

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.



J. R. M.: What do you know about this new clover seed? Do you think it would grow good on sandy land one hundred and fifty miles north of Toronto? What is the proper method of sowing by hand or seed drill, and how much per acre? Also, about what time should it be sown and cut for hay? Do you think this man is asking too much per pound? Do you sow in spring like oats and cut same year or sow oats or rye for a nurse crop and cut clover following season? Is it good for more than one season? I would be very much pleased to receive fall particulars regarding this new clover.

2. Can you tell me if there is a machine made for sharpening disc harrows? If so, where could I get one? Could I use same by hand or with a gas engine? I have no engine. If so, how much would one cost?

3. How much per ton does ground limestone cost? I have a piece of ground that seems to be sour. It gets hard after seeding. How much per acre? How should it be applied, after seeding or before? Where could I get same?

Answer: Huban sweet clover is a plant which was discovered at Iowa State College, Ames. It is much like the ordinary alfalfa clover, except with the exception that it makes more rapid growth and completes its life cycle in one year. When grown in a comparatively warm climate like Southern Iowa or Illinois it has been found to produce large crops and of course adds considerable humus and nitrogen to the soil. In a region one hundred and fifty miles north of Toronto I doubt very much if the season is free of frost sufficiently long to mature seed. However, the clover would make a splendid growth for hay and many stock feeders claim that they get good results from cutting it and putting it in the silo. The seed can be sown early in the spring along with oats or barley. Use not more than a bushel and a half of oats or barley to the acre when seeding with sweet clover and sow 6 to 8 lbs. of clean clover seed to the acre. If possible use an early variety of oats like Daubeny or early Champion. Understand, of course, that Huban clover is a one season crop and does not last over like other sweet clover. In order to ensure a catch to 200 lbs. per acre of a fertilizer supplying about 3 per cent. nitrogen, 8 per cent. phosphoric acid, and 3 per cent. potash at the time that you sow the clover and grain. This will hasten the ripening of the grain, improve its yield, and greatly assist in getting a catch of clover.

2. I do not know of a machine other than the grindstone for sharpening disc harrows.

3. The price of limestone varies at different places. I have heard it quoted from \$1 to \$3 a ton. I would advise applying at least 1,000 lbs. of limestone per acre, scattering it on top of the plowed furrows and working it in by disking when you are preparing your seed bed. Any of the fertilizer firms of Ontario handle limestone, also it can be obtained in the vicinity of Beaverville and from other sources.

D. H.: We have a farm which is a light sandy soil with a hardpan bottom, and it has been run quite a little while, so I plowed up sixty acres last fall and want to put a crop on this spring to turn under, and my idea is to sow a crop of white turnips early this spring, and figure that I can turn that crop under and sow it to buckwheat, and also turn that under in time to put in a fall crop to turn under another year. Or what other crops would be best? As I have to build the land up, and would like to build it up in the shortest possible time, please let me know the best kind of white turnip seed and also buckwheat, and also the best kind of seed I could put on in the fall.

Answer: The idea of plowing under white turnips as a soil improving crop is rather out of date. You would get a great deal more good by plowing under a mixture of peas and oats or oats and soybeans, or some other rapid growing mixture, preferably containing a legume such as peas or beans. If it is possible to get a good stand of sweet clover on your soil, why not grow some of this rapid growing legume and turn it under. Besides adding humus this will also add considerable nitrogen. When you are seeding to your crop it would be well to fertilize as indicated in the answer to the question above.

V. W.: Have only a small farm but have four acres of hill land that I cannot get a catch of clover on, has not been good since plowed one spring when quite wet, for once. I want to try alfalfa on it. Will you think and want to know if you apply lime I could get a good catch of alfalfa if we put

that it is not satisfactory to leave it over as a clover sod for the following year.

E. T.: Can you tell me how to treat my currant bushes? The leaves are affected by some kind of disease which turns them an orange or rusty color. They curl and the bushes do not grow. What is the best way to trim currant and gooseberry bushes?

Answer: I cannot tell from your description just what is the matter with your currant bushes, but I would suspect that it was Leafspot. The best cure that I know for Leafspot is to spray with a mixture of Bordeaux during the early part of the season. The disease is a fungus disease which kills the fungus. It is made up of 1 lb. of quicklime, 1 lb. of copper sulphate dissolved, to 8 gals. of water. Dissolve the materials separately and mix, using them immediately. Do not use the material which has been standing for some time, since it will not be of any avail. Practical cane growers trim out the dead wood from currant and gooseberry bushes early in spring before the sap begins to rise. They follow this with a slight trimming of the branches that tend to grow excessively long.

S. M. F.: I wish to plant some onions this spring on good muck soil. What kind and how much fertilizer would it take for one acre? Also, how many bushels does it take for a carload?

Answer: For fertilizers for onions grown on muck soil I would advise 500 to 750 lbs. per acre of a fertilizer analyzing about 2 per cent. to 3 per cent. nitrogen, 8 to 10 per cent. phosphoric acid, and 4 to 6 per cent. potash. This should be applied half broadcast and half through the drill at the time the seed is sown. Freight cars are of various capacity. You will be able to learn a definite figure by getting in touch with any of the freight agents in your vicinity.

Says Sam: Slovenly farming is a form of impiety.

The same adjectives and enthusiasm you use in describing those good calves to your neighbor, if put into an advertisement, would probably sell them.

The Sunday School Lesson

APRIL 30

Isaiah's Summons and Response, Isa. 6: 1-8. Golden Text—Here am I; send me.—Isa. 6: 18.

Time—B.C. 740.

Place—The Temple at Jerusalem.

Connecting Links—Isaiah was the first great prophet of the Southern Kingdom. Before him Amos and Hosea had preached to the Northern Kingdom and he was doubtless familiar with their teachings. He was brought up in Jerusalem, where he mingled freely with its most influential citizens and perceived clearly the trend of Judah's politics and life. As a young man he witnessed the brilliant reign of Uzziah, which was marked by great material splendor and prosperity (2 Chron. 26: 5-16) as well as by folly, wickedness and social injustice. The removal of Uzziah from the throne enabled Isaiah to see a higher king and a better kingdom.

I. Isaiah's Vision, 1-4.

Isaiah's vision came while he was worshipping in the temple. He fell into a prophetic ecstasy, during which the earthly temple was transfigured into the heavenly temple where God dwells in glory, and various apparitions in the temple became symbols of great spiritual realities.

V. 1. In the year . . . died. We do not know whether Uzziah was already dead or a leper isolated from his kind (2 Chron. 26: 21) when Isaiah received his call; in any case the sight of the proud, successful king humbled and punished by God would cause the young Isaiah to revise his estimates of life. I saw . . . the Lord. The description of God is impressively brief. For other visions of God see Ex. 33: 20-23; Amos 7: 7; 9: 1; Ezek., ch. 1; Dan. 7: 9. **Sitting upon a throne.** The temple was regarded as the special dwelling place of God, and Isaiah in the earthly temple but rising far above it. **High and lifted up.** To the prophetic mind God is both in the world and above it. His kingly majesty, because above the world, is free from its changes and imperfections. His train. The lower portion of God's robes flowed down from His throne and filled the entire floor space of the temple.

V. 2. The seraphims; are celestial beings, not mentioned elsewhere in the Bible. They are represented as the guardians of God's throne who repel from His holy presence all things profane and sinful. The posture of their wings, as described by Isaiah, indicates reverence, humility and service.

V. 3. It is probable that the seraphim sang antiphonally, one choir chanting the first half of the verse and the other the second half. One of the functions of the seraphim thus appears to be praise. **Holy, etc.** The threefold repetition of the word "holy" gives the sense of absolutely holy. Isaiah filled the word with deeper content; it now became not only the idea of separation from sin but positive, moral perfection. "It covers the impressions which God makes on man as a sinner" (G. A. Smith). Isaiah's favorite designation of God was "the holy one of Israel." (Glorious, Usually in the Old Testament "glory" denotes the nimbus of light which is supposed to surround the presence, Ex. 24: 22. Here it seems to be "the expression of holiness as beauty is the expression of health" (G. A. Smith).

V. 4. Filled with smoke. This may have been suggested by the incense from the temple service. A cloud fre-

Smoke

OLD CHUM

The Tobacco of Quality

1/2 LB. TINS—and in p'kgs.

Making Horses More Useful

Some Things Every Farmer Should Know

BY WILFRID E. DIEGEL.

In hitting a young and nervous horse, care should first of all be taken to observe whether his mouth be sore or tender, and if so, the mouthpiece should be covered with leather. In any case, a bit with a large, smooth mouthpiece is far better than the sharp and cruel instruments often seen. When harnessing a horse the bit should be attached to the bridle by the off-side check-strap only, and the animal, unless it is tender about the ears, will usually allow the bridle to be quietly adjusted in its proper place. Then taking the hanking bit in the left hand and grasping the near-side fingers of the right hand, insert the first and second fingers in the mouth which the horse will involuntarily open; the bit can then be deftly brought up into its place and fastened almost before the horse is aware of it. Take plenty of time and use the horse very quietly. When gentling a young horse it is advisable for a week or two to keep a mouth-bit in the mouth while standing the animal in harness, say for an hour and a half in the morning and again in the afternoon.

Teaching a Colt to Back.

Many experience difficulty in training a colt to back. There should be no difficulty in this if proper methods are followed. The following method is a good one: "After the colt fully understands the legitimate use of the halter in leading is a good time to teach it to back—an important and necessary duty in its after life of usefulness—which is easily accomplished by complying with the natural law again, by pressing the extended finger of one hand between the point of the shoulder and the breast bone and using the other hand at the halter strap simply to keep the colt straight in line, to back in any desired direction. Do not try to force the colt backward by "yanking" at the halter or bit, but simply press in his sensitive chest cavity with the fingers, and the colt will naturally go backward, provided there is nothing of any obstruction behind it. When this pressure has been made at the front and the colt moved backward (if it is only one step) you should be satisfied and try it again. About the third time this pressure has been made is a good time to associate the word "back" with the pressure, and you will be surprised to see how soon the colt will comprehend what is wanted, and how willingly the young thing complies with your every wish as soon as it understands what is wanted.

Starting a Bally Horse.

A remedy which will start a bally horse almost every time is as follows: When a horse balks—no matter how badly he balks or how ugly he is—do not beat him; don't throw sand in his ears; don't use a rope on his forelegs or even burn straw under him. Quietly go and pat him on the head a moment; take a hammer or even pick up a stone in the road; tell the driver to



His cows were going on pasture so poor that they could hardly stand. He had lost two or three cows and some young stock. He had spent \$1,000 for feed during the winter, and could see no way to go beyond that. He realized that most of the summer would be gone before his herd would regain its usual condition. No herd can fully recover from such a period of starvation as his conviction. Now what was wrong?

He had cut his forage just as close as he could estimate his needs, and the season had cut it much more. He had no silo to make use of his corn in a way to get full results from it. He underestimated the price of feeds, and when too late realized that he was going to find it very hard to pull through the winter and keep his stock alive, and he tried to feed as little as possible and keep the cows strong enough to come through to grass, but he failed with some.

Of course, a silo with nothing to put into it would not feed his stock, but with it he could have saved much more of the feeding value of what he had, and he could have purchased corn in the field to fill it much cheaper than he could buy alfalfa and other roughage in winter.

The dry summer and fall were directly responsible for his failure to have feed, but he should have provided against such an emergency. In no way could this have been done better than by building a large enough silo to carry them through safely.

Corn will make pretty good silage, even if it does not produce any grain; and if we have plenty of it we need not fear that the cows will die of starvation.

Farmers who have taken their sons in as partners, instead of as hired men, chuckle to themselves when neighbors complain that their sons are leaving the farm.

sit still, take his lines, hold them quietly, while you lift up either front foot; give each nail a light tap and a good smart tap on the frog; drop the foot quickly and then tell him to go. In most cases he will go right on about his business, but the driver must keep his lines taut and not pull or jerk him back. This may make some horsemen smile, but a horse has more common sense than most people are willing to give him credit for. The secret of this little trick is simply diversion. With kindness and proper treatment a horse can almost always be made to go.

Another method is as follows: Take a small rope and firmly attach it to the horse's tail. Take a turn on the doubletree or cross-bar, giving slack enough to tighten the traces. If the horse refuses to pull, tighten this rope until the draft comes on the tail. No horse ever refuses to pull by his tail. When the horse starts, the tail-hold may be relaxed until the draft comes on the traces again. Many balking horses will refuse to start, but others will start off all right, but if stopped will refuse to pull. The way to treat this form of vice is to pull on the tail rope until the draft comes partially on the tail. Then he will go. The tail draft may then be gradually relaxed until all the draft rests on the traces.

Persist in this treatment and a permanent reformation is a sure result.

Kicking in the Stall.

For the habit of kicking in the stable, it is a good plan to fasten a chain or strong rope across from post to post behind the animal, about three feet from the floor. A horse almost invariably backs up as far as his halter rope will allow before commencing to kick, and if he cannot get back he is very likely to stand up in his place and behave himself. Another plan is to fasten a chain about a foot long to one hind pastern by means of a strap.

Halter Pulling.

A very good plan to break a horse of halter pulling is to pass the halter rope through the manger ring and bring it back between the fore legs attaching it to a rope tied around the body. Another plan is to pass a double rope back through rings on a surcingle, and fasten them to a crupper. When either of the above methods is adopted the animal should be urged to pull back which he is not likely to do more than once.

A very good diet to build up a horse is oats, barley, bran and flax. The bulk of the food should consist of oats and bran. It is well to have the oats chopped and mixed with one-quarter their bulk of bran. A horse may receive from four to five quarts of this for the morning and noon meals. In the evening the feed may consist of about three quarts of boiled barley, one quart of boiled flax and a quart of bran seasoned with salt. The hay fed should be of good quality and be given in no larger quantity than is eaten up clean in one hour three times daily.

Keeping the Boy on the Farm

The subject of "Keeping the Boy on the Farm" has been discussed at length from many angles and for many years, yet we are still talking about it. I would like to add my page to the books of discussion; it may exhaust my readers, but not the subject.

I talked to a man last year who had raised seven boys, most of whom stayed on the farm. The old man had educated them, given each one a start, and had himself retired at seventy with an ample old-age fund.

"How did you keep them interested?" I asked. "How did you get them to stick?"

"Pride of ownership!" he replied, "pride of ownership! They had things all their own from childhood—that did it! Besides, when I gave them anything it was their for keeping—it was not in play. They were 'little men,' they were!"

Pride of ownership, real ownership, is, I believe, instinctive with every one. The man without it, to my mind, needs either a physician or a guardian. I know a man in a town of 15,000 people who has a house worth \$5,500. Just at present he could get eight per cent. for his money if he sold the house. That makes \$440. He pays \$100 in taxes, while upkeep and depreciation cost at least another \$100. In other words, he pays \$700 per year to live in a house that he could rent for \$350.

"Why don't you sell?" I asked him.

"Sell, nothing!" he replied, "the feeling I have in owning the thing is worth more than \$150 per year."

There's the point,—that feeling! It keeps this man in a house, and I believe in a large majority of cases it would keep a boy on the farm.

You must remember, however, that I mean real ownership, not play ownership. Sometimes a father on a farm says to a boy, "That's your pony, now, so you must take good care of him!" This the boy does until the father wishes to sell the pony and does sell him. Then it is different. The boy takes mighty good care of the money he sold for. If the boy has pepper in his make-up he begins to long for the day when he will "live some place else and really own something."

I wrote a little poem once, the kernel of which is in the following lines:

Why did you leave the farm, my lad?
Why did you bolt and quit your dad?
Why did you beat it off to town,
And turn our poor old father down?

I left my dad, his farm, his plow,
Because my calf became his cow;
I left my dad,—'twas wrong, of course,—
Because my colt became his horse;

I left my dad to sow and reap,
Because my lamb became his sheep;
I threw my hoe and stuck my fork,
Because my pig became his pork!

If you don't want the lad to stay by you, farmer fathers, then don't bother your head about him. But if you do want him, try to develop, or rather gratify, this instinctive pride of ownership. Give the boy things that he "can keep or sell himself, and everything." Try it, anyway.

Outlook for Cattle.

While the outlook for cattle may not be the very brightest, with the ravages of disease in Britain, the unsettled state of Europe, and the embargo in France against British imports, there is likely to be some improvement ere long. The disturbance of the movement of frozen meats and cannot go on indefinitely and something approaching normal conditions must return. Canada should be prepared to take advantage of the changed situation when it occurs. That some such views are held by the Dominion Live Stock Commissioner is suggested by the remark, in his comprehensive review of last year's trade, that unless foot-and-mouth disease is soon controlled in Britain it is probable that a continuation of the strict quarantine regulations will effect the movement of frozen meats and clear out the storage for frozen supplies. It is obvious that this would be beneficial to all classes of the trade and more than anything else bring supply and demand nearer to adjustment. Further on in his report the Commissioner says that unless reports and market conditions in the United States have been badly interpreted, Canadian cattle should make a better showing than during last year. This should occur despite the Fordney tariff, for cattle authorities in the United States insist that there exists a shortage, and point as proof to the poor showing of certain of the heavy producing areas. Short supplies and strong markets are expected to materialize as a result. During the war all classes of live stock were ruthlessly slaughtered, and breeding has not yet had time to replace the animals exhausted and an improvement in economic conditions, which perform must come, there can hardly fail to be a betterment of the market.

In building hoppers, supply a foot of feeding space for each six hens.

Take care of the pasture; don't turn stock on it too soon. Let the grass get a good start.

It was an Ohio farmer who by rearranging his fences, saved himself and his team 4,300 turns in a year. There is no law against any farmer trying the same plan.

For Home and Country

Institute School News

Elphine (Lanark Co.), have equipped their two schools with dishes for a hot lunch.

The members visited the school one Friday afternoon, taking sandwiches and cake as a treat for the children, the latter in turn entertaining the visitors with a very nicely executed program.

A quilt and some other articles were sent to the Soldier Settlement Board, Toronto, and a needy family in the neighborhood was also helped. A concert and lecture on "The Soul of the Nation" contributed to the funds of the Institute, and the social brightness of the community life.

Crowland (Lincoln Co.) is arranging for a debating contest between the schools represented in their Institute area, the Institute giving the prizes.

Malden Branch have placed wash basins and rolls of sanitary towels in the seven schools in their district; have distributed dustbans, and had the cracks filled in all the schools which were without oiled floors, and by interviewing the trustees had sanitary containers for drinking water installed, and individual drinking cups. Prizes given at the close of school for the summer holidays for regular school attendance have greatly raised the average attendance in the schools. This is community work well worth while.

Just What We Women Need.

Gormley Institute have completed a most successful and enjoyable Demonstration Course in sewing. "I never was so well pleased with any two weeks' education," reports a member enthusiastically. "It was just what we women need in our homes every day. The Instructor was A1 and certainly has the ability to make things very clear."

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MICA AXLE GREASE

The ground mica in Imperial Mica Axle Grease smooths the spindle by filling the minute crevices in the steel. Over this the grease works easily, eliminating friction, heat and wear. Saves the strain on horses and harness. It goes twice as far and lasts twice as long as other greases.

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EUREKA HARNESS OIL

Fills the pores and protects the fibre of leather from the action of dust, sweat, moisture and heat. Keeps harness strong, flexible and non-sticking. Doubles its life and gives it a rich, black finish that lasts. On sale everywhere in cans from a pint to a barrel.

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