

# 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. 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—B.E.W.:**—I have a field of corn which is now clean and growing very rapidly. I wish, however, to grow a green crop to plow under next year; and have a farm that has been run quite badly; but as you know, the corn crop this year is very late, and its value, if matured, will be greater than usual. Will the sowing of a cover crop now interfere with, or detract in any way from the present crop ripening early? And how much vetch and rye should be sown per acre?

**Answer:**—Regarding sowing a cover crop in your corn at this stage, I believe it will do no injury to the corn. You will gain in green material which you can plow under to improve the condition of the soil. A good mixture to sow is a bushel of rye to about three pecks of vetch.

The seed should be scattered between the corn rows and then worked in by a leveling cultivator or a narrow sectional harrow. It would be best done, of course, by a single row drill.

The addition of 200 lbs. to the acre of fertilizer analyzing approximately 2 per cent. ammonia and 10 to 12 per cent. available phosphoric acid would insure a good catch, and would also assist the ripening of the corn.

**Question—F.W.G.:**—I am told repeatedly that one should not cultivate beans after they bloom. They claim it is an old saying but cannot give any good reasons. Will you kindly advise me through your columns if there is anything to this and if so state why it should not be done.

**Answer:**—Growing beans should be cultivated very carefully. Men who handle large areas of beans say that most of the yield should be on the seed-bed and just sufficient cultivation should be given to keep down the weeds.

If you will carefully dig up a plant of beans you will find that its roots spread out fairly near the surface and sufficiently wide to extend over half the distance between the rows. This being the case, a deep cultivation of beans, when the plant has made maximum growth, such as you will find at blossoming time, will cut off a large percent. of the small roots between the rows. The roots are the conveyors of plant food. Then if you cut off the root, you are to a certain extent starving the plant.

From blossoming time to the filling of the pods of beans is a critical period for the bean crop. At such a time it requires a good supply of water; hence any injury to its root system should be carefully avoided. Another reason for avoiding cultivation at blossoming time is that there is a tendency during damp weather to spread bean disease, by the bean spores being carried by the cultivator or on the shoes or clothing of the workman.

**Question—R.F.D.:**—I have this year planted beans on heavy clover seed and have a fine crop of beans. I have been told I could plant another crop of beans next year without any added fertilizer on this same soil. I would like your advice on this subject. Another question I would like to ask is, should I be compelled to use commercial fertilizer? When is the best time to use it, fall or spring? Should I drill it in or spread it broadcast, and how much to the acre? This is a light loam sand soil.

**Answer:**—As a rule, beans should not follow beans. They should follow a cultivated crop like corn or potatoes. Of course, if your soil is in good shape and you have used a large amount of fertilizer this year, and if the beans have been absolutely free of disease, you may safely plant another crop next year where these stand. The last point is really the point of greatest importance, since bean diseases live in the soil for one or two years. On your light sandy loam soil you certainly will have to provide plant food for next year's crop if you expect a good crop. The problem is

just the same as is faced in feeding calves. If you expect the calf to well from one year to another, you have to look out to supply an abundance of suitable food. Now fertilizers are carriers of plant food and although the plant food which you added this year may not all have been used up, yet I am of the opinion that you will find it profitable to make an addition of plant food on next year's bean crop. On light sandy soils, especially if they are low in organic matter, it is profitable to top-dress the land after plowing in the spring with 5 to 8 loads of well rotted manure to the acre. This should be supplemented by the addition of acid phosphate or a complete fertilizer high in available phosphoric acid, at the rate of 200 to 400 pounds per acre, if largest yields of best quality are to be harvested.

The fertilizer, of course, should be applied in the spring. Successful bean growers apply the fertilizer through the fertilizer attachment of the grain drill seven to fourteen days before planting the beans. If no grain drill is available any broadcast distributor will work, applying the fertilizer broadcast and working it in by harrowing and disking. When fertilizer is applied with a grain drill at planting time it should be allowed to run in the hole to each side of the one which drops the beans and not in the hole dropping the seed. Some successful bean growers go over the field twice, the first time drilling the fertilizer and the second time sowing the seed. This works the fertilizer into the soil and avoids the fertilizer and the beans coming in contact, the one with the other. While this method takes twice the time it mixes the fertilizer thoroughly with the soil, and the tender bean plants are never injured.

**Question—J.B.A.:**—As I have a field of alfalfa which I think would yield larger returns as seed I take the liberty of writing you for information in regard to the same. If you will kindly answer the following questions I will appreciate it very much. (1) Is the second crop the one to cut for seed? (2) About how many bushels per acre is an average yield? (3) Does it injure the future crops to cut for seed? (4) Do you think the past hot weather has injured the prospects for seed?

**Answer:**—As a rule the second crop of alfalfa will produce the largest yield of seed in Canada; this for the reason that there are more bees at the time that the flowers of the second crop are in blossom than there are for the same period of the first crop. The seed should be cut when about two-thirds of the pods are filled; otherwise the earliest filled pods will shatter and some seed will be lost. From two to five bushels per acre is an average yield of alfalfa seed.

If the alfalfa crop has made a good strong growth and is well established, little injury will be done to the alfalfa by allowing it to come to seed, especially if after cutting the seed the crop is top-dressed with manure or fertilizer so as to give it strength to meet the coming winter conditions. The hot weather which has just past should not have injured the seed prospects unless the ground is very sandy and has dried out.

**Question—H.J.:**—I am trying alfalfa this year for the first time without a nurse crop. I will give you a brief outline of what I did and ask your advice as to the next move. Plowed seven acres this spring, three acres bean ground last year, four acres two year meadow; worked it until about June 25th; sowed ground limestone on it, using about ten tons to the seven acres. Then I inoculated alfalfa seed and put it on about one peck per acre and dragged it in at a distance with a peg-tooth. The field is heavy clay for the most part, with a few sandy places. The field is rolling so it is pretty well drained. The seed came fine, a good stand. To-day the



**Peaches**

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## Silage As A Grain Substitute

By E. W. Gage.

The prevailing high prices of grain feeds in the face of very moderate prices paid for dairy products have reduced the dairy farmer's profits to a point where it is an open question with many whether it is possible to make the cow pay for the large grain ration necessary. Several dairymen have found that if they are able to dispense with half the grain he formerly fed without materially reducing the milk production and butter-fat, the chances for profit have increased at a smaller cost of production.

**Tests Show Advantage.**

Several feeding experiments have been held in various sections of New York State to determine just what position silage may be made to occupy in the dairy cow's ration, and the relative basis for feeding as compared with purchased grains. In one of these tests ten cows were used, representing five different breeds, to determine what effect the feeding of more silage than is usually fed, with a corresponding reduction in the grain portion of the ration might have upon the production of milk, butter-fat, gain in weight, cost of ration, and consequent profit.

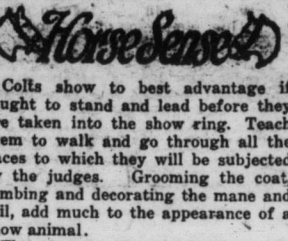
The general plan of this experiment was to compare two rations which should carry as nearly as possible the same amount of dry matter and nutrients. In one ration these nutrients were to be derived largely from roughage, mainly silage; in the other ration no silage was to be fed and as little roughage as seemed wise, the bulk of the nutrients being derived from concentrates. The two rations fed carried practically the same amount of dry matter, one over fifty per cent. of this dry matter was derived from silage and less than eighteen per cent. from grain. In the other over fifty-seven per cent. of the dry matter was from grain, no silage being fed.

The silage used in the test was a mixture of one-ton of soy beans and cowpeas to two and a half tons of silage corn. There were nearly twice as many soy beans in the mixture as cowpeas. The silage corn was very

alfalfa stands six to eight inches high and is commencing to blossom but in a good many places the leaves are turning yellow or pale green. Also quite a few thistles and ragweeds have come up along with it. Now the ground was so wet last spring that we could not draw out manure and we have 2000 spreader loads or better in our barnyard. I decided this afternoon upon looking the field over to go over with mower and clip it quite high, then top-dress it quite heavy. What would you advise?

**Answer:**—I believe you have handled your new alfalfa field wisely. I would not top-dress it too heavy with manure just at the present time, but would give it a second top-dressing either late in the fall or early in the spring. My thought is that too heavy a top-dressing might smother out some of the tender plants. If after cutting and manuring, the crop does not make a good healthy growth, I would advise you to top-dress still further with 200 lbs. per acre of fertilizer carrying 1 to 2 per cent. ammonia, and 14 to 12 per cent. phosphoric acid. This will tend to invigorate the plant and give the crop strength to withstand winter conditions.

The total cordage required for a first-rate man-of-war weighs about 80 tons, and exceeds £3,000 in value.



**Horse Service**

Colts show to best advantage if taught to stand and lead before they are taken into the show ring. Teach them to walk and go through all the paces to which they will be subjected by the judges. Grooming the coat, combing and decorating the mane and tail, add much to the appearance of a show animal.

The exposure of young horses to the short spells of severe weather which occur frequently during the fall, causes a shrinkage in live weight and is a hindrance to rapid and economical development. Older horses seem to stand this sort of treatment with less loss. It is doubtless true that animals become accustomed to winter weather but frequent changes from fine fall weather to bad storms retard gains in coat without shelter.

Four yearling Percheron fillies with an average weight of 1169 pounds on pasture, with a ration of six pounds of corn and oats (one-half of each by weight) daily shrank an average of 32 pounds each during the spell of severe weather on October 18 to 20 of last year, at an Experimental Station. Aged mares in foal lost only slightly during the same period.

Inexpensive sheds which will protect colts from wind, rain, sleet, and snow will prevent part of such loss in weight. Growing horses should not be housed too closely and prevented from taking plenty of exercise, but they should not be subjected to extremely bad weather if they are expected to make satisfactory growth.

Education must be of character rather than of mere learning, for Germany has shown us during these dreadful days that the possession of knowledge turns a modern man into the most dangerous type of savage that the world has ever seen.


**A Scotch Retort.**

A Scotchman born and bred, Sir Henry Oliver, the new Deputy-Chief of the recently reorganized Admiralty, has a large fund of Scotch stories.

One of the best concerns a certain headle whose duty it was to show visitors over the remains of an old abbey, "somewhere beyond the Tweed."

On one occasion he had performed this service for a lady who, on leaving him at the churchyard gate, rewarded him only with barren thanks.

Whereupon the canny Scot remarked: "Well, my leddy, when ye gang hame, if ye fin' out that ye have lost your purse, ye mair recollect that ye hae na had it out here."



**Your Problems**

Conducted by Mrs. Helen Law

Mother and daughter of all ages are cordially invited to write to this department. Initials only will be published with each question and its answer in each letter. Write on one side of paper only. Answers will be mailed direct if stamped and addressed envelope is enclosed.

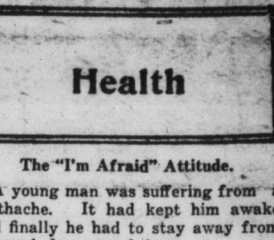
Address all correspondence for this department to Mrs. Helen Law, 233 Woodbine Ave., Toronto.

**Daughter:**—The author of "Martha By The Day" is Julie M. Lippmann. This entertaining story may be had at any of the large bookstores for sixty cents.

**Stephanie:**—A healing lip salve is made of one ounce cream, 15 drops of tincture of benzoin and 30 drops of glycerine. Rub the cream and glycerine together and then incorporate the benzoin with the mass. Rub with a spatula or flexible knife on a flat tile or plate. A mixture called cream of roses is also good. Melt an ounce of white vaseline and half an ounce of white wax and beat. When nearly cold add three drops of attar of roses.

**E.B.S.:**—1. Here is a good recipe for oatmeal muffins: Take one-half cupful milk, one well-beaten egg, one teaspoonful butter, one tablespoonful sugar, one cupful flour, into which has been sifted two teaspoonfuls baking powder and one cupful oatmeal mush. Stir well together. 2. Bake in hot muffin pans in moderate oven. 3. Perspiration stains can be removed from a blouse by soaking in strong salt water before washing. 4. The best and simplest way to mend a torn net curtain is to dip a square of net cut to fit into cold starch, lay on the wrong side of the curtain over the rent and iron with a hot iron. 5. A letter of acknowledgement for a wedding gift which has been sent by a whole family should be addressed to the mother but should contain mention of the other members. 6. It is good form to display wedding gifts in a room especially set apart for them. 7. When wedding gifts are on view the cards of the donors should be removed. 8. The best man usually takes charge of the wedding ring and the clergyman's fee.

**Would-be Benefactress:**—How does the following idea appeal to you? The woman living in a small town originated a novel plan for circulating reading matter among her neighbors of the outlying country districts. Her first step was to collect among her acquaintances all the used books and



**Health**

The "I'm Afraid" Attitude.

A young man was suffering from a toothache. He had kept him awake and finally he had to stay away from his work for several days.

A friend looked into his mouth and, to his amazement, saw that the young man had a number of filthy decayed roots. He said, "Why don't you have them out?"

"I'm afraid," was the reply.

The thing of which this young man was afraid, the extraction of several old roots, is a perfectly painless, harmless operation, requiring a few moments.

The thing of which he was afraid, the harboring of decayed roots in his jaw, is a dangerous risk to health and life. The germs from such roots may get into other regions of the body, and cause rheumatism and other serious and dangerous maladies.

A young lady was going about a certain office with her hand over her ear and her head on one side. "My ear aches," she said. "I have had a cold and have been suffering from a 'catarrh cure.' Now, the trouble seems to be in my ear."

"Why don't you go to a physician or to an ear clinic and have it examined?" was the query.

Again there was fear of an examination and treatment which might save her life. She was afraid of the danger to delicate internal canals in the head, of infections from the nasal cavities that often lead to mastoiditis, or even to brain abscess. She did not know that earache is often a manifestation of serious trouble.

Some one had a large and ugly looking wart or birth mark on his chest. It had become irritated and was exhibiting dangerous symptoms. A cancer set in.

His answer was the same old foolish. "I'm afraid."

It is a paradox that many people fear unrealities, but know no fear of their real dangers.

Reasonable precaution against illness need not mean fear itself as fear. Fear is a state of mental ill health. Its unreasonableness is often apparent. It should be corrected by reasoning and will power. Not only the mind but the body would profit.

**FIGHTING ANIMALS.**

**Constant Struggle Between Meat-Eaters and Vegetable-Eaters.**

It must not be supposed that the meat-eaters are always successful in making their necessary killings. Even when the great advantage is with the carnivorous creature over the intended victim, the latter not infrequently gets the better of the encounter, or in some way makes its get-away. Naturally, if this were not so there would be no weaker, herbivorous animals left on the earth, and the carnivores would soon be destroying each other for food, which they do to some extent, anyway.

By quicker wits, by superior speed or dodging ability, by defensive tactics that have to be respected by their foes, or by size and power alone, the plant-eating creatures continually maintain themselves, often against great odds. In every case they have numerous and powerful enemies either larger and more powerful, or else well-endowed for overcoming and killing these fat plant eaters.

In this manner the earth supplies its creatures with food, most sections yielding abundant vegetation for the herbivorous kinds, permitting them to increase and to grow fat, thus furnishing the flesh eaters with their quota.

Most animals have means of protection, and it is interesting to note these means. Molly Cottontail is an example of one extreme; she has no defense, except her legs and the speed she can get out of them, with an occasional kick to add for good measure if she is barely seized. But the weasel, half her size, will easily kill her, when cornered, just as the puma kills down the deer or the lion overcomes the giraffe.

The opposite extreme is the rhinoceros or the elephant, vegetable eaters, the flesh of which is no doubt coveted, but no carnivore may hope to overcome these powerful beasts. To this class also belongs the moose, able to fight off bear, puma or wolf pack, because of its great size and strength.

The ox and lion also, for purposes of successful defense, admirably armed with powerful horns, are creatures that the most savage killers must fear. A cow with her calf, the long-horned mother fighting, head up and with eyes wide open and virtually fearless, is an antagonist that any big cat or bear may fear, and a bull has been known to kill a large tiger in fair fight. The African buffalo, in single combat, not only defends itself against but kills an attacking lion; and thus it is that two or more lions generally hunt together when after buffalo meat.


Only 2,250,000 Iron crosses are worn by the Germans, but the Iron has entered into the souls of the rest of the people.

Get the wheat land ready early. Those who ploughed early last year got their wheat in; those who didn't have no fall wheat this harvest.

"Did you have the eight-hour system on the farm where you worked?"

"Yes; we worked eight hours in the forenoon and eight hours in the afternoon."

## The Doings of the Duffs.



TOM, WILL YOU JUMP IN THE CAR AND TAKE THIS TO THE EXPRESS OFFICE FOR ME?

I'LL HAVE TO HUSTLE, IT'S NEARLY CLOSING TIME.

SEE, HERE'S WHERE I GOT A JITNEY.

THANK YOU—I MUST GET ASTRING TO HOLD MY HAT.

GOSH, THANKYUH IS ALL I GOT FER CHASIN' THE LID.

YUH BETTER GET A HAMMER AND A NAIL TO KEEP YOUR HAT ON!