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.

Subscriber:—**Would soil and leaves taken from the surface of ground in oak timber and spread four inches deep and plowed into light, worn-out soil, have any beneficial effect, or, to what extent would it compare with barn-yard manure?**

Answer:—The handling of leaves, as you have described, would be of material benefit to the soil, provided that the leaves are worked in thoroughly so that they will not break up the water connection between the compacted soil below and the area in which crops grow. The addition of this quantity of leaves should materially add to the humus of the soil, and be of great benefit to it. Furthermore, average forest leaves have approximately 15 pounds of nitrogen per ton, one and one-half to six pounds of phosphoric acid, and from 20 to 50 pounds of potash per ton. Well-kept stable manure carries from 10 to 15 pounds of nitrogen, 5 to 9 pounds of phosphoric acid and approximately 10 pounds of potash per ton.

J.J.B.:—**I have been thinking about putting hardwood sawdust on some hard clay land. I have a mile to haul it. Would it pay me to do so? Has it any value as manure? How much would I apply per acre?**

Answer:—Hardwood sawdust carries approximately 20 pounds of nitrogen per ton, 1 pound of phosphoric acid and approximately 2 pounds of potash. If you are going to put it on a soil where you intend to grow potatoes, it would probably be best to burn the sawdust and take good care of the ashes. In so doing the potash would be in more quickly available form. At present prices for this constituent it would pay you to handle the sawdust as described.

R.L.:—**I would like to ask you about planting beans in hills, how far to plant them apart and how many in a hill?**

Answer:—In the large bean growing sections, it is the practice to sow beans in rows a distance of 28 inches apart. For the smaller dwarf varieties sometimes the space is reduced to 21 inches. Most of the growers use about three pecks to the acre of the small bean varieties, and about 6 pecks per acre of the larger. They give the soil very careful preparation and in addition to doing everything possible to make a mellow, well worked deep seed-bed, on loam soils they add from 200 to 600 pounds per acre of fertilizer analyzing from 1 to 2 per cent. ammonia, 8 to 12 per cent. phosphoric acid and 1 to 2 per cent. potash. This is applied through the fertilizer attachment of the grain drill, either at seeding time or a week or ten days previous to planting time. This fertilizer may also be applied with a lime or fertilizer distributor, but under such circumstances it should be carefully worked into the soil.

J.H.T.:—**What is the cause of scab in potatoes? Is cow manure better than horse manure? We have been planting them in different ground in this way. Where we had them this year we would plant them again the year after next; where we had them last year we will plant next year. Do you think a complete change of ground would be better? What is the best soil? Where oats were this year, it was sod last year, would that be good? Or where corn was this year? Is it best to plant a whole potato or to cut them?**

Answer:—Scab in potatoes is a parasitic fungous disease. Just how it infests the potato stock is not definitely known, but the spores gaining entrance to the skin of the potato cause it to become rough and scury. The spores live for a considerable length of time in the soil, especially if the soil is sweet. Hence, putting on lime or wood ashes to the potato patch increases the favorable conditions for the growth of potato scab. Precautions for killing scab include the dipping of the seed potatoes in a mixture of one pint of formalin to 21 gallons of water. This penetrating mixture kills the spores that may be adhering to the surface of the potato.

Cow manure is higher in water, but some lower in nitrogen, phosphoric acid and potash than is horse manure. As far as plantfood is concerned, horse manure is more valuable.

I do not consider a complete change of ground necessary for potatoes, provided that you have grown them in a system of crops so that there has been opportunity for the keeping up of the organic matter or humus of the soil. Under ordinary conditions potatoes follow clover or sod to best advantage.

Relative to the size of potato seed, Prof. Zavitz of Ontario Agricultural College finds best results come from using seed pieces not less than two ounces each. The lowest yield was produced by planting seed of one-ounce size as close as two feet apart in the rows.

C.M.:—**1. What is the best variety of raspberry? How far apart should bushes be set? 2. What will destroy wild oats?**

Answer:—1. I am not prepared to say which is the best raspberry. It would be well for you to write the Horticultural Department of Ontario Agricultural College. 2. In order to destroy wild oats, if the fields is badly infected, you will have to restore to summer fallowing.

R.C.:—**Which is the best method of planting beans, in the hill or in the drills? What crop should they follow?**

Answer:—Relative to handling beans, I would refer you to question initialed "R.L." above. As to the crop they should follow, beans will thrive on any well prepared soil. Necessarily the soil should be as free of weeds as possible, hence corn or potatoes make good preceding crops for beans.

THE EVILS OF THRUSTING RESPONSIBILITY ON THE ELDEST CHILD

By Edith Graham.

The generality of mothers are certainly unselfish, but don't you know a few who hardly could be included under that category, even by the widest charity? What about the woman who puts a load of responsibility on the eldest child and allows the poor little mite to bear many burdens altogether too great for her tiny shoulders? Lately I heard of one who left her small daughter, only six years old, to give the baby of sixteen months its bath. The little nurse did the work thoroughly from considerable practice, dried and dressed her sister and then placed her before the stove while she ran to answer her mother's call; on her return she found the baby had clambered back into the tub, clothes and all, taking with her the blanket and pillow on which she had been sitting, the towels and her nightclothes.

The poor, wee nurse was inconsolable, but I think the mother should have been very grateful that it was the water, not the fire, which had attracted the baby. It it had been otherwise, who would have been to blame? Certainly, the woman who laid such a responsibility on a mere infant.

This sort of thing hardly can be escaped in the homes of the very poor, where the mother frequently must go out to work in order that the children may have food; but this example did not occur among the poor, but with a mother who very well could have taken time herself to attend to the baby's needs.

Deprived of Her Girlhood

In innumerable families the eldest sister is apparently regarded as a sort of deputy mother and while herself only a child is deprived of all the care-free happiness which is the right of childhood. The effect is sometimes desirable, as it develops her sense of responsibility and makes her dependable, resourceful and considerate for others; but in nine cases out of ten, it succeeds only in making her old, serious and very frequently bad-tempered and domineering. Even if it should, by good fortune, happen to have the better result, it is not fair to the child and undoubtedly it is bad for the mother.

Of course, it is hardly possible to prevent the eldest, especially if it be a girl, being more or less responsible; as a rule, the mother leans on her to a certain extent; but she should never forget, no matter how helpful the child may be, that she is only a child and must be given her share of fun and childish gayety.

A comic incident in this connection comes to memory. My niece had herself assumed a certain authority over her three brothers, and one day, their mother heard heart-breaking wails issuing from the nursery. Panic-stricken, she rushed up, expecting to find at least a broken limb awaking her and found the second boy, aged four, weeping as though his very soul were rent, while May stood sternly regarding him; the nurse had gone downstairs. In answer to his mother's anxious queries he sobbed out, "May said if I didn't do what she told me I would be locked up in the big black safe in the bank the whole night."

It was difficult not to laugh, but keeping her face as straight as she could my sister explained: "That is nonsense. I would not let any one take you away to lock you up, and, anyhow, May could not do anything to you. She is only a little girl herself." The seven-year-old mentor gazed in horror-stricken reproof on her mother as she exclaimed: "Mummie! How can you expect me to manage the boys if you will not back me up?"

A Middle-Aged Drudge

Every one who has ever lived in a large family must have noticed this tendency to make the oldest responsible. Even the most unselfish of mothers seem to do it unconsciously, but it should be guarded against carefully. It is unjust to the elder child; it frequently endangers the younger children because the deputy guardian is not old enough to carry the responsibility, and it is bad for the mother herself.

The evil results do not always stop at childhood, either. Over and over again you will find middle-aged women who have never had time to live their own lives; when they were growing up they were expected to care for the younger children; then, these in turn growing, shoved them aside and they were laid on the shelf, put in the background. Later, when the younger members of the family married, "auntie" was expected to help take care of the children and, well-tutored to giving up from the time she was a child, she slipped into the niche prepared for her, finding herself in the end without home, occupation or assured position.

This type was common enough a couple of generations back. Nowadays, thanks to the growing opportunities for women, there is less danger of this empty life in middle age, but in most cases when you find a woman in this situation you may make a pretty safe guess that she was an oldest child who was expected to give up from the time she could walk and had responsibilities laid on her by a thoughtless or selfish mother.

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, 233 Woodbine Ave., Toronto.

Marion:—What do people mean when they speak of a "Bread and butter letter," you ask. A "bread and butter letter" is a note which should always be sent to a hostess after spending a day or more at her home, which expresses again the guest's appreciation of a delightful visit. It should be mailed immediately on the return home.

N.A.J.:—1. The best answer to a 4-year-old child who asks, "Mother, where did you get me?" is a definite statement. Everything that lives has a father and mother, and he, like all the flowers, plants, vegetables and animals came from father and mother. 2. A roast of beef can be served for a small family in the following five consecutive ways: 1, as a roast; 2, with the cold meat sliced and allowed to simmer in left-over gravy; 3, as stew cooked with vegetables; 4, in a meat pie, and 5, in croquettes.

A Mother:—Anxious for a new dish that will be nourishing for the boys and girls, aren't you? Well, Boston Roast is a war-time dish that is pre-eminently nutritive. You can get ten servings from the following: 2 cups dry kidney beans, 1 cup bread crumbs, 2 cups grated cheese, 3 teaspoons salt, ½ cup liquid, 1 tablespoon chopped onion. Soak the beans for 24 hours and cook in salted water until soft. Drain and put through food chopper. Add onion, cheese, crumbs, more salt and ½ cup of the water in which the beans were cooked. Form into loaf and bake in a moderate oven for 40 minutes, basting occasionally with hot water and fat.

Inquisitive:—"Why can't we get sugar when there is no real scarcity?" asks Inquisitive. Lack of shipping is the answer. The world's sugar crop this year will be 1,123,000 tons in excess of that of last year. But right now there are 900,000 tons of sugar in Java held up for lack of shipping. Canada's normal consumption of sugar is 90 lbs. per capita. To meet the Allies' needs this should be reduced to 67 lbs. It shouldn't be a case of "Why can't we get sugar?" but "How can we save sugar?" It is needed in Europe more than it was ever needed before.

Mrs. N.N.B.:—It is a pity that your family is so refractory in acceding to the requests of the Food Controller. Why not try so to arrange the menus that they will not notice the absence of those things to which they have been accustomed? Don't inform them that you are giving them a beefless or baconless or wheatless meal and they probably won't notice it when no attention is drawn to the fact—always providing the substitutes are adequate and palatable. That, of course, is of prime importance.

Mrs. R.A.M.:—"What's the use of saying save white flour when brown bread is no cheaper?" Well, it's a patriotic duty and for this reason the more brown bread you use the more wheat you save. The demand for graham bread has been so limited that the product has to be made by hand and, consequently, the labor cost is somewhat greater than in the case of white bread. It is not primarily with a view to economy in cost that the Food Controller has urged the use of brown bread but because, if substitution is effected on a large scale, it means an important saving in wheat.

The Sunday School

INTERNATIONAL LESSON
JANUARY 6.

Lesson I. John Prepares The Way For Jesus—Mark 1. 1-11.
Golden Text, John 1. 29.

Verse 1. The beginning of the gospel of Jesus Christ, the Son of God—No introductory words about the origin of Jesus, but a concise and graphic presentation of Jesus the Christ in his living energy. Gospel—Originally a reward given to the bringer of good news. In the New Testament the good news itself. How fresh and startling must have been the original announcement, "Good news about Jesus Christ!" Jesus—Literally, help, or deliverer. Same as Joshua in the Old Testament. Matt. 1. 21. Christ is his official title of Messiah, which means "the anointed" of God. In the Old Testament, a messiah was one selected by God to perform an important service. He was anointed or set apart for this work. The kings of Judah and Israel were thus "messiahs." Even Cyrus, the Persian king, is called in Isaiah God's messiah, or anointed (Isaiah 45. 1). Jesus is not merely one in a long line of messiahs, but he is The Messiah, par excellence, anticipated by the prophets and now ushered in as the Great Restorer of Israel and Founder of the Kingdom of heaven. Paul gives Jesus his complete title—"Lord Jesus Christ," indicating his divine character, his saving work, and his official designation. Son of God—Omitted in this verse by some of the leading manuscripts, but in place here as the climax of Jesus' title. It is used elsewhere by Mark.

2, 3. As it is written in Isaiah the prophet—Some manuscripts read "in the prophets," for two are here quoted (Isaiah 40. 3 and Malachi 3. 1), but only Isaiah is given as authority. Prophecy declares the coming of one who should prepare the way of the Messiah. In Malachi, Jehovah is speaking. He will send his "Angel" or "Messenger" to prepare his way. In Isaiah a prophetic voice cries out in the wilderness calling for the preparation of the way of the Lord. Mark will teach us that the great epoch has arrived, and that prophecy is fulfilled in the person of the one whom he now introduces to us. Isaiah refers to the glorious news of the return from Babylon. Mark uses the national deliverance as typical of the greater Messianic deliverance announced by the Forerunner, who summons the Jews to prepare for the great epoch.

4. John came—The account of John's family and his birth is given in Luke 1. Who baptized—The external, ritual purification of water, symbolizing the spiritual purification which was to come through the agency of the Holy Spirit. In the wilderness—The barren, rocky region in Judea bordering on the lower Jordan and the Dead Sea. Rightly called by the Hebrews "Jeshimon," or the "appalling desolation" or "horror," a region of canyons and chalky cliffs and gullies, devoid of vegetation, sloping to the Dead Sea. Preached—Heralding or proclaiming to all the people the inauguration of the new era. Repentance unto remission of sins—Baptism looking toward repentance. A baptism which reflects the figurative washings in Isaiah 1. 16, "Wash you, make you clean," and also in Jeremiah 4. 14, and had its counterpart in the washings of the law (Exodus 29. 4). But its use by John had a unique application. Repentance—Change of mind, change of purpose, resulting in change of conduct. Baptism is profession and is related to repentance as the outward act in which the inward change finds expression. "Penance," as it is rendered by Wiclif, is not repentance. "Penance" is largely external and a mortification of the flesh. Genuine repentance results in remission of sins, for repentance is the Scriptural ground for forgiveness.

5. The country of Judea, and all they of Jerusalem—The capital and the entire district of orthodox Judaism are mightily stirred by the announcement of the Baptist that the kingdom of heaven is at hand (Matt. 3. 2) and hasten to prepare for the new era. Baptized in the river Jordan—Eighteen miles from Jerusalem, down a descent of nearly four thousand feet. It must have been a thrilling interest which summoned the multitude from their homes to the river-side. The Jordan—One of the most remarkable rivers in the world. Its name "Descender" well describes this rapid, muddy stream which leaps from the Lebanon Mountains at Banias, flows through Lake el Huleh, rushes thence twelve miles down to the Sea of Galilee, passing through its twelve-mile reach, and then plunges down six hundred feet in sixty miles to the Dead Sea and is lost in its salty depths. Confessing their sins—Genuine repentance seeks outward expression in confession, renunciation, restitution, reconstruction.

6. Camel's hair . . . leathern girdle . . . . locusts . . . with honey—The garb and the fare of a desert-dweller. Instead of the finely-woven robe of civilization, a coarse garment of hair-cloth; in place of the elegantly-embroidered girdle, so much cherished by the city dweller, a leather strap; and for a menu, roasted grasshoppers and honey scooped out of a hollow tree. Surely an uncouth figure, but a prophet with a clarion note of reform to his age.

7. He preached—"One mightier than I is coming, and I am not worthy to do for him the menial service of untying his sandals. He must increase; I must decrease" (John 3. 30), John's self-effacement is one of the noblest traits of his character.

8. The Holy Spirit—The important thing in baptism is not the quantity of water, but the measure of the renewing grace of the Holy Spirit. Water baptism is simply the symbol of the Holy Spirit's influence.

9. It came to pass in those days—A transition, now, to the presentation of Jesus as he enters upon his baptism. Mark sets his baptism apart from that of the multitude. In Matthew, John hesitates as he recognizes the greater presence (Matt. 3. 14), but yields to Jesus—"Suffer it to be so now." Came from Nazareth of Galilee—The home town of Jesus. Nazareth was the home of his childhood, youth, and young manhood. It is beautifully situated two-hours' ride west of the Sea of Galilee, in a sort of cup made by the union of several hills. The New Testament is silent as to the life of Jesus spent here with his parents. He disappears from our view at twelve years of age reappears eighteen years later, at the Jordan, to be baptized and to make a formal entrance upon his ministry. In the Jordan—Not far from Jericho. Perhaps at the ancient ford of Succoth. Thousands of pilgrims every spring seek to be baptized in the Jordan, in imitation of their Master. The baptism of Jesus was not according to John's baptism, repentance unto the remission of sin. It was not what the church of to-day regards as Christian baptism—"In the name of the Father, the Son, and the Holy Ghost." It was "to fulfill all righteousness," as Jesus tells us in Matthew's Gospel. That is, it was fitting that he, the inaugurator of the kingdom of heaven, should undergo the rite, symbolical of the renewing and cleansing which was the very kernel of his teaching.

10. And straightway—A favorite word of Mark, occurring ten times in Chapter 1. It discloses the vivid and rapid movement from one stage to another. Coming up out of the water—Indicating that he had been in the river. A vast majority of all the representations of the baptism of Jesus in early Christian art represent him as standing in the water while the ministrant pours water upon him from above. He saw the heavens rent asunder—Matthew, Mark, and Luke have substantially an identical account. Luke adds that the dove was in bodily shape. We are not told whether the multitude saw these phenomena or whether this was a vision to Jesus only. The language used indicates that the descent of the Spirit was a real event and not merely a sign. It was a special influence preparing him for his new work.

11. A voice came out of the heavens—In the Gospel account three heavenly voices are heard during the ministry of Jesus: First, at the baptism; second, at his transfiguration (Mark 9. 7); and third, during the last week of his life, in the courts of the temple (John 12. 28). Thou art my beloved Son, in thee I am well pleased—This recalls Luke's account of his development "in favor with God and men" (Luke 2. 52). This title, "Son of God," is one of the most important in all the Gospels. It occurs nine times in Matthew, four times in Mark, six times in Luke, and ten times in John. We may well understand, therefore, why Mark's first sentence is "the good news" about the "Son of God."

Bedtime Stories

Miss Centipede

Little Miss Centipede
Went out to shop,
And at Shoofly & Company's
Made her first stop.
Mr. Shoofly came forward,
All beaming and gay:
"And what can I do
For you, madam, to-day?"
He bowed and he beckoned;
He showed her a seat;
But the poor clerks turned pale
When she put out her feet.
"How many?" they faltered.
"As many as these,"
She replied very sweetly,
"And hurry up, please."

So they hurried and scurried,
The ten Shoofly clerks,
All hustling together
And working like Turks.
They cleared all the counters;
They emptied the shelves;
They made, in their haste,
Perfect slaves of themselves.
They laced and they buttoned,
They pushed and they squeezed,
Miss Centipede watching,
Quite placid and pleased;
They used a short ladder
To fit her top feet,
And never drew breath
Till the job was complete.

And here's what they sold her—
Now count if you choose:
A pair of cloth gaiters,
A pair of tan shoes,
A pair of black pumps
And a pair of tan ties,
Two pairs of galoshes
And boots, ladies' size;
Five pairs of silk slippers
For thin evening wear—
Rose, green, red and buff,
And a rich purple pair:
And soft bedroom slippers
Of crimson and gray;
And a pair of bootees,
By red tassels made gay;

And five sets of sandals,
Two basket-ball shoes,
And two pairs for lounging—
Pale pinks and pale blues;
And six pairs for walking,
And six pairs for snow,
And six pairs to hunt in—
Though what, I don't know;
And two pairs of goatskin,
And two pairs of duck,
And four pairs of kid—
And on all of them stuck
The daintiest rubbers.
Indeed, she looked sweet,
Miss Centipede did,
As she tripped down the street.

—Nancy Byrd Turner.

Cakes with molasses in them bake more quickly than others.

Poultry

Market Calendar.

Market prices are considerably higher in January than before Christmas. Fresh killed chickens, especially crate fed roasters, in special demand. Good market also for late hatched and immature pullets.

Market in January crate fed roasters, immature pullets, last young ducks, young geese, young turkeys.

When buying screenings or damaged grain for poultry be sure that it still contains considerable food value; for example, wheat that is shrunken may be excellent poultry food but that which has been frosted or water-soaked is of very little value.

Sprouted oats are the best green feed obtainable, and make a good, cheap feed and a great egg producer. The fowls are fond of it. Feed at noon as much as they will eat up clean. To prepare, take a pail half full of oats, soak in water for about one day, drain water off and empty in a box with half inch holes bored in the bottom. Sprinkle night and morning with warm water. When the oats commence to sprout spread them out in other boxes two inches thick, and sprinkle twice daily with warm water. Keep oats well stirred up each time you sprinkle, and in about a week or so they will have sprouted. The length of the sprout will depend upon the temperature of the room. When sprouts are four or five inches long you will have them all fed. In the meantime have another lot ready to feed.

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Eliminate the old hen which devours her quota of daily rations and refuses to make the expected return of three or four eggs a week.

A bird with a predominating yellow color in shanks, beak, vent and ear lobes and with pelvic bones close together is not a producing bird. She is not laying at all, or at best laying only infrequently.

By far the best way to kill a fowl is to pierce the brain with a knife. The bird must be hung up by the legs, the mouth opened, and the blade of a sharp-pointed knife thrust firmly through the roof of the mouth. An incision should then be made in the neck and the bird should be left hanging until the blood has drained out. When killing an old fowl, a dessertspoonful of vinegar should be given about 12 hours before killing, and all fowls should, of course, be starved for from twenty to thirty hours before they are killed. It will be found that poultry will keep far better if the skin is not broken. Therefore if the birds are not to be cooked for a day or so after they have been killed, they should only be plucked and not opened until they are needed.

Sheep Notes

When sheep have torn and ragged fleeces, the buyer gets the impression that they have had rough usage and that the carcass will not be first-class. The bad fleeces hide any good points the sheep may have.

The feet of sheep should be trimmed at least once a year, and as much oftener as necessary. The hoof grows rapidly, and if the sheep are not running on very rough ground the feet will grow faster than they will wear off. The trimming may be done in the spring, and should be done from the under side with a sharp pocket knife or hoof knife.

The Dairy

By increasing the value of the manure produced, cement floors in live stock feeding stable will return their cost in about one year. Tight stable floors save soluble plant food from seeping away as it does with earth floors.

Much of the fertility value of manure is in the liquid part, which is easily carried away through earth floors. Concrete prevents this seepage, making each ton of manure worth more and at the same time there is a greater quantity of this material. Added to the profit of the manure is the great convenience of concrete floors.