Farm Crop Queries

Henry G. Bell.

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—E. L. S:—I have a piece of sandy land which is practically unproductive. Would it be wise to sow it to sweet clover this spring with a cover crop of rye? I want to build it up, but do not know the most practical and quick method.

Answer:—Sweet clover would be a good crop to put on this thin soil. Under normal conditions it can be sown with rye, however, I question if the rye has not grown too rank for this spring's sowing, unless you are seeding it with spring rye. If so, you should prepare the seed-bed well as in preparing it for wheat, and before harrowing the ground spread one to two tons of ground limestone or a ton of air-slaked burnt lime over the ground. Work this in thoroughly in order to sweeten the ground. This should be done, if possible, a week before the seed is sown. At the time of seeding, sow about three-quarters of a bushel of unhulled seed to the acre, or if hulled seed is obtained, about twenty pounds to the acre. In order to make sure of a catch, I would advise the application of 200 to 250 pounds per acre of fertilizer, in order to give the young crop quickly available plantfood, which will cause it to make an early vigorous start. If you are sowing this seed on top of fall sown rye, follow the seeding by harrowing the rye, being sure that the harrows run with the rows and not across them. This harrowing will bury the sweet clover seed and should give it a good start. If you are fertilizing the rye at the time of seeding sweet clover, I would advise drilling or broadcasting the fertilizer before you harrow the crop. The second year's growth of sweet clover should be plowed under as soon as it has made maximum growth in early spring. Sweet clover will add considerable organic matter and some nitrogen, since it has on its roots, nodules where the sweet clover bacteria live. These bacteria have the power of taking nitrogen out of the soil air and of incorporating it in the roots of the sweet clover plants so that the soil is richer in nitrogen after growing sweet clover than it was before.

Question—S. J.:—I would like to know how to get a sure catch of clover and how to test seed. I work 20 acres, keep two horses and two cows. I sowed four acres of rye on wheat stubble last fall and pastured it. Good stand of rye, and now I want to seed this rye with clover and a little alsike. How would you do it to get best results? Would you harrow it a little and seed and then go over it with a weeder? I also want to know how to seed in barley. Which is the best barley? Which is the best barley to sow, and where can I get it?

Answer:—The answer to question No. 1 covers the answer to the first part of question No. 2, granted that your rye crop has not made too great a growth. If it has made too great a growth already to allow harrowing, do not attempt clover seeding until next season. Clover seed should be sown on top the winter wheat or rye as soon as the frost is out of the ground in the spring. It should be immediately harrowed in.

Barley is sown in the same way as wheat or oats; that is, if you have a grain drill suited to the sowing of wheat or oats, it is also adjustable to the seeding of barley. If not, prepare the seed-bed well and then scatter evenly broadcast a bushel and a half to a bushel and three pecks to the acre of good barley seed. A variety that has given the best results in Ontario is Mandscheuri. This is a variety developed by Prof. C. A. Zavitz of Ontario Agricultural College. In recent years a selection has been made from this barley under the name of O. A.C. No. 21. This is superior in strength of straw and is a little heavier yielder than the average barley in Ontario. You can locate seed of it by addressing Prof. C. A. Zavitz, Ontario Agricultural College, Guelph.

Question—C. D.:—Could you give me information concerning the seeding of sweet clover with fall wheat. Would the clover be all right sown in the spring the same as June clover? How would you sow it? Would you drill it in, or would a drill cut the wheat roots too much? How much would you sow per acre?

Answer:—Sweet clover can be seeded with full wheat and rye, as described in answer to question No. 1. The best time to seed it is early in spring. If you have machinery for drilling the seed, you can get a little evener distribution and the seed will be planted at an even depth. Be sure and do not get it planted too deep. As a rule an inch to an inch and a half is deep enough for clover seed.

Question—J. R. M.:—(1) I have a piece of old meadow in which I want to plant potatoes. Have plenty of manure for same. I want to plow potatoes in. Would you advise putting manure on sod, plow potatoes in, and disc-harrow after plowing?

(2) How deep should sod be plowed for potatoes?

(3) When is the best time to plant potatoes to get the best yielding crops?

(4) Does rye cut green make good horse feed for winter feeding?

Answer:—In preparing your old meadow for a potato patch, I would advise plowing down the sod, about five or six inches deep. If the manure is well rotted, apply about five loads to the acre, and then disk and harrow it into the soil thoroughly. If it is fresh manure, do not put it on your potato patch, since it tends to harbor potato scab spores. In order to get largest yields of best quality potatoes you will do well to add, in addition to the manure that you put on the soil, about 50 lbs. of a fertilizer carrying 3 to 4% ammonia and from 8 to 10% available phosphoric acid, and possibly 1% potash. Scatter 200 lbs. of this fertilizer per acre over the ground before the last harrowing, which will work it into the soil. At the time you are planting your potatoes strike the plow furrows and then scatter a light dusting of fertilizer all up the furrow. Follow this by putting in a light covering of soil over the fertilizer, then drop the potatoes and cover as usual. Potatoes should not be planted until there is reasonable certainty of the early sprouting tubers escaping frost. In the central part of Ontario, this would delay the planting until early in May.

Rye cut green makes a fair quality hay. If allowed to grow until it is thoroughly ripened, the straw is relatively poor and lacks nourishment. Henry, in his "Feeds and Feeding" says, "Cereal hay (which includes rye) may often be advantageously employed for horse feeding. However, rye should be used in moderation. In actually practice we have found it to give horses indigestion if they are allowed to feed too freely upon it.

CONCRETE ON THE FARM

Its Low First and Its Durability Make Concrete An Economical Material.

The use of concrete by the farmer has become quite general throughout the country, a condition undoubtedly brought about by reason of the economy which attends the use of concrete. It is usually a simple matter for a farmer to obtain sand and gravel and the only other material needed is the cement, which can now be obtained at a price easily within the reach of all.

Probably the first use to which concrete was put on the farm was for the building of foundations for houses, barns and other buildings.

The concrete root cellar is a farm structure which has found great popularity. Vegetables, and particularly potatoes, must be protected from cold. A concrete root cellar, built into the ground on a side hill, not only makes freezing impossible but in addition affords protection from water and from burrowing animals, such as rats, mice and squirrels, and is easily kept clean. A six-inch layer of gravel or cinders is first placed and well tamped and on top of this is laid a six-inch concrete floor. The following day the walls, which should be 8 inches thick, are erected. The earth bank can be used for the outside wall forms and it is only necessary to erect inside forms, which consist of 1 inch sheeting with 2" x 4" studding spaced 18 inches centre to centre and braced across between walls. The roof should be 6 inches thick rising to a peak, reinforced with 3-8 inch rods, spaced 5 inches apart, running from eave to peak and 3-8 inch rods spaced 18 inches apart running from end to end. A ventilator can be provided by the simple process of embedding a six-inch tile drain on end in the concrete.

Perhaps nothing is a more decided improvement to the farm than the replacing of the old style cow stable by one having a concrete floor with a drop gutter, pipe stanchions and pipe stall partitions. At a step one goes from the rotting timbers, the germs and the foul smells of a stable which it is impossible to clean, to one which is the last word in cleanliness and hygienic construction. This too is an improvement which is very easily accomplished. A five-inch concrete floor is laid on six inches of well-tamped cinders or gravel, the floor consisting, in cross section, of an alley 4' 6" wide, a drop gutter 1' 4" wide, 6 inches below the alley level, a stall 4' 8" deep raised 2 inches above the level of the alleyway, a manger wall 7 inches high and 6 inches thick, a manger 1' 6" wide sloping to a feedway 4 feet wide, 8 inches above the stall floor. If two rows of cows are to be kept in the stable this cross-section may be repeated on the other side of the building, in such a manner that the cattle either face each other or are placed back to back, as may be preferred.

There are many other ways in which concrete can be employed with great advantage on the farm, such as fence posts, dairy houses, ice houses, poultry houses and piggeries, springs, wells, cisterns and watering troughs, drains and septic tanks, bee cellars, bridges and culverts, chimneys, fireplaces, dipping vats, engine bases, feed troughs, porches and retaining walls.

CANADIAN GRAINS.

Varieties Recommended For Use In Ontario.

It is not the policy of the Experimental Farms to advise the cultivation of new varieties of grain which have not yet been sufficiently tested in Canada, or which when tried have shown no superiority over older and better known sorts.

The varieties here recommended have been thoroughly tested and have shown excellent qualities. While they may not be adapted to every condition of soil and climate, they have demonstrated their suitability for large areas in the provinces for which they are recommended.

Other very good sorts, almost or quite equal to those mentioned, could have been added to the list, but it appears undesirable to recommend an unnecessarily large number of varieties.

Spring Wheat.—Red Fife and White Fife are good standard sorts but rather late in ripening in northern localities.

Huron, Marquis and Early Red Fife are earlier in ripening.

All the varieties mentioned are good for bread-making, but Huron is not equal in this respect to the others. It is, however, particularly vigorous and productive and is highly recommended.

In extreme northern districts, Prelude will be found valuable if the soil is fairly rich and the rainfall sufficient.

In Southern Ontario, the very late variety, Blue Stem, gives good results. It is rather more resistant to drought than most sorts. Goose wheat is useful in extremely dry localities, though the price of this variety is often quite low, as it is not used for bread-making. Kubanka, closely resembling Goose, makes excellent bread, but it is so different from ordinary wheats that millers object to grinding it. Goose is usually more productive than Kubanka.

Oats.—Banner and Ligowo are two of the best sorts. Ligowo is slightly the earlier in ripening, but generally produces a smaller crop. Daubeney may be used where extreme earliness is desired. O.A.C. No. 72, (a selection from Siberian), is a very productive, late-maturing variety.

Barley.—Manchurian and Ontario Agricultural College No. 21 are recommended among the six-row sorts.

Duckbill, and the best strains of Chevalier are recommended among the two-row sorts.

No varieties of beardless or hulless barley can be recommended. Success (beardless) is of very early ripening habit.

Peas.—Among yellow peas, Arthur is most highly recommended for earliness and productiveness. Golden Vine, Chancellor and White Marrowfat are also good sorts.

Prussian Blue, Wisconsin Blue and English Grey are good colored peas.—Experimental Farms Note.

Only one thing better than a good sheep—a better one.

Housecleaning is in order. Have you had your spring stable cleaning? Clean out, scrape out, wash out, sweep out. No animal on the farm is more worthy of a clean stall than a good horse.

FOOD SHORTAGE SUGGESTIONS

Beans Contain a Large Amount of Protein and Their Food Value Is Therefore High.

By Henry G. Bell, Agronomist.

Beans.

Crop reports indicate what may amount to a desperate shortage in food next winter. What this country needs more than anything else is high food value crops in as small bulk as possible; foor that will keep; food of minimum bulk which can be readily stored and shipped.

An acre of beans, yielding 28 bushels, produces as much heat and energy-producing food as an acre of wheat yielding 20 bushels. A 28-bushel-to-the-acre crop of beans produces over 2½ times as much flesh-producing food as a 20-bushel-to-the-acre crop of wheat.

Ontario produces over 800,000 bushels of beans on 51,000 acres. The average yield is 16.3 bushels per acre.

An acre of beans produces from 13 to 30 bushels of dried beans.

Beans are being contracted for at $8 to $9 a bushel.

One bushel of small navy beans, or 1½ bushels of kidney beans plants an acre, in rows or drills 28 inches apart.

Beans should not be planted till danger from frost is past. They mature in 90 to 100 days. Planting dates vary from May 15th to June 15th.

Beans are suited to soils that will grow corn and wheat. In wheat growing sections they would be a splendid substitute where winter wheat has killed out.

Bean Seed-bed Points.

1. Beans thrive best on well-drained soil.

2. If a soil is sour, apply 1 ton ground limestone or ½ ton air-slaked lime to the acre.

3. Prepare medium deep, fairly firm seed-bed by plowing, disking and harrowing.

4. For best results, fertilize the crop with 200 to 600 lbs. to the acre of fertilizer carrying 1 to 2% ammonia, 8 to 10% phosphoric acid, and 1 to 3% potash.

This fertilizer is best applied by drilling it into the seed-bed through the fertilizer dropper of a grain drill. If you do not have a drill, scatter the fertilizer evenly over the bean ground and work it into the soil by disking and harrowing before the beans are planted. This available plantfood will increase bean yields and hasten the ripening of the crop.

In cultivating the crop, be careful to work the soil shallower each cultivation. Do not cultivate after the beans begin to flower.

Buy healthy seed if possible. Some growers claim that spraying bean crops with Bordeaux mixture (5 lbs. copper sulphate, 5 lbs. quick lime and 50 gallons water) controls bean diseases.

Do not work among beans on a damp day or before the dew is gone. The spores of bean diseases are carried on tools and shoes. Disinfect these by dipping them in a wash of one pint formalin to 20 gallons of water.

Beans may be more effective than bullets.

A large crop of beans will supply the most non-perishable food material in smallest bulk for our armies, our allies and ourselves. High prices are almost certain.

Hogs

There is a theory that the way to keep a hog well is to keep him and his food and surroundings clean. Worth trying.

The sooner the pigs are all out on pasture the better. It is natural for hogs to eat grass.

A good hog pasture cuts the cost of growing pigs and hogs in two.

Many men seem to ignore the need and craving for grass that is as natural to a pig as it is to a cow.

A young farmer grew a lot of pigs last year on clover and alfalfa pasture. He fitted them for the butcher on sugar beets and corn grown on the farm.

That pork was surely healthy, and cost less than it would have done under less intelligent management.

The feeding period of the hog is short, and the more quickly it is grown the greater the profit.

The pigs need shade in the pasture. There should be trees as well as shelter.

Do not let the little pigs hang over a high trough—or they will grow crooked in the backs.

The early hatched goslings must be protected from severe cold at first.

Poultry

Hints on Goose Culture.

While geese live to a great age, the ganders are usually unreliable as breeders after about nine years old. Females, however, have been bred at from fifteen to eighteen years of age. An indication of advanced years is an abdominal pouch of considerable size.

Geese do not reach maturity until their second or third year, and their eggs do not show strong fertility.

Being naturally a grazing animal, the goose is provided with a bill that has sharp interlocking serrated edges, designed to cut and divide vegetable tissues easily, and the tongue at the tip is covered with hard hair-like projections pointing toward the throat, which serve to convey the bits of grass and leaves into the throat quickly and surely.

For a start, a gander and two geese are sufficient. Their eggs being very fertile, as a rule, quite a number can be hatched each year.

It requires a full month to hatch a goose egg, and incubation is performed by either a hen or a goose. A good-sized hen will cover five eggs, and a goose can take care of as many as fifteen. It is seldom that any of the goslings are lost, except through accident or exposure to hard storms while still very young.

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, 235 Woodbine Ave., Toronto.

H. S. S.:—1. As almost every one from fifteen to fifty is wearing her skirt short, you need have no fear of not being in the mode if your skirts are within an inch or two of your boot-tops. 2. As to the important matter of wearing your hair up, you will be so much more sensible to wear it hanging, clasped at the back with a barrette or ribbon-bow, which is the most suitable style for a girl of sixteen. Of course, you have probably been told this before, but it is true. Remember, in a year or two you will be putting it up, and must wear it so for the remainder of your life.

D. K.:—1. Yes, a pacifier for the baby is most injurious and should on no account be permitted. Continuous sucking on any nipple is likely to cause adenoids, enlarged tonsils, protruding teeth, and misshapen jaws. 2. Headache is not a disease, it is a symptom. When your head pains you, look for the cause. And by all means do not merely try to stop the headache. This can be done in a good many ways without correcting the cause of the pain. But no real cure is made; you have only destroyed the danger signal which has been trying to tell you that something is the matter with you—that you are not a healthy person. See a doctor.

N. M.:—It is usually advisable to allow children to have candy in moderation. Candy is largely sugar, and sugar has a high food value, as it supplies heat and energy. Most children over two or three years of age may usually be given candy in small amounts with one of their daily meals. It should be pure, hard candy that can be sucked, preferably homemade; not of the chocolate cream order that is usually macerated in the mouth and hastily swallowed.

M. B.:—1. All linen and silver is marked with the bride's initials. In your case "M. B." should be embroidered on the linen and engraved on the silver. 2. A corsage bouquet of roses would be entirely suitable when married in a travelling dress. 3. A bride should write personal letters of thanks to all those who have sent presents to her. 4. It is not good form to address a wedding invitation "Mr. and Mrs. John Smith and family." Send one invitation to Mr. and Mrs. John Smith with the name of the daughter written underneath that of her parents, while another invitation should be addressed to the Messrs. Smith (the sons).

C. F. J.:—1. If white silk waists after being washed in warm water are rinsed in warm bluing water they will not turn yellow. 2. One should never use the phase "respectfully yours" unless writing a business letter. 3. Needles will not rust if they are kept in waxed paper. 4. Stale or otherwise unpleasant odors in the cellar can be eliminated by sprinkling the celler floor with unslacked lime. 5. When soot falls on a carpet throw salt on it to prevent it marking the carpet when being swept up.

L. L. T.:—1. A thorough sun bath is the best thing for mattresses. Pillows should be hung in the shade as the heat of the sun brings out the oil in the feathers and will cause them to stick together. 2. The reason custard and pumpkin pies raise in the centre is because of air under the crust. Grease the tin and lay crust on and begin at one side and smooth to outer edge leaving no air bubbles in, then pierce crust in bottom and sides with a small fork. Press the crust off with your hands instead of a knife.

The Sunday School

INTERNATIONAL LESSON
MAY 20

Lesson VIII. (Temperance Lesson)—The Importance of Self-control
Isaiah 28. 1-13. Golden Text—1. Cor. 9. 25.

Verse 1. Woe—The Hebrew word thus translated is a simple interjection indicating distress. Crown of pride—Samaria, the capital of the northern kingdom, crowned the summit of a low hill, the sides of which were terraced with vineyards and gardens and about which lay a fertile valley. Drunkards of Ephraim—The dissolute aristocracy of the capital city. The fading flower of his glorious beauty—Elements of social decay and disintegration were already evident on every hand.

2. A mighty and strong one—Referring to the Assyrian power which was to be instrument in Jehovah's hand for inflicting chastisement on his apostate people.

3. Trodden under foot—By the invading army of the enemy at the time of the fulfilment of Jehovah's judgment against the nation.

4. The first-ripe fig before the summer—It is a familiar fact that in Palestine, as in other fig-producing countries, the main crop of figs is preceded by a few scattered first fruits. These "first-ripe figs" are still esteemed a great delicacy. Hosea, Micah, Nahum, and Jeremiah, as well as Isaiah, refer to this early fruit (compare Hos. 9. 10; Mic. 7. 1; Nah. 3. 12; Jer. 24. 2).

5. In that day—The day of judgment and desolation. Will Jehovah of hosts become a crown of glory—A beautiful promise in figurative language to the remnant or residue of the faithful whom Jehovah shall redeem and to whom he himself will become a source of beauty, strength, and joy.

7. And even these—The men at Jerusalem among whom the priest and the prophet are especially referred to because of their being the spiritual leaders of the people. It was they who opposed Isaiah in the name of Jehovah, and claimed to have the authority of divine revelation back of them in this opposition and in the support of the politicians. Reel with strong drink—Judah, on the whole, still contrasted favorably with Israel, but even here the besetting sin had for a long time been drunkenness. Swallowed up of wine—Perhaps better, "confused with wine," or "wholly absorbed in their carousings." Err in vision—Deceive themselves with regard to revelations which they claim to have received.

8. Full of vomit and filthiness—Literally so, these words of the prohhet reflecting vividly the awful state of things existing in aristocratic social circles of the capital city. We are reminded, as we read these words, of the similar state of affairs in Rome shortly before the downfall of the empire.

9. Whom will he teach knowledge?—The prophet is here quoting the mocking retort of the nobles and priests whom he has thus severely rebuked, and who apparently interrupt him with their scoffing replies. The quotation continues through the next verse.

10. Precept upon precept; line upon line—The Hebrew of this verse gives a series of repeated monosyllables, the exact sense of which is not entirely certain. They are intended to imitate the mocking, stammering words of drunken men as these mock the wearisome repetition of the prophet's warning speech. The meaning of the whole retort is: "Who are we that we should be lectured by this man? Are we newly born infants? Is it necessary to repeat over and over again to us this message as one would teach a child?"

11. Nay, but by men of strange lips and with another tongue—Or, "for with stammering lips." The quotation has ended and the prophet replies to the mocking interruption of his hearers by pointing out that his unwelcome and oft-repeated message will be followed by a severer word spoken by Jehovah himself to this people in a still more uncouth language, namely, the harsh and barbarous accents of the Assyrian invaders.

12. This—The course of action advocated previously by the prophet, is the rest, the only means of averting the impending disasters; and this alone is the one possible means of bringing refreshing to the exhausted nation.

13. Fall backward—Retreat from their haughty position and be cast down. Broken, and snared, and taken—Defeat and capture and utter desolation will be the inevitable outcome of the conflict which their apostasy from Jehovah will in the end bring them.

Sheep Notes

It is a hard tug on ewes to suckle lambs almost as big as themselves. Separate them before the lambs are too big.

Set your mind on having a nice wether for your own meat. No finer meat in the world.

The sweetest mutton ever made was from feeding barley with plenty of grass and hay.

The finer clover is in leaf and stem, the better sheep like it. That is why alfalfa and alsike are in such favor.

The wool a sheep bears will pay its way on the farm.

Get the sheep out on the pasture while the bite is short.

Give a good feeding of hay in the morning before turning to pasture.

When the flock has been eating roots, the change to the fresh grass is not so relaxing.

Any change in feed, even from dry hay to grass, should be made with care.

The Dairy

The cream from different breeds of cows does not churn alike.

The fat globules in the milk of a Jersey or a Guernsey cow are larger than those of other breeds, and consequently break more easily.

If the milk and cream containing large fat globules and milk containing small fat globules are mixed, there will be a loss in the churning.

It is all right to divide the calves with the boys, but don't forget to divide the proceeds of the sales, too.

Health and wealth in stables with pure air everywhere.

The cheapest winter feed that can be produced for the dairy cow is a combination of alfalfa and ensilage.

The one safe guide in ascertaining any cow's annual production of milk and fat is the constant use of the scales and test.