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. 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.

B. S.:—1. Have eight acres of light sandy soil that has not been plowed for six years that I would like to put to beans. I would like to fertilize it. Can you tell me the kind to use, also the amount and the best way to apply? 2. Is it possible to grow peanuts in Ontario?

Answer:—Beans show the results of good feeding more than any other crop. In growing them on a sandy loam soil best results are obtained by fertilizing with plantfood fairly high in ammonia say from 2 to 3 per cent., and well supplied with available phosphoric acid 8 to 12 per cent. In putting this fertilizer on bean land, do not let it drop in the rows immediately under the beans,, as such an application tends to hinder the germination of the seed. If you are applying the fertilizer through the dropper of a grain drill it is well to stop up every third hole where fertilizer is dropping and allow the seed spouts to drill the beans along the rows that do not receive fertilizers. Many successful bean growers claim it is advantageous to apply the fertilizers a week to ten days ahead of the time the beans are sown. As to the amount to use, from 200 to 600 lbs. per acre are used by successful bean growers in this latitude. 2. Peanuts are a long season crop. That is, they are used to a growing season over 200 days free of frost. Most parts of Ontario enjoy a season of only 125 to 140 days at the outside free of frost, hence peanuts cannot be successfully produced in the province.

R. R.:—What would be the best crop for a gravelly knoll that does not give a good crop of grain or corn?

Answer:—The reason the gravelly knoll is not productive is that it fails to hold a supply of moisture sufficient to the needs of the average farm crop. In planning for its management therefore, thought should be given to overcoming this difficulty. If the plot is very gravelly, possibly the best thing you can do is to seek to establish a stand of sweet clover on it. Prepare the soil early in the spring and seed with 6 or 8 lbs. of good seed to the acre. In handling the crop be sure to cut it sufficiently early so that the growth does not become woody, otherwise the hay will not be satisfactory. If the gravelly knoll is fairly productive, early in the season, I would prefer to get a stand of alfalfa on it. This will produce a splendid quality of feed and at the same time will continually improve the quality of the soil.

W. R.:—How does sweet clover compare with corn for silage, I mean as to feeding value? What time should it be ensiled?

Answer:—Sweet clover is becoming fairly popular in some parts of the country as a crop for silage. It is used frequently in combination with corn, putting it in alternate loads of corn and sweet clover. This is advantageous, since corn is relatively low in protein and high in starch, while sweet clover carries a considerable amount of protein as well as a fair amount of starch. Good results have been obtained by cutting the clover when it is in full bloom. However, I would prefer cutting before the full crop is in bloom, since the plant becomes very woody if left till this time. As to feed value, sweet clover carries about 3.17 per cent. protein, 20.8 per cent. carbohydrate and .65 fat. Well matured corn carries 2.1 per cent. protein, 21.70 carbohydrate and .8 fat.

L. L.:—1 What is the right ration to feed to dairy cows? Would you advise mangels with silage, hay and some grain? 2. Would you advise growing Russian vetch for hay? Please advise as to its culture.

Answer:—You will do well to address your enquiry to the Dairy Department of the Ontario Agricultural College. This department is undoubtedly in close touch with experimental work of this and other countries with reference to best rations for dairy cows. 2. I am not familiar with Russian vetch. Common vetch and hairy vetch are both valuable crops. They are legumes which produce a considerable growth of very nutritious stalk and leaf. The seed of vetches is temporarily very high in cost on account of much of it normally coming from Europe. Common vetches can be handled much like field peas. A well prepared seed bed supplemented with a good dressing of manure or application of fertilizers, forms a suitable home for the crop which is sown broadcast. Hairy vetches can be sown on poor sandy soil, but of course will give best results on soil in better state of fertility.

R. R.:—What is the best fertilizer for orchards?

Answer:—For orchard fertilization I would recommend a mixture carrying 1 to 2 per cent. ammonia and 10 to 12 per cent. phosphoric acid. Use this at the rate of about 10 lbs. per tree scattering it out about the area covered by the branches.

Farmer:—Is fertilizer needed on Spring grain as much as on Fall wheat?

Answer:—Fertilizers are profitable on both spring and fall crops. It is impossible to say on which it is most profitable since weather conditions, price of products, etc., entering in at different times of the year will frequently reverse any rule that may be laid down. To give you an idea of the results of experiments, Ohio Station which has been testing the effect of fertilizers for the last 20 years finds a gain on corn from 16 to 22 bushels per annum as an average. On oats for the same time the fertilizer produced an increase over the unfertilized of 29 to 48 bushels per acre. On wheat for the same period, the gain for fertilized wheat over unfertilized, ranged from 21 to 27.5 bushels per acre.

X. Y. Z.:—Do you recommend basic slag on garden vegetables? What is the best fertilizer for cucumbers?

Answer:—Basic slag will give results on cabbage, turnips and other cruciferous crops, but is not sufficiently available to give best results with other garden vegetables. In fa ct, with the vegetables noted, basic slag will not give as good results as high grade fertilizers. For cucumbers I would recommend on sandy soil from 300 to 500 lbs. per acre of fertilizer carrying 2 to 5 per cent ammonia and 10 to 12 per cent. available phosphoric acid with as much potash as it is possible to obtain at this time. Some successful commerical growers use over 1000 lbs. of such fertilizer per acre. If your soil is fairly well supplied with nitrogen and you believe it will give a sufficient vine growth, cut down the ammonia to 1 or 2 per cent. For best results apply 2-3 of the intended amount of fertilizer, drilling it into the field with the fertilizer attachment of the grain drill or spreading it broadcast and disking and harrowing it in carefully. When planting the cucumbers work in a handful of the fertilizer into each hill, but do not allow the seeds to drop immediately on top of the fertilizer.

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SMOKE TUCKETTS
T&B PLUG

The Summer Cottage.

Busy Johnny chanced to peep
Within an ancient rubbish heap
That held the things they cast away
Behind the barn on cleaning day.

"These grown-ups," said he, "are not wise;
They often throw away a prize.
Now here is something! This, mayhap,
Will make a sling; perhaps a strap."

High on a broken cherry limb,
In sheltered corner known to him,
He hung his treasure out of view—
A battered, broken, worn-out shoe!

Then by and by, with merry song,
Came Mistress Jenny Wren along.
"Why, husband, dear," she called out thus,
"Who built this handsome home for us.

"With floor, and sides, and roof of leather,
To fend our household from the weather?
Besides a door that opens wide,
Here is a window at the side!"

"Why, bless me, yes!" said Mr. Wren.
They got the furniture, and then
This jolly copule, free from care,
This jolly couple, free from care,

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TIME NOW TO SWAT THE HOUSE FLY

To be sure, the house-fly is a nusiance every summer and to "swat the fly" after he has laid his eggs is practically useless. To get the greatest benefit it should be killed in its breeding places or caught before it can lay its eggs. "For every fly you kill early in the season you kill a million," has often been said and there is much truth to it. Proper control measures taken early in the season will do much to eliminate this annual menace to the public health.

Methods of combatting the house-fly may be summed up as follows:

1. Protect the breeding places from the fly. This can be accomplished by keeping the garbage in enclosed containers where the flies will not have access to it. In the country care should be taken in the disposal of manure. If the manure pile is allowed to sprawl over a large portion of the barn yard the conditions are ideal for the breeding of flies.

2. Kill them in their breeding places by means of some chemical. Government experts report good results from the use of borax which is applied at the rate of 0.62 pounds of borax to eight bushels of manure immediately on its removal from the barn. "Apply the borax particularly around the outer edges of the pile with a flour sifter or any fine sieve, and sprinkle two or three gallons of water over the borax-treated manure."

3. Place traps near their breeding places to catch them before they lay their eggs. Traps are made of wire screen that fit into the barn window or on top of the garbage pail. Common wire screen traps, with bait in the bottom, placed near the manure piles will catch many of the adults.

4. Shelter food and dwellings from them. The use of screens on doors and windows of dwellings is quite general now and should be even more so. Food such as milk, butter, etc., should be covered or place in a fly-proof place.

5. Poison their food. Many flies will enter the house in spite of our eternal vigilance and will have to be dealt with there. The fly-swatter should be kept busy but alone it can not cope with the invaders that are constantly coming into the house. They need water to drink and by giving it to them with a little poison in it it will aid in their destruction. One poison of this nature is to fill a shallow dish about half full of water and add to a tablespoonful of formalin. Milk may be used instead of water. Place a couple of bread crusts in the fluid for the flies to stand on. In order to be more effective other fluids in the room should be covered up.

An up-to-date farmer has devised a way of killing flies around the cow-barn. Take eight ounces of arsenite of soda and dissolve it in a barrel of water, adding to it a gallon of molasses. Fill a common sprinkling can with the fluid and sprinkle floors and sides of the barn near the manure piles. Care must be taken that cattle cannot get where they can lick it. The barrel of poison when not in use should be covered and put in a place inaccessible to any animals. This poison proved to be very effective on the farm last summer when other slower acting poisons failed to keep these pests under control.

INTERNATIONAL LESSON

Lesson XII. Jesus Triumphant Over Death—Mark 16. 1-20. Golden Text, I Cor. 15. 20.

Verse 1. When the Sabbath was past—This was after sunset on Saturday, for the Sabbath ended at sundown. Mary Magdalene, and Mary the mother of James, and Salome—Luke speaks generally of the women who had come with him out of Galilee (23. 55). They were present at a distance when the body was laid in the tomb. As the burial took place late Friday, before the commencement of the Sabbath (sundown), and the care of the body was not completed, on account of the Sabbath, the women returned as soon as the Sabbath was over to complete the final preparation. Bought spices—Aromatic herbs and ointments for the embalment. This was unlike the Egyptian embalment, for no incisions were made and only the surface was cared for.

2. Very early, the first day of the week—Our Sunday. The time is carefully noted by all the evangelists and is to the effect that Saturday night was just dying out and the first streaks of dawn were rising on the darkness.

3. Who shall roll us away the stone—They do not seem to know that the authorities have sealed the tomb. The expression "roll away" literally is "roll up and back," since the circular flat stone was rolled up and back into an inclined groove and would have to be wedged so that it would not roll down again. This is the character of such a stone seen by the writer in a tomb near Jerusalem.

4. Looking up—While they were walking along and talking, they looked up toward the tomb and were amazed to see that the stone was rolled away. Mark says nothing of the earthquake or that an angel had rolled away the stone, as Matthew records (28. 2).

5. Entering into the tomb—Luke agrees with Mark that the women entered the tomb and that they found not the body of Jesus. Some of the rock-cut tombs in the vicinity of Jerusalem may be easily entered by a person standing erect. The burial niches are in lateral chambers in many places.

6. He is risen; he is not here—The resurrection is here stated as an accomplished fact. It has been suggested that the "young man" may have been no other than Jesus himself, indistinctly seen in the dimly lighted sepulcher by the women, who as yet had no thought of the possibility of a resurrection. Behold, the place where they laid him—There were no human witnesses to the resurrection but evidences all around that the event had taken place. The place was empty. The body gone. There were no evidences of a violent removal. Everything was in order.

7. Go, tell his disciples and Peter—There was no time to linger in transport over the amazing fact. They had a message to give to the stricken disciples, in their darkness and perplexity. It is Mark only who adds "and Peter." This is a specially tender touch, that to the disciple broken by his own denial and by the death of his loved Master the early announcement of the resurrection should be made. It is also significant that this injunction to tell Peter is recorded by Mark the interpreter of Peter. He goeth before you into Galilee—This was to remind them of his promise to meet them in Galilee—the scene of his glorious ministry. But they had doubtless, in the confusion of the last days, forgotten that perplexing statement, "After I am raised up, I will go before you into Galilee." (Mark 14. 28.)

8. And they went out, and fled from the tomb—True to nature. The whole account is artless, honest, and strong. Trembling and astonishment had come upon them—Matthew (28. 8) tells us that this first impression of terror and mental confusion gave place gradually to other feelings so that they ran to bring the disciples word.

It is maintained by biblical scholars that the following verses (9-20) form no part of the original Mark Gospel, but that they are of a very ancient date and trustworthy material, added to the Gospel soon after the original draft was composed.

9. He appeared to Mary—Mark alone mentions that the first person to whom Jesus appeared was Mary. She first ran to tell Peter, then returned to the tomb to receive the manifestation here recorded.

10. Told them that had been with him as they mourned and wept—This discloses the condition of the disconsolate group of disciples in their extreme distress.

11. When they heard . . . disbelieved—It seemed utterly impossible. Nothing was further removed from their thoughts. It was only after the most convincing and irrefragible proof that they subsequently preached that he was risen from the dead.

Sex of Geese.

It is almost impossible to tell a goose from a gander. They all look alike to most people. The gander has a shorter, thicker neck than the goose. The bag between his legs is single, while that of the goose is double. The gander's voice is high and thin. The goose has a deep bass voice. The beak of the gander is thicker; the under mandible is fuller; the under mandible of a goose is shrunken around the nostril. Put a flock of uncertain ganders into a pen, and turn a strange dog in. The ganders will come forward ready to fight while the geese will huddle in a corner.

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.

Wants-to-Know:—1. The repatriates are the old men and women, children and babies and in some cases the young women being sent back from Germany into France through Switzerland. They are the French and Belgians captured by the Germans earlier in the war. As they cannot be used to work and eat too much food they are being sent back. 2. Soissons, one of the oldest cities in France, is on the Aisne (pronounced "ain") River. 3. Chemin-des-Dames ("Road of the Ladies") is an important highway running along the hills flanking the northern bank of the Aisne in the Champagne. 4. The bride's notes of thanks should be written on note paper in preference to correspondence cards. All of the wedding presents that arrive before the actual day or day before the wedding should be acknowledged before the bride goes away. If time does not permit of acknowledgment of these and those arriving after the wedding on the honeymoon trip, it is permissible to write these notes of thanks after the return home. 5. The terms dried, dehyrated and evaporated mean virtually the same thing—that is, removing the moisture from foods or drying them. In evaporation, as a rule, the water is not all removed, as in evaporated milk and fruits. The dehydrated process calls for the removing of a much greater amount of moisture..

Picknicker:—Even athwart the path of the picnicker the shadow of war must lie and the warning note must be struck—to save food. Everyone knows something of the charm of these outdoor expeditions, but it must be admitted that the perennial sandwich invariably accompanies them makes the bread and butter fly. While there is no compulsory legislation in the matter, it should be remembered by all organizations or individuals having picnics or outdoor expeditions, that they are on their honor to waste nothing, to use substitutes as freely as possible and to steer clear of all wheat products. A sufficiency of food should be taken to the picnic. Usually there is a superabundance, with consequent waste.

Milkmaid:—You sound quite pastoral and picturesque, Miss Milkmaid. No doubt you wear a pink sunbonnet. But you're the patriot! With so many cows to milk you make the city dweller's Red Cross work look a midget beside a full-grown bumble bee. There is a big and practically undiscovered field for women in dairying and they would do well to think seriously about taking it up as a definite occupation. Have you thought about factory work at all? You are really more useful where you are, however, for the work in the creameries and canneries is extremely heavy and not altogether suitable for girls. They are employed at present to a limited extent in certain factories, doing such work as testing the cream, printing and packing the butter and other of the lighter phases of the industry. Some are going around the farms collecting cream and delivering it at the canneries. None of them has as yet gone in for cow-testing, although an expert at the Ontario Agricultural Farm states that they could do this very well. You would be well advised to stay right where you are, however, and to try to convert some more damsels to your way of thinking. Canadian dairy products have strengthened their hold on foreign markets since war broke out and the Minister of Agriculture sees great possibilities for Quebec and Ontario capturing much of the dairy trade of Norway and Denmark; while the Maritime Provinces, besides sharing in the markets of the old land, should be able to command an ever-increasing trade with the Eastern States in butter and cheese.

Traveller:—Yes, food demonstrations will be put on at all the big exhibitions this year—notably Toronto, London and Hamilton. No doubt they will prove a very popular feature as there is no doubt of the fact that the interest of everybody in the country has now been awakened to the food question and people are thinking about it more than they ever did before.

Poultry

An easy way to insure a reliable winter meat supply is to caponize enough cockerels to furnish it. Take April or May hatched cockerels and caponize them when they reach two and a half or three pounds weight and they will continue to grow in weight until they are ten months old. The meat of fat fries is no better than the meat of capons.

To sell cockerels as broilers or to use them as broilers or fries gives us but small returns comparatively, for there is so little of them, but when we take a moderate sized flock, caponize them and grow them until they weigh ten or twelve pounds each we have a pretty good meat supply. If we want to sell them they will bring as much per pound as the ordinary broiler price, and more than we often get for summer fries.

One of the best things about the capon meat supply is that it is stored on foot, and is fresh meat of the best grade whenever we want it. There is no loss in the keeping, for the weight is constantly on the increase. We have been urged and all but forced to rear a large poultry supply to enable us to release the pork and beef supply for the use of the armies in the field. This can be done to the best advantage so far as the winter supply is concerned, by caponizing, for cockerels will not remain good eating until they are so large, and hens are not liked so well even if we wanted to sacrifice them.

The modern caponizing tools are so well made and the methods of doing the work so well developed that it has become an easy matter for anyone to get a set of tool and do their own caponizing. Full instructions come with the instruments, and as the operation is not a very painful one for the cockerel, there should be no hesitation in attempting it if you are at all nimble of finger and have the ordinary set of nerves.

Any of the meat producing breeds will make good capons. They soon show a marked difference in their growth, and grow larger than cockerels of the same age, weighing several pounds more when fully grown. The meat is always tender and sweet, and preferred by many to turkey or goose. As the capons never are quarrelsome, flocks of them can be grown together, nor will cockerels or cocks bother them. Any left over winter can be used for mothering flocks of chicks, for which they have excellent reputations, though I have never seen one serving in that capacity.

Horse Sense

Many horses lose condition, or fail to make gains because they are infected with worms. This is especially true of colts. Horses suffering from worms generally have a good appetite, but apparently benefit little from the food eaten.

There may be no symptoms which point conclusively to worms, but this trouble is so common that if the colts and horses are not doing as well as they should for the feed given, a worm remedy may prove of decided value. In treating horses for worms, a noted veterinary suggests it is well to keep in mind that the drug is meant for the worm rather than the horse and should therefore be given in as concentrated form as possible. To insure this, little or no bulky food should be fed during the course of treatment, and as the parasites are stupefied by worm remedies rather than killed, the animal's bowels should be kept in an active condition so that the stupefied worms may be passed out before they regain their vitality. A well-salted bran mash once a day will generally insure such an action.

The following formula is a worm remedy which is also of value as a tonic: Powdered nux vomica, two ounces; powdered gentian root, four ounces; powdered areca nut, six ounces; sodium chloride, four ounces; arsenious acid, two drams. Mix.

Give one heaping teaspoonful to every 250 pounds of weight, every morning and evening for about ten days. The medicine may be mixed with ground feed or sprinkled over oats or corn which has been dampened.

The Dairy

The calf shows very quickly the effects of poor care, and this often occurs during the summer months because of the pressure of other work, although it is really much easier to keep a calf thrifty in summer than in winter. Calves grown on farms should have grass pasture provided for them and should be fed some grain, preferably oats, during the first five months of their life. In taking them from the cow and raising them by hand on skim-milk, you are preventing them obtaining butter-fat, which is a natural part of the food of a young animal. You must replace this, insofar as it can be replaced, by the use of a grain rich in oil, fed to the young animal on grass, the grass itself taking the place of the butter-fat in milk to a small extent. A calf grown upon skim-milk, grass, and a small amount of oats, will be a profitable, healthy, strong and rapidly growing animal while a stunted calf will require much more feed next winter to get him started towards making good gains.