural College and consult with the engineers of a good tractor company.

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Making the Country Store Work for the Farmer.

One chilly fall day a typewriter salesman stepped off at a country railroad junction, with a couple of hours' wait ahead of him. There was no town there at all—just one rambling general store. The storekeeper had opened a big box and was taking out horse blankets. The salesman watched him.

"Have you got any printed letterheads?" he asked suddenly.

"Yes. Why?" said the merchant.

"I believe I can help you sell those horse blankets," replied the salesman. He had a sample typewriter. Sitting down with some carbon sheets he quickly wrote twenty-five letters to farmers whose names were given him by the storekeeper. He told them that a new load of horse blankets had come in, named the prices, and reminded folks that it was humane and also good business to look after a horse's comfort.

"When I come back this way next month I am going to ask you to buy a typewriter," announced the salesman. "I am sure those letters will make you want one."

Several weeks later the storekeeper was waiting with a typewriter order, for the letters had brought him several hundred dollars' worth of trade. Farmers had never got a business letter from him before. They came in to buy horse blankets on his friendly tip, and also bought other things.

For fifteen years or more the country general store has been ailing. Until lately country storekeepers believed that the trouble was price competition of mail-order houses — many still believe it.

But now it is gradually becoming clear that competition is not a matter of prices at all, but of service to farmers. Here and there over the country the storekeeper in a farming town has demonstrated that with service to one's farm customers it is possible to build up a big business in the smallest place. There are not many such stores yet. But in scattered places merchants enterprising enough to go after farmers with service have proved that the principle was right. Neither mail-order competition nor a small town are handicaps. Farmers prefer to buy near home if they are given service, and even to pay a little more for convenience. A country store serving a population of from 500 to 2,000 buys as much merchandise as a factory town of 5,000 to 10,000 people.

How can a country store serve country people?

In many ways. When the merchant with a new stock of horse blankets reminded farmers round about that the time had come to keep horses comfortable he made a beginning in service—simple enough, but on the right lines.

One of the most thriving country stores known to the writer is in a village of 200 people in sparsely settled farming country. This store operates a flour bank. It buys flour by the carload, at the lowest price and freight rates, and sells farmers coupon books good for five or ten or more sacks of flour. It has a special room for storing flour, where it is kept dry, clean, and safe from pests. The farmers who hold coupons on the flour bank come in and take out flour as needed, get the benefit of car-lot prices and freights, and are not troubled with storing flour at home. As coupons are bought before the flour is wanted, that furnishes money to finance the business; and the flour bank draws customers for other merchandise.

This town had no ice plant—few country towns of that size can afford one. But the store installed an eight-ton artificial ice plant, with a cold-storage room large enough to hold a carload of eggs, butter, and other perishables. Farmers bring in perishable stuff during the season of heaviest production and lowest prices, the store paying them cash, and holding produce in its cold-storage plant until there is a car to ship to the city. Ice is also sold to the farmers to take home.

Each summer this store takes a neighborhood census, covering both the things farmers will have to sell at harvest and the things they will want to buy. This is as smple as it is convenient. Postal cards with printed reply forms are mailed to every farm for 15 miles around, asking for estimates on what each farm will sell and buy. About one farmer in four sends back his figures, and thereby it becomes possible to organize the handling of farm stuff and get it away to market during the rush season.

What do you think of a store that has a correspondent in every village and township throughout the territory from which it draws customers? This store has a staff of correspondents, and they send in information which furnishes a foundation for service. Farmer Jones intends to build a barn—the store can help him with tools and hardware. Farmer Smith has a new baby—it is quickly reported, and his wife is congratulated, and the store serves by selling the things that babies need.

City department stores serve women, understanding that they are the purchasing agents of the home, with a perplexing, responsible job on their hands. This store has built up a service to country women, the purchasing agents for farm homes. Maybe the farm home needs painting. Somebody will choose the paint and the color. This storekeeper assumes that it will be a woman's selection, and sees that the farmer's wife has color charts and paint prices. City women buy things in small packages—starch in one-pound boxes, crackers in ten-cent cartons, tea in one-pound packages. Country people have more pantry space and go to town infrequently. So this merchant gives service by selling starch in special three-pound boxes, crackers in ten-pound drums and tea in five-pound packages. A lot of attention is likewise paid to what goes on around the countryside. If a farmer buys a new auto, the store knows the day he drives it home, and he is invited to bring it around so the storekeeper can see it. If the farmer's daughter is going to school this fall, she will need a sweater, and the store writes about sweaters to Mary herself, and waits on her personally when she comes to buy, respecting her choice before that of her parents, and treats her with an understanding of the personal importance of that sweater to herself.

The country neighborhood and the country store are bound up together. Big cities and big city stores constantly exert a destructive influence upon both. If the country store is losing business and the country neighborhood losing population, the same influences are probably at work. Country merchants used to insist that it was the farmer's duty to patronize them, and grumbled when they saw goods coming in from the mail-order houses, or watched farmers' wives taking the train for a city shopping tour. But to-day the country merchant thinks along another line—he admits that it is his duty to serve farmers, and through good service bring customers to his store.

Bedtime Stories

A Little Bear Story.

Once upon a funny time a little polar bear went to sleep on top of an Eskimo's house and slept and slept and slept. Pshaw, it was four days before he awoke and then he was stiff as his great-grandfather Shaggyhair. Why he could hardly limp home and when Mother Polar Bear saw him snuffing into their big cold comfortable snow house she threw up her paws and telephoned for Doctor Penguin.

Doctor Penguin came with a green umbrella and a big bag of pills. He listened to little bear's heart and he felt his pulse, then he shook his head and said:

"He's caught a terrible—a terrible—"

"What?" begged Mrs. Polar Bear, wringing her paws.

"A terrible HOT!" rumbled Doctor Penguin.

"He must have been near a fire!"

Then all the family came and stood around little bear's bed and fanned him, and Mother Polar Bear put a cake of ice on his feet and pretty soon, that is, in about three days, he was nice and cold again. But after that he never went to sleep over warm ovens because he didn't want to catch any more colds—pshaw, I mean hots.

A Home-Made Trailer.

My trailer was made out of an old-fashioned surrey. It was worn very little, and stands up under any work like a new rig. I shortened the pole to six feet, and had my blacksmith make a coupling for the end, and another one that fits around the rear axle of the light car which pulls it.

The surrey didn't cost me anything, and the blacksmith's work cost 50 cents. When I load a pig, I place the loader on the rear of the trailer in which I have a hog box, and we are soon on our way.

I drive about 18 miles an hour, but take the corners pretty slow. It does not seem to require much extra power.

Of course, a trailer with rubber tires, bumpers, and so on would be still better; but this serves very well, and will keep on going until I am ready to buy a truck, or a better trailer built especially for the work.

Life of a Motor Truck.

A motor truck of standard make, with attention such as should be given a machine of the class, should run 100,000 miles. Some trucks have longer records than this, which would seem to indicate good running conditions and excellent care. One should expect a certain amount of repairs, and these repairs should be made as soon as apparent wear is seen. In this way only is it possible to get the maximum service from a vehicle.

The Sunday School

INTERNATIONAL LESSON, FEBRUARY 15.

Peter and Cornelius. Acts 10: 1-11: 18
Golden Text.—Romans 10: 12.

10: 1-8. Cornelius was a centurion that is an officer of the Roman army corresponding to our captain. Six of them were usually attached to a cohort, or battalion of 500 to 1,000 men but they were sometimes detached for special duty. The town of Caesarea on the sea coast was the residence of the Roman governor, and was probably garrisoned at this time by a band, or cohort, of volunteers from Italy, hence called "the Italian band." Cornelius had a house of his own, and a high place in the regard of the Jews, so may have been resident there for some years. He was evidently a man of exceptionally fine character, devout, generous, and kindly, "one that feared God with all his house, who gave much alms to the people, and prayed to God alway." He was a good soldier and gentleman, in the best sense of that term. Whether he had ever heard of Peter, or knew anything of the gospel of Jesus Christ before this time, or not, we do not know, but it is probable that he had (See 10: 37.) In the vision which came to him he was instructed to invite Peter to visit him.

9-16. Peter "fell into a trance." The house-top, flat and easily reached in oriental houses, was a favorite resort for prayer. In a trance, or day-dream, while he waited for the food which they prepared for him, he saw a vision which touched very closely his Jewish prejudices and traditions. The ancient law which it had been an essential part of his religion to observe, forbade the use of certain kinds of meat (See Deut. 14.) But the vision bade him put aside that law, when that which was set before him Gor had made clean. The old law and custom had its value, but Peter has to learn that there is a higher law. Thus he is prepared for the coming of the messengers and the invitation of Cornelius. Compare Mark 7: 14-23.

30-42 God is no Respecter of Persons. The gist only of Peter's speech is given. He must have spoken at much greater length. He begins with a very humble and sincere confession of the truth which he has learned. It is not race, orb lood, or color, or customs and forms of religious practice, that make a man acceptable to God. The Old Testament itself might have made that plain to the well informed Jew, if its more spiritual teaching had not been obscured by the emphasis put by priests and Pharisees upon observance of the law. See for example, Micah 6: 6-8; Isa. 56: 15; Psalm 51: 16-17, and especially Psalms 15 and 24. Compare also Rom. 3: 29.

The Word Which He Sent (v. 36) is the gospel message, the substance of which is the story of Jesus of Nazareth, how that God anointed him with the Holy Ghost and with power (v. 38.) Peter assumes that they have heard the story, and declares that Jesus, who was crucified, is risen again from the dead. And, he said, "We are witnesses." "We saw what He did in the country of the Jews and in Jerusalem. We witnessed His death. We saw Him and ate and drank with Him after He rose from the dead. His coming was foretold by the prophets. To everyone that believeth in Him, his sins shall be forgiven." Upon the little company listening with rapt attention came down manifestations of the Spirit's power, for Peter and those who were with him "heard them speak with tongues and magnify God."

11: 1-18. When Peter was come up to Jerusalem and strict Jews found fault with him for what he had done, he simply told the story, sharing his wonderful and convincing experience with them. What could the narrow-minded fault finders do but hold their peace and give thanks to God?

Poultry

Because of its high nitrogen content, poultry manure is quite valuable as a fertilizer, and we find that we can make a high-grade fertilizer cheaply by conversing it carefully. When practicable, we take the manure from the poultry house and store it in a tight container just outside the building before it is mixed into a fertilizer. Or, when the poultry houses are cleaned out, the litter is placed in the manure spreader, to which is added about 300 pounds of acid phosphate to a load of the manure. This combination, we think, makes a mixture equal to a high-grade fertilizer, and we use it to sprinkle lightly over meadows or crops requiring heavy fertilization of valuable food elements.

We find that in growing rape for swine forage, if we sprinkle manure at the rate of about four tons to the acre over the soil after the seed is sown, it gives the rape a quick start, and makes it produce a very luxuriant forage. The fertilizer, in all events, contains a high amount of available food for plants, and should only be used chiefly on crops that will support and require heavy fertilization. The effects of the treatment is seen for several years afterward on the succeeding crops.

Profiteering is taking all you can get, and giving as little as you can. How about some cows and hens?

Chickens are just like the rest of us. If they don't have to work, they won't. Instead of throwing their grain on a bare floor, scatter it through light clean litter and let them get some exercise by scratching for it.