Farm Crop Queries

Conducted by Professor Henry G. Bell

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.

C.E.J.:—I want to plant a large acreage of corn next summer but have not sufficient fertilizer. Should I sow commercial fertilizer broadcast, or put a handful in each hill when planting? I use a marker and plant with a hoe. Is a special drill needed for fertilizer?

Answer:—If you are putting on from 400 to 600 lbs. per acre of fertilizer, it is good practice to apply about 300 lbs. of this broadcast, in preparing the corn field, and work it thoroughly into the soil. If however, you are not applying more than 200 to 250 lbs. per acre, you will probably get best results from sprinkling fertilizer into the row after you have opened it up with a hoe, and then draw in a light covering of soil before you drop the corn seed. Many corn drills are built with fertilizer dropping attachments. This would certainly save time and labor in applying the fertilizer and would deposit the fertilizer and the corn seed at the proper depth.

F.S.:—1. Would brome grass seed be suitable for sowing on a barn bridge where a sod is wanted? 2. What seed sown neat will make the earliest pasture?

Answer:—1. I would not recommend brome grass for the purpose you mention. Possibly the best grass you could use for this purpose would be Kentucky blue grass. This forms a solid thick matting about the third year, and if the ground is fairly rich, it provides a substantial pasture. 2. Tall oat grass has been found to give the earliest pasture at the Ontario Agricultural College. This is closely followed by western rye and by timothy.

W.J.B.:—A sandy ridge crosses one of my fields. The cultivator naturally sinks deeper there than on the rest of the field. Does that have a bad effect on the crop? What kind of fertilizer is best for this ridge? Is lime necessary?

Answer:—Too deep cultivation always is a serious detriment to hoed crops. Keep in mind the fact that the roots are the trunk lines carrying up the food to the plant leaves where it is digested. Deep cultivation cuts off these trunk lines and insofar as it injures the plant, it reduces or starves the crop. It is impossible for me to say what kind of fertilizer is best for this ridge, not knowing the crop for which the fertilizer is to be used. Keep in mind always that sandy soils are relatively weak in nitrogen, phosphoric acid and potash. If it is a grain crop that you are planning to grow upon the land, add 200 to 300 lbs. of a fertilizer carrying 2 to 4 per cent. ammonia and from 8 to 10 per cent. available phosphoric acid. If it is a hoed crop, such as potatoes, mangels, or turnips, I would advise adding from 300 to 500 lbs. of a fertilizer carrying from 3 to 5 per cent. ammonia, 6 to 8 per cent. available phosphoric acid and 1 to 2 per cent. potash. It is not likely this sandy soil would be sour. If, however, it should show signs of sourness, the addition of ground limestone at the rate of one-half a ton to a ton per acre would be of benefit.

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HIVING THE BEES FOR WINTER

By D. Everett Lyon.

I have tried every method of wintering bees, but the outdoor wintering plan has every advantage over that of wintering bees in cellars. In the first place it avoids the task of carrying each colony into a cellar every fall and out again in the spring. Then, again, bees wintered in special repositories are liable to suffer from dysentery, not having the opportunity for an occasional cleansing flight, which comes on warm days, even in February, to the bees wintered out-of-doors.

The double-walled chaff-filled hive is the proper hive for outdoor wintering. It is a cooler hive in summer, and a warmer hive in winter, than the single-wall hive, as the chaff acts as a non-conductor of heat and cold, and the only difference in its use lies in the fact that when it is prepared for winter the trough of chaff is set on top of the brood nest. This is laid aside for the summer. After the chaff box is placed on, it is covered with the regular telescope top, and all is snug and warm. The same telescope lid is used in summer as well.

If one does not care to go to the expense of buying these chaff hives, the ordinary single-wall hives can be made warm for winter by covering them with many thicknesses of newspaper, tied securely around the hive body and over the top, and a home-made deep telescope case can be made and covered with waterproof roofing paper, the case being made of wood, and the waterproof paper tacked on with tin caps.

Since this telescope case is to cover both the hive body and the inch or less of newspaper, it should be about an inch wider on its four sides that it may slip down and fit snugly. The newspaper packing and the case should reach down to within an inch of the bottom of the brood body of the hive, leaving the entrance of the hive open for the bees to come and go.

The hive entrance should be contracted to about three inches for the winter. This can be done by reversing the hive alighting board and using the small entrance in place of the larger one used for the summer. These alighting boards are made with entrance strips nailed on both sides, and the side with the smaller entrance should be used for the winter.

If the colonies have been strengthened by bees and food, then the bees are all fixed for the winter and need give us no further concern until next spring when the time comes to go over them.

All surplus extracting combs should be placed beyond the reach of rats and mice, and occasionally examined to see that the bee-moth is not destroying them. To keep these combs safe through the winter take the bodies containing them and tier them up in piles of about six. Underneath, place upon the floor an empty hive body. In it, sprinkle about a half pound of tar balls. The odor going up through the combs keeps the bee-moths out.

Late November is the proper time to put the hives in the cellars, if you prefer that method of wintering. The cellar should be absolutely dark, the hives placed one upon the other, and the cellar ventilated occasionally.

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.

Mrs. W. P. P.:—1. One of the best books on the care of infants that we know of is Holt's "The Care and Feeding of Children." The price is 75 cents. 2. A doily holder is an unexpensive Christmas present that can be made from two pieces of cardboard and pieces of bright-colored cretonne. Your friend will value it as it keeps the doilies pressed, fresh and unrumpled. 3. For a boy's Christmas gift a box of gummed slips with his name and address printed on them (could be had cheaply at local printer's) will be appreciated as he will enjoy marking his books and other property. Or an outfit consisting of boxes of tan and black shoe polish, flannel rubbing cloth, and velvet pad for polishing; a small flashlight or a set of puzzles. 4. A new way to salt nuts is to use white of egg instead of butter. Place the white in a pan and stir nuts around in it until they are thoroughly covered, sprinkle on the salt, and place in a medium oven to brown.

Red Cross Worker:—Wash clothes and mufflers are simple to knit and quite within the powers of the small girl or boy who cannot manage a sock or sweater. For the wash cloth, use medium weight cotton and steel needles No. 10. Cast on 70 stitches, knit back and forth plain until the cloth is about 10 inches square. Bind off, and sew a loop of tape to one corner. The muffler requires 5-8 lb. of wool. Cast on 50 stitches or about 11 inches. Knit plain for 68 inches.

Inquirer:—The Christmas card is a comparatively modern idea. It may almost be said that it grew and expanded with the post office. The first card was designed about seventy years ago. The custom of the Christmas box is traced back to the Romans. In every village an altar was erected, and the people dropped money into a "box." The box was usually of pottery. On Boxing Day the boxes were opened, and the money was distributed.

Ora:—1. A good way to arrange couples for the birthday party is to write verses or proverbs on cards, then cut the cards diagonally, putting half of each in one basket for the girls to choose from and the other half for the men. Each man must find the girl who has the remainder of his quotation. A birthday cake may be made of any good fruit cake recipe. Insert a silver coin, a wedding ring, a thimble, a button in the cake, which denote wealth, marriage, old maidhood and bachelorhood. On the top have tiny colored wax candles to the number of one's years. A good game would be "An evening with the ages." Prepare slips of paper with the following: 1. The age we live in. 2. The age of deficiency. 3. The age we carry. 4. The age that carries us. 5. The seasoned age. 6. The matrimonial age. 7. The uncivilized age. 8. The age we cook. 9. The stamp age. 10. The age we drink. 11. The profitable age. 12. The sanguinary age. 13. The feathery age. 14. The salt water age. 15. The age of slavery. 16. The age of communication. 17. The age of plunder. 18. The age we give as a pledge. 19. The rough and tumble age. 20. The age of hemp. 21. The governing age. 22. The searching age. 23. The heroic age. 24. The mint age. 25. The "done up" age. 26. The age of proportion. 27. The wandering age. 28. The weighty age. 29. The unravelled age. 30. The moving age. Give a prize to the person who has the most correct answers. The answers are in part as follows: 1. Cottage. 2. Shortage. 3. Baggage. 4. Carriage. 2. I have not yet been able to obtain the information you require. When I do I shall write to you. 3. Without knowing something of your ability it is hard to answer this question. Some girls have made money at home by making fancy cakes and selling them in the city, or candy, or fancy work, or in bee-keeping and poultry-raising. Doing mending or sewing for busy mothers is profitable. Make a specialty of the thing you can do best. Best wishes for success. Write again.

Poultry

Feed and eggs will probably be higher this winter than they have ever been known. More than ever then it will be necessary to make every pound of feed tell in eggs or flesh. To do this, it will require vigorous culling of the flock, good housing and care, and business methods in buying the feed and selling the product.

Mature pullets best. In a test covering three years at several branch Experimental Farms during the months of November, December and January, early pullets produced eggs at a cost per dozen, for feed, of 18.3 cents; late pullets, 56 cents; one-year-old hens, 78.2 cents and old hens, $5.73.

Late pullets not good. There are a lot of pullets this fall too late hatched to keep for laying, at the present price of feed. Any pullet that is not nearing maturity by November will not pay to hold. Feed such with the cockerels, and market. It does not pay to feed a pullet till February before she lays.

Don't keep old hens. A two-year-old Leghorn hen may be worth keeping but a two-year-old Rock hen is usually a loss. If all these old hens were not sold in the spring or during the summer, get rid of them now.

The late moulter best. In selecting the one-year-old hens to keep for breeding, pick out the ones that moult late in the year. Those that are in full new feather in November are not the layers.

Crate-feed before marketing. Even at the present cost of feed, it does not pay to sell thin birds. Three and a half pounds of ground grain will produce one pound of flesh. Don't sell all at the same time, sell those that are ready first, spread the sale over several months, keeping if convenient, some of the cockerels till after Christmas.

Sanitary well-ventilated house. Before the pullets are put into winter quarters, see that the house has a good cleaning and a coat of whitewash. Stop all cracks, but open the south side. Don't be afraid of plenty of fresh air and sunshine.

Don't excite the pullets. Pullets should be housed before they start to lay. When nearing maturity they should not be excited. Keep the dog away. Every time they are frightened means a loss of money.

Keep accounts. Start with December 1st to keep track of the receipts and expenditure. Write Poultry Division, Experimental Farm, Ottawa, re forms for this.

Selling produce. Now is the time to look up a new-laid egg trade. Those who have fresh eggs now will get good prices and can secure customers for the whole year. Sell all produce as directly to the consumer as practicable.

Feeding. Wheat fit for milling purposes should not be used for poultry feed. Oats, buckwheat, barley, corn, screenings, buckwheat screenings, etc., can be used. Feed a mixture of grains in litter morning and night. In the mash, dry or moist, use bran, shorts, ground oats, etc. Give milk to drink and table scraps and if there is no milk, use beef scraps. Give grit and shell, green feed, and keep birds and houses free from vermin.

The Sunday School

INTERNATIONAL LESSON
DECEMBER 2.

Lesson IX. Nehemiah Rebuilds the Wall of Jerusalem—Neh. 4.

Golden Text, Heb. 13. 6.

Verses 7, 8 narrate Sanballat's plans to attack the city. Sanballat . . . Tobiah—See comment on lesson for Nov. 18, verse 10. Arabians . . . Ammonites—The adherents of Tobiah (Neh. 2. 10) and of Geshem (Neh. 2. 19). Ashdodites—Inhabitants of the Philistine city of Ashdod. The surrounding tribes, like the Samaritans, resented the progress of the restored community. Wroth—Because in spite of all their efforts the building enterprise went right on. Unless the people could be stopped they would soon be in a position to withstand all outside attacks. Confusion—Or "panic." A panic would disorganize the work and make the people an easy prey.

Verses 9-11 portray Nehemiah's feelings on discovering the seriousness of the situation. Prayer . . . . watch—Though Nehemiah and the people had full confidence in Jehovah they did not neglect to take proper precautions, so as not to be taken by surprise. Outposts were placed beyond the city wall where they watched day and night. Verses 10 and 11, which are obscure, seem to call attention, on the one hand, to the discouragement of the Jews; on the other, to the bold confidence of the enemies. Judah—The Jewish community. Not able to build—The strength of the workmen was exhausted, and yet much remained to be done; no wonder the Jews became disheartened. The enemies, on the other hand, were confident. Their plan seems to have been to take the city by surprise, slay the workmen, and thus bring the building enterprise to an end.

Verses 12-14 describe the preparations made to meet the attack. The thought of verse 12, as translated above, seems to be that some of the Jewish workmen living outside of the city, near the gathering places of the enemy, brought reports that the enemies were gathering for the attack. Immediately Nehemiah took proper defensive measures. The general sense of verse 13, another obscure verse, seems to be that Nehemiah on receipt of the reports arranged his forces so as to meet the attack. Be not ye afraid—When he saw that the people were still downcast and full of fear he sought to arouse them by appealing to their courage, religion, and patriotism.

Verses 15-18 tell that the enemy gave up the attack and that the work was resumed. Was known—The enemy soon discovered that the Jews were prepared for them; hence they desisted from an actual attack. This made it possible for the builders to return to their tasks. Verses 16-18 give an idea of the assignments given to different classes of the population: (1) Nehemiah's immediate followers; (2) the princes and leaders; (3) the builders; (4) the carriers of burdens; (5) the trumpeter; (6) Nehemiah himself. Servants—The immediate followers of Nehemiah; half of these were to assist the builders, the others to furnish protection. Rulers—They were in the rear to give encouragement and direction. The closing words of verse 16 should be joined with verse 17, "the whole house of Judah, both those who were building and . . laded themselves," better, with a slight change in the text, "were armed."

Verses 19-21 describe the provisions made for collecting the forces quickly. Large—Or, "extensive." Consequently, only a few men were at a given point; in case of attack they had to be brought together quickly. Trumpet—There were probably several trumpeters, but one was always by the side of the commander-in-chief: the two might always be found at the point of danger. Morning . . . stars—The speedy completion of the walls was of the utmost importance; hence the long working hours.

Bedtime Stories

The Happy Tadpole.

Hippety hop.
Three men on a top.
One was red and one was blue
And one didn't know just what to do.

Little Timmy Tadpole was singing to himself when along came Mister Trout and wanted to know what all the happiness was about.

"I don't see why I have to stop my song and tell you why I am happy. What's the idea?" asked Timmy.

"I don't see why you are happy—in a little while your tail will be gone and you will be an ugly Frog," said the Trout.

"Tut, tut!" began Timmy Tadpole. "That is the very thing which makes me so happy. Think of it! I have something to look forward to, while you will always be a Trout—nothing but a beautiful Trout."

"Of course, I am beautiful, while you are ugly enough now, but goodness knows a Frog is the ugliest thing in all the world," answered Mister Trout.

"Oh, but you forget! You are so beautiful and so tasty that men are hunting you all the time, while a Frog, well, they are only hunted for their hind legs. It must be terrible to have to live in fear all the time. You have to look closely at every fly before you eat it, while I gobble them up with a snap! and so does a Frog. Swim up stream and let me sing my song. Good-day."

Mister Brook Trout did not wait for any more talk from Timmy Tadpole, for he knew that the little fellow had the best of him, so he went away up stream where there was a deep pool and sat there thinking over what had been said to him.

By and by a fly came floating along on the top of the water.

"There, I don't dare eat that fly after what has been said to me," thought Mister Brook Trout. He waited a little longer and the fly floated over toward the bank and before the Trout knew what had happened a huge Frog had gobbled up the tiny fly and Mister Brook Trout was sorry, very sorry.

After a long time, the Trout swam over to where the big Frog was sitting and asked, "Was that fly good?"

"Why do you ask, you don't have to digest it?" said the Frog.

"Curiosity," ventured the Trout.

"Well, if you spent more time catching flies and less time being curious and asking foolish questions, the world would be better and you would be fatter."

The Trout sighed and said, "Well, if I were fatter, more fishermen might want me."

"There you are! Trout who are afraid what to eat and when to eat either starve to death or are caught," said the Frog. "By the time you get through listening to advice, you will be deaf and dumb, and then you will get caught for sure. Look! There's another fly."

They both made a grab for it, but the Trout was too quick for the Frog. "Thank you," he said, as he swam away, while the Frog's mouth closed with a pop! on nothing at all.

When You Have a Cold.

1. Keep away from places where people congregate.
2. Do not use the same drinking cup as other people—you shouldn't do so at any time.
3. Do not kiss people, and shun too close contact with them.
4. Destroy your mouth and nose secretions by boiling or by fire.
5. If you have fever or aches go to bed and stay there until you feel better.
6. Always remember that you have no more right to give anyone else a cold than you have to give them diphtheria or small-pox; and that you are very foolish to "take a cold" from anybody else if you can help it.

Newfoundland's potato crop this years is estimated at two and a half million bushels; a supply per head of the population for the year twice as great as is ordinarily consumed. The normal consumption is given as four and a half bushels per head per year.

Sheep Notes

Wintering Sheep.

Shelter, proper feed, and good management are the requisites in bringing sheep successfully through the winter season. While some shelter is necessary, close housing is not advisable, especially with ewes in lamb. Large, dry yards in which the sheep have plenty of room for exercise are the first requirement.

Seven or eight square feet of floor space in a shed is necessary for an average-size sheep. The fleece affords sufficient warmth in dry weather, and for this reason the main need for a shed or sheep barn is protection from the storms. On dry nights the sheep prefer to be out of doors, and will winter better if allowed to be there.

It is usually more convenient to have the feed racks inside, but some roughage should always be fed out of doors. With breeding ewes toward lambing time there is danger of injury in their crowding through narrow gates. It is well to provide a pasture on which they can run during the days in dry and seasonable weather.

In wintering sheep to the best advantage, the owner should sort them by age, sex, and condition into various lots, otherwise some are almost sure to get more feed than they need, and others less.

It is economy to dispose of the wether lambs and cull ewes early in the fall, and use the winter feed and quarters mainly for a large number of breeding ewes.

The number that would do well together varies with the breed. Sheep will usually thrive better with not more than 40 or 50 in a lot.

The aim in wintering breeding ewes is to bring them to lambing time in good vigorous condition and in only medium flesh. This can be done by giving plenty of exercise and the right kind of feed regularly.

With plenty of roughage, such as red clover or alfalfa hay, sheep can be carried until nearly spring with little grain. Corn silage can be used to furnish succulence, although some losses and a good deal of trouble have resulted from improper feeding of silage.

Sheep are peculiarly susceptible to injury from moldy feed. Poorly kept silage is therefore to be avoided. A ration of oats and bran makes an excellent feed for ewes with lambs at their side. The flock should have access to water and salt at all times.

In feeding rams during the winter season, the object is to feed them as cheaply as possible but at the same time keep them in a thrifty condition. Oats, bran, and meal may be relied upon to meet all the requirements of a grain ration.

One-half to one pound a day of this mixture, along with plenty of roughage, should be sufficient.

Lambs that are being wintered, whether ewes, rams, or wethers, require the same general conditions—adequate shelter and feeding.

Horse Sense

No domestic animal has greater need of absolutely good feet than the horse, and yet, owing to the fact that his feet are used so persistently, he meets with trouble in this section of his anatomy to a greater extent than any other being, except the human. Just as with children, the foot of a colt should receive attention from birth, and every sign of a disposition toward malformation or weakness should be met by a correction which in many cases can be provided by the owner without the assistance of an expert.

Of course, the endeavor to ensure good feet in the colt should start a long time earlier than this, that is to say, his parents should be selected principally on account of their good formation and soundness in this regard.

To neglect the colt's feet during the first six months of its life often results in permanent malformation, not only of the feet, but also of the legs of the animal, with the effect of bad action produced.

Even bearing of the weight on the bottom of the walls of the feet is necessary if the upper structure of the colt's limbs is to be maintained in good form, therefore any disposition to go on the heels or on the inside or outside of the foot should be counteracted by trimming the less-worn hoof to the level of the more worn point. This leveling can be done with an ordinary jack-knife, but as the hoof increases in hardness with the age of the animal, the use of a pair of cutting pinchers becomes necessary, and it is often the best plan to take the horse to a good blacksmith and if he has to do any considerable amount of traveling on hard ground or on the road, such as is entailed by showing, for instance, the young horse should be lightly shod for the occasion; that is, if the travel is likely to be sufficient to wear down his hoofs unduly.

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