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—F. G.:—We have a fifteen acreacre field of clover sod manured this winter and spring. The soil is a good sandy loam. My two sons want to raise a bumper crop. Now would you advise to drill the fertilizer in with grain drill or corn planter? We intend to check it. Also how much fertilizer should we use to the acre? The land is in good shape.

Answer—In order to get a maximum yield of corn on your sandy loam soil, I would advise you to put on 400 pounds of fertilizer per acre. I would broadcast 300 pounds of this by drilling it in with a grain drill before the land is planted to corn. Sow the other 100 pounds per acre through the fertilizer attachment of the corn planter. I would advise an analysis of fertilizer running from 2 to 3% ammonia and 8 to 10% phosphoric acid; also 1% potash will help, if it is obtainable.

Question—C. O.:—I have a piece of rather light land that was in corn last year, part of it had manure applied. If the balance of the field is manured then disked and harrowed thoroughly, would it be all right to sow clover on, providing it is well limed? How much hydrated lime is needed per acre? Would it be advisable to sow buckwheat and clover? When ought the seeding to be done?

Answer—If the land is well manured and limed, then disked and harrowed thoroughly, it will make a good seed-bed for clover. If adding hydrated lime, I would use from 1,000 to 1,500 pounds per acre. I do not believe that buckwheat would be a good nurse crop for the clover. The buckwheat tends to grow very thick. It is used to smother out such weeds as quack grass. I would rather prefer oats, spring wheat or barley. Perhaps barley is the best nurse crop, since it ripens early, is shallow rooted and is removed more quickly from the ground, so that the clover has a better chance to grow. The small grain and clover should be sown as soon as the ground can be prepared in the spring. In order to help both the small grain and the clover catch, since your seeding must necessarily be late, I would advise applying from 200 to 250 pounds of fertilizer carrying 2 to 3% ammonia and 8 to 10% phosphoric acid. This will act like whole milk to the young calf. It will give the infant grain and clover plants easily digestible plantfood and will greatly assist both crops.

Question—W. M.:—What is your advise in regards to planting soy beans in ensilage corn? Does this make the silage a better feed, and would you plant them the same time as the corn? I thought perhaps if the beans were planted later it would make more moisture in the silage. Please let me know what time to plant for best results. Also my pasture runs short in latter part of July or August. I have two and one-half acres that I would like to use for this purpose. Would cowpeas and oats be a good feed if cut green, and what time is best to sow them?

Answer—In many sections good results are forthcoming from seeding soy beans with corn. Theoretically, the mixture should greatly benefit the balancing of the ration, since soy beans are rich in protein and fat and corn is rich in carbo-hydrates. Many farmers get excellent results by hogging down the corn and allowing the pigs to harvest the soy beans. This balances their ration, as indicated.

The beans may be planted at the same time as the corn, if you cultivate the corn only one way, but the common practice in the middle western states is to drill the seed in at the last cultivation, or to scatter it between the rows and work it in at the time of the last cultivation. About 1½ bushels of seed per acre is required. If planted as described the beans should be well set and fairly well ripened by the time the corn is to be cut for silage.

Regarding the short pasturage, I am wondering if you are familiar with the work on pastures done by Prof. Zavitz of Ontario Agricultural College. He has obtained good results from the following mixture:

Oats	51 lbs.
Early Amber Sugar cane	30 lbs.
Common Red Clover	7 lbs.
Total	88 lbs.

He advises sowing this early in May. The oats and the Early Amber sugar cane can be drilled through the grain drill and the clover seed can be sown through the clover seed attachment of the drill. At Guelph they found this mixture ready for cattle pasture late in June. It carried more than one steer to the acre. In 1911 it was successfully used for milk cows.

If you wish to grow a crop to cut green, I would advise you to mix peas and oats,—a bushel of each. This makes a good rich green hay and gives satisfactory results. Sow this just as soon as you can prepare the ground.

Poultry

The shade problem is one that must be solved in the near future. The days will soon be here when the midday sun can do a lot of damage to stock exposed to it. Even in June there are days when a little shade is needed. This is probably more the case with chicks than it is with grown fowls; but, nevertheless, they all need it. Trees furnish the most cooling shade. Where trees are not available canopies should be erected, made by driving stakes in the ground and covering the top with burlap.

The chicks need plenty of nourishing food, but care must be taken that they are not overfed. If overfed they will lose their appetites and becomes stunted.

The hens out on range must be looked after. They are apt to hide their nests in some out-of-the-way place, and in consequence many eggs are lost or never found until they have lost their value. Beware of the hidden nest, and above all things never market an egg that has been found outdoors; let the cook in your own kitchen test its quality.

A more profitable side-line than turkeys for the farmer can hardly be found for those situated on grain or stock farms. Improper feeding, combined with close confinement, has been the cause of many failures in turkey raising. Given free range on the average farm the poults can generally pick up their own living. One light feed per day for the purpose of inducing them to come in at night is sufficient.

The Dairy

A little oil cake added to the skim milk will make an excellent substitute for fat in the calf's feed after the whole milk has been cut off.

Milk warm from the separator, with a little flaxseed jelly added to supply the extracted butterfat (at less cost), is an ideal feed for calves.

The calf feeding pails should be kept as clean as the milk pails. One feeding of stale or sour milk will often cause serious indigestion and scours.

It is better for a calf to miss a feed than to have a feeding of sour milk.

After drinking the milk a handful of ground grain should be put in a feeding box.

The pregnant heifer should receive a liberal ration containing a high per cent. of protein and ash, as these are necessary for the development of the foetus.

The best time to start feeding the heifer to produce a good milk cow is when it is young.

Hogs

The strength of the pig when farrowed exerts possibly the greatest effect on the ultimate economy of production.

Second only to this point in importance is the influence of wisdom in the feeding and management of the sucking and the weaned pig.

More good litters are ruined—and more swine-feeders baffled and discouraged—by improper feeds and feeding and ill-advised methods at the period mentioned, then possibly during any other phase of the pig's existence.

Teach the litter to eat three weeks before weaning.

For best results milk products are practically a necessity, with middlings.

A few handfuls of dry grain scattered in the bedding insures the pigs taking exercise. Avoid overfeeding, and make exercise necessary.

Gradually increase middlings until weaning. If skim-milk is available, and two litters per year are anticipated, wean at six weeks of age; otherwise wean at eight weeks.

Rape makes excellent forage for hogs. And rape, sown on land kept under clean cultivation until July, will assist in land cleaning.

Sheep Notes

There have been quite serious losses in lambs in England this spring owing to unfavorable weather and lack of skilled help at lambing time.

When the sheep have become accustomed to pasture, and the grass has gotten good heart, there need be little anxiety about the flock.

Grain fed to the flock while on pasture increases the profits.

Provide a lamb creep so the lambs can be fed an extra ration of grain by themselves.

The quicker the lambs grow to marketable size the more profit and the better the meat.

Shear the sheep early. Protect them during nights in the folds, and from rains or cold winds.

The ticks will go to the lambs, which should be dipped.

Dock the lambs while they are young, as there will be less shock and less loss of blood. But not too short. Smear the wound with tar. Keep a close watch that the healing takes place at once.

That Feminine Intuition.

When a man is in love with a girl he should tell her as a matter of form, though the chances are that she knew it before he did.

A HOME-MADE REFRIGERATOR

Simple Device Which Makes a Good Substitute for an Ice-box, and is Easily Made by the Home Carpenter.

An Iceless Refrigerator.

Country homes without ice-houses may have an iceless refrigerator as a good substitute.

This convenience comprises a simple wooden frame with a covering of canton flannel made to fit so that little air is admitted into it.

Wicks made of the same material as the cover are tacked on top of each side of the cover and extend over into the pan of water sitting on top of the frame. This water is taken up by the wicks and carried down the sides of the cover by capillary attraction, when evaporation takes place, drawing the heat from the inside and lowering the temperature. The more rapid the evaporation, the lower the temperature. The refrigerator should therefore be kept in a shady place where there is a free circulation of air. Keep the wicks in a supply of fresh water in the top pan. The whole refrigerator should stand in a larger pan which catches the drippings from the cover.

The frame may be made of pine, painted white. About 5½ yards of white canton flannel will be needed. Put the smooth side out, care being taken that the cover comes to the lower edge of the frame. The wicks are made half the length of the sides and sewed on the top edge at each side. They must extend three inches into the water. The three shelves are made of zinc. Cover the whole frame with wire screening to protect from flies.

Bedtime Stories

Whole Duty of Children.

A child should always say what's true
And speak when he is spoken to,
And behave mannerly at table;
At least as far as he is able.

—Robert Louis Stevenson.

Making Others Happy.

A dozen pairs of little shoes and slippers hung down almost to the floor from that infant class bench, and a dozen little maids kept them swinging back and forth all through the lesson hour. Ada Bryce was so busy gazing at her own pretty, shiny boots that she did not notice a pair of very worn shoes at the other end of the row.

"Why, what a shabby pair of shoes to wear to Sunday school!" she thought to herself when she caught sight of them; "and what a faded dress that little girl has. I am glad she is not sitting by me," and she smoothed her own dainty frills with a chubby hand.

The teacher was speaking again, and her words set Ada thinking. "Now, girls, you have answered well to-day, and I want to know who will promise to remember the lesson during the week and try to make someone happy whenever she can?"

Up went Ada's hand with the rest, and her eyes turned again to the little stranger, whose name, she had discovered, was Janey Burns. 'I don't believe she is very happy," she thought; and before she knew it almost she had smiled at the little stranger, whose big, wondering eyes smiled back into her own.

As the infant class scholars trooped out for the closing exercises a little figure in a dainty dress slipped into the seat beside Janey Burns and a soft little voice whispered, "I guess I'll sit by you. You can hold my muff if you like. It's cosy to put your hands in."

As she and Lucy Miller trotted home from Sunday school together Ada whispered in Lucy's ear, "It's easy to make people happy; and isn't it funny? It makes you feel as if someone were making you happy, too."

Horse Sense

The symptoms for disease of the side-bone are, in some cases, lameness, and a hard, unyielding enlargement surrounding the heel on one or both sides of the foot.

If lameness be present, blistering tends to effect a cure; if not lame no treatment is advisable.

Use three or four horses in a team wherever possible.

The neck and shoulders of most horses are all the time changing. The collar that may be all right this year may need considerable readjusting another year.

It is difficult to find a better collar than a good curled hair collar.

Some blacksmiths seem to think they must earn their money paring off the horse's hoof. Result, thousands of poor sore-footed horses.

A SILO ON EVERY FARM

Pays For Itself in Two Winters With Twenty-Cow Dairy—How to Get It—Where to Put It.

If there is anything a farmer is justified in going into debt for it is a silo. No implement will pay for itself so quickly as the silo. The question, Will it pay? is no longer debatable. With a dairy of twenty cows it will pay for itself in two winters' feeding. The only questions nowadays are, How can I get one? What kind shall I get? Where shall I put it, and how shall I pay for it?

Wideawake fruit farmers have found that dairying filled a unique and profitable place in their farming system. And modern dairying is not profitably possible without a silo.

An acre of corn made into good silage has about forty per cent. greater feeding value than when fed as crib corn and dry fodder.

Cows need succulent feed during the winter months and silage furnishes it in convenient, economical form. Steers and lambs make faster and cheaper gains when silage is part of the ration.

There is a further urgent reason for erecting a silo this season—the prices of all feeds are unusually high and the saving with silage is consequently greater than ever before.

The first silos built were of the pit type, dug in the ground. It was soon found that the ensilage in these pit silos rapidly became moldy and unsuitable for feed. The silos first constructed above ground were of wood, being square in shape or eight sided; but they were not a success on account of the air pockets in the corners, which caused the silage to spoil. It was not until the round stave silos, with hoops that could be tightened or loosened as the silo swelled or shrunk, were put on the market, that silos became a practical success.

The expense of wood silos depends on the sort of wood used.

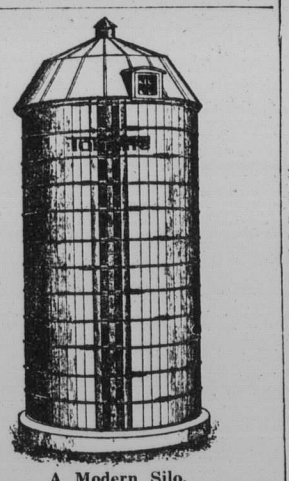
A silo ten feet in diameter is the best size for from twelve to fourteen head of cattle, as enough silage is taken out each day to keep it fresh. This is a very important point. A silo twenty feet in diameter would require a herd of from thirty-five to forty head of cattle to eat enough off each day to keep the silage fresh. A silo ten feet in diameter and thirty feet high is the best size for the small-sized herd. This will hold forty-six tons of ensilage, enough for eleven cows, each getting forty pounds a day, for 200 days, and allowing some for loss.

The absolutely essential features about a good silo are: The walls must be air and moisture proof, the inner surface must be smooth and perpendicular, the walls must be strongly reinforced, and the doors must be air-tight.

There are five kinds of silos on the market, those made of wood, solid cement, cement blocks, hollow tile and iron.

The wood silo was the first commercially introduced and has been greatly improved. In selecting a wood silo, the writer would go to the expense of having the staves made in one piece. This costs a little more.

Cement silos, and silos made of hollow cement blocks have been used, but do not seem to be growing in favor. Every silo, however, no matter of what material it is constructed, should have a solid foundation of masonry or cement, preferably cement.



A Modern Silo.

Seven or eight years ago silos began to be made of hollow tile, and are steadily gaining in popularity. The manufacturers claim they will last for generations, are wind and moisture proof and fireproof.

Metal silos are being built and extensively exploited in the United States, being put up in sections all bolted together, the joints being filled up with suitable paste. The manufacturers claim the work of erecting these silos is so simple that a farmer with ordinary judgment can put them up, using the help on the farm. When the silo is complete and erected, it resists the action of heat and cold, the walls being absolutely air-tight, and the silage will keep well; but there is no doubt that the silo of this type should be kept painted, pa[illegible] inside, [illegible] it might be eat[illegible] rust.

The Sunday School

INTERNATIONAL LESSON
JUNE 10.

Lesson XI. Jesus Crucified—John 19. 16-30. Golden Text—1 Cor. 15. 3.

Verse 16. The Evangelist lays the whole responsibility on the Jews. They have just repudiated their nationalism: the Emperor Tiberius is the only Messiah they will own! So Pilate hands over their King to them that they may enthrone him; and they accept the office! Compare Acts 2. 23.

17. Bearing the cross—This is usually harmonized with Mary 15. 21 by assuming that the Lord sank under the burden. It was observed earlier in these Text Studies that he had well-nigh worn out his body with overstrain before he came to the last great act of service, and that this probably accounts for the rapidity with which he died. John fastens attention on the first steps in the sorrowful way: the King goes forth bearing the sceptre of his victory! A skull—In Latin calvaria: it was presumably named from its shape, a round bare knoll. In Hebrew, as in verse 20, means Aramaic, the common language of Judaea and (to a less complete extent) Galilee.

18. The crime for which these dacoits suffered is described by implication in Luke 23. 41. Compared with Luke 23. 19, it may be safely assumed that they were among Barabbas's followers. Having accepted the Jews' accusation that Jesus made himself a King, Pilate is obliged to make the most of it. So he orders that the King shall be between his followers, in the place where Barabbas should have been. He also has the usual titulus written, which the condemned carried suspended round his neck to the place of execution. This sets forth what is the fate of those who dispute Caesar's crown.

19. Wrote . . . put—Abbreviated for "ordered to be written . . and put." Mark gives only the essence of the charge, and Luke practically follows him. The other two add the name, John being fullest of all. The name and place of origin may well have been omitted in the Greek and Latin versions: strangers were not supposed to be concerned with his identity, but only with the crime for which he suffered.

20. The local language, the official, and the language of universal intercourse in the Roman world, are combined to proclaim his royalty. One recalls the mingling of Jew, Roman, and Greek in the great apostle of the cross, who was to make the King known through the Roman empire. Few passers-by would know Latin, which was there as official: the Greek was for foreigners, and for not a few of the Galileans.

21. Pilate had succeeded in insulting the men who had forced him to do what he knew was an outrage on justice. It was the sneer of verse 15 made permanent for all to see.

25. It is not quite certain, though probable, that there are four women mentioned here. There may have been more in the company: Joanna (Luke 24. 10) is an obviously probable one. It is difficult to believe that Martha and Mary of Bethany were not there. This consideration makes it risky to assume that the three in Mark 15. 40 are the same, and that therefore his mother's sister was Salome, mother of James and John. Mary the wife of Clopas—Alphaeus (Mark 3. 48) may be the same name, so that her son, "James junior" (Mark 15. 40), was an apostle.

26. Woman—The rendering entirely fails to give the tone of the address, which often answers to Madam. Our idiom would simply drop it in such a context (as in paraphrase).

27. That Mary was gently led home at once is suggested by Mark 15. 40, where she is not named. Her Son tenderly spares her the agony of the darkest hour; and she, utterly crushed in spirit, passively obeys him. She did not hear him cry lama sabachthani.

28. That the scripture—of course this means that the Evangelist recognizes in the cry of physical anguish the correspondence with a Divine necessity revealed in Scripture. "In my thirst they gave me vinegar to drink" does not answer in spirit to the kindly act described in verse 29. But it is the thirst, not the "vinegar," that the Evangelist is thinking of: the quality of the liquid offered made no difference at such an hour.

29. Vinegar—Rather, sour wine; Latin, posca, the soldiers' ordinary drink. Hyssop—The branching twigs of which would hold the sponge and enable them to press it to his mouth.

30. He said—The momentary refreshment gave him strength to utter aloud this one great word, and then to breathe the dying whisper (Luke 23. 46, margin) of Psa. 31. 5. Gave up his spirit may mean simply, "expired," but the thought of returning his spirit to God, who gave it, may be present.

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.

J. L. G.:—1. It takes a submarine from three to eight minutes to submerge. The record for submerged speed, so far as known, is 12 knots. Generally ten miles an hour is the best underwater speed. 2. A forestry regiment is composed of lumbermen who cut timber and prepare it for engineers for the building of bridges, railroads, trench supports, etc. 3. The River Isonzo, a short Austrian stream, just across the Austro-Italian border, runs north and south along the battle-front in this sector. It empties into the Gulf of Trieste and the Adriatic Sea.

"Housekeeper":—Honey is a very valuable food. It is especially good for children who need a great deal of sugar, because of the fact that the skin surface, that is, the radiating surface of the child's body, is much larger in proportion than that of the adult. This means that children's bodies lose heat rapidly, and therefore they need a great deal of sugar which produces heat and energy. Honey supplies sugar in its most digestible form, and enters into the circulation at once. Honey also contains minerals necessary for the human body, one of these being iron.

"Lucy":—1. Spread a thin film of butter over cheese that is to be put away and it will not dry or crack. 2. Lengthen the stitch on your sewing-machine to its fullest extent, and stitch the part to be shirred. Adjust stitch gathers by pulling the lower [illegible] gathers will be per-[illegible] or moths around the edge of a carpet, a hot iron is an excellent exterminator. Dampen the edge of the carpet and iron with the hot iron. If of velvet or Brussels, hold the iron close to the carpet, but do not press it down. The hot steam will kill all moths, and without the least injury to the carpet. 4. When sealing jelly, melt paraffin in an old teapot or tea steeper. It is the most satisfactory way of pouring the wax over the jelly when sealing it. No drops will be spilled upon the table.

"Mary":—To remove stains caused by handling fresh fruit, before washing rub the hands with half a lemon. Or take a stalk of rhubarb, peel and bruise and rub the hands with it.

"Botanist":—The national flowers of the allies are, so far as known: England, rose; Scotland, thistle; Ireland, shamrock, Wales, leek; Canada, maple leaf; Australia, fern; France, lily; Japan, chrysanthemum; Italy, lily. There is no floral national emblem accepted by the other allies, Russia, Belgium, Serbia, Rumania, Montenegro, Portugal, United States and Cuba.

S. B.:—To make Hollandaise sauce for fish put 2 tablespoonfuls of butter and 4 tablespoonfuls of vinegar in a saucepan, bring to a boil, add yolk of one egg, cook till thick, remove and season with ½ teaspoonful salt and a dash of pepper.

A course in Domestic Science will shortly commence in the Household Department. If you clip out the lessons as they appear and paste in a scrap-book, you will have the complete series for future reference.