Farm Crop Queries

CONDUCTED BY PROF. 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.

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H. A.: Would sweet clover have a tendency to eradicate milk-weed and quack grass? How long after planting before a crop can be cut for hay under normal conditions? How early should it be sown, and how much seed per acre?

Answer: Sweet clover makes very rapid and close growth. I do not know that it will eradicate milk-weed and quack grass, but it will at least weaken those weeds, and make their extermination easier.

There are two kinds of sweet clover—the annual and biennial. The annual clover, if planted early in spring, produces a good forage crop by the middle of July, which in many instances cuts from 1 to 1½ tons to the acre. The biennial clover produces a heavier growth the second year, but should not be cut short the first autumn. As a rule 10 to 15 lbs. should be seeded per acre to get a good catch.

R. K.: I have a field of biennial white sweet clover seeded in oats last year. Can I cut it for hay, then let it grow up again and cut it for seed? What time shall I cut it so as to give it time to go to seed?

Answer: Biennial clover seeded last year should make a good cutting of hay by mid-summer of this year. If cut early it will make a second growth which will flower, but if you are growing it for seed, do not cut it for hay first if you wish to get the largest yield of seed.

W. F.: Would like some information in regard to fertilizers for corn. I have been told that acid phosphate alone was all right. This field has been in corn for the past two years and I have planted it to corn again this spring. The land is a mixture of sand, clay and gravel. It is heavy beech and maple land, but badly run down. What is the amount and kind of fertilizer to use?

Answer: The fertilizer to be added to corn depends very largely upon the soil upon which the corn is grown. If the soil is a rich loam which has received considerable manure, acid phosphate is probably the only fertilizer that need be added. If the soil is pure clay which has not received manure for some time you should add from 200 to 400 lbs. per acre of a fertilizer carrying 3 to 5 per cent. ammonia, 10 to 12 per cent. phosphoric acid. If the soil is sandy or gravelly a complete fertilizer analyzing approximately 4 per cent. ammonia, 8 per cent. phosphoric acid, and 6 per cent. potash should be used. This appears to be the type of soil on which your corn has been growing. Therefore, we would advise adding at least 400 lbs. of the above fertilizer per acre.

B. H.: I planted raspberry bushes this spring in gravelly soil, using sheep manure as fertilizer. Can you give me directions as to the best care this season?

Answer: The raspberry bushes should receive cultivation sufficiently often to keep down weeds and to preserve the moisture in the soil. About the middle of July we would advise adding 300 lbs. of bone-meal per acre distributed between the rows of canes and worked in by cultivation.

Fighting the Crow

There are probably no birds whose habits are wholly good or wholly bad from the standpoint of man's best interests. Many species are recognized as valuable assets contributing largely to human welfare; others show vices and virtues so nicely balanced as to make judgment difficult; while in a few species their numerous sins brand them as undeserving of protection. In spite of all that has been written in its defence, the crow belongs in popular mind to the last or outlawed group, for its destructiveness is attested by the farmer, the poutry raiser and the sportsman. Notwithstanding the abundance of the English sparrow in this province and the enormous losses due to its activities it would seem that the crow is considered as serious a pest, if one may judge by letters of inquiry which are received.

The economic status of any bird depends almost entirely upon what it eats. To be ranked as a beneficial species, it must either render valuable service by the destruction of animal pests (insects or rodents), or in the consumption of weed seeds.

Because of the gathering of the clans at the great crow roosts of more southern countries, our winter population of crows is very much reduced and therefore the winter food plays little part in a consideration of the economic status of the species in Ontario.

In March the migration tide starts in. At this season of the year their food supply consists of carrion, waste grain, benumbed insects and cold-blooded vertebrates and meadow mice. If the crow is ever to be considered as beneficial it is during these months.

April, May and June are busy months in the crow's calendar. Nest-building, egg-laying and brooding, and finally the search for food for the nestlings are the duties which now devolve upon the birds. It is during this period that the crow commits the crimes which make it detested by the farmer and the bird-protectionist. Undoubtedly the most serious charge against it results from depredations in newly-planted corn fields. The extra work involved in replanting, and the short growing season remaining for the replanted corn make the damage of unusual importance in this province. Fortunately, reports indicate that serious damage is not general, but depends rather upon local conditions. Where crows are numerous and corn fields few, the damage may be considerable.

The bird protectionist finds much to criticize in the crow's crimes against smaller birds. These species are put to flight and their nests robbed of eggs or nestlings. Many of the birds thus attacked are themselves decidedly beneficial to man and the damage done in their destruction is at once apparent.

So serious is this phase of the question that some of the leading ornithologists of this country declare the crow to be the most destructive native enemy of smaller birds.

The tastes acquired in the robbing of the nests of wild birds may account for another of the crow's vices, for during the summer months it is an accomplished chicken thief. So much stealth and cunning are displayed in this pursuit that it often escapes notice and beneficial hawks bear much of the bame and often suffer the supreme penalty. In some of the cases reported, poultry-raising has become well-nigh impossible until the shotgun finally put an end to the crow's career.

In June adult May-beetles are eaten in large numbers, some caught alive, others picked up as carrion. During the late summer months grasshoppers form a considerable portion of the food supply. The destruction of these insects must be considered as beneficial, but it falls far short of atoning for the wholesale destruction of entire broods of beneficial birds. The crow always prefers hard-shelled insects and rarely eats caterpillars or soft larva of any kind. In the fall, corn becomes an important item in the diet and the loss may be considerable when crows gather in flocks preparatory to the fall migration.

Total extermination would be inadvisable, but the sagacity and intelligence displayed by the crow give ample assurance that man's best efforts will still leave sufficient numbers for esthetic and ornamental purposes. It distrusts and avoids man, but soon learns how harmless are the scarecrows, bits of dangling tin and other devices used in an effort to frighten the birds from fields of grain.

The first step toward crow control on the farm must be the destruction of crow's nests. If the trees of the wood-lot shelter the nests of a half-dozen pairs of crows the farmer is sure to pay a heavy toll in the loss sustained in nearby corn fields and in the poultry yard. He is also robbed of the services of many smaller birds whose work is important in the control of plant pests. Where the crows have been allowed to nest undisturbed for several seasons, the farmer will usually find it time well spent to take an occasional hour in ridding the farm of nesting crows. Shooting through the nest, in the spring, with a shotgun will often kill the entire brood of young crows. The most serious damage will be done in the vicinity of the nest. Where co-operative measures are taken by large numbers of farmers to reduce the number of nesting crows the results are particularly gratifying.

For the protection of the corn crop there seems at present no better method than that of tarring the seed corn. The time and labor involved are about the same as in the formaldehyde treatment of grain and when properly done the results usually justify the additional item in the cost of production of the crop. Place the corn in a tub and cover with lukewarm water and stir so as to moisten the corn thoroughly. Drain immediately and stir in one tablespoonful of coal tar per bushel. Spread out to dry. It can then be used successfully in the corn planter.

The Sunday School Lesson

JUNE 19.

Making the Social Order Christian. St. Luke 4: 16-21; St. Matt. 25: 34-40. Golden Text—St. Matt. 25: 40.

Connecting Links—The essence of Christianity is in the spirit, not in the forms, of life. It is possible for the Christian spirit to exist and to manifest itself in any recognized or established order of society. Even a slave and his master may live together as brothers beloved (see Philemon 16). The king, the feudal lord, the artisan, the physician, the soldier, the serf, the priest and monk, hermit and missionary, have all entered into this brotherhood. It is possible for this kindly Christian relationship to exist in the factory, the forest, the field, and the mine, between employers and employed, just as perfectly as between fellow workmen in the same craft. The Christian spirit is the spirit of love and service.

St. Luke 4: 16-21. As His custom was. Jesus did not despise the religion of the past. His custom was to go to the synagogue service on the sabbath day. There, too, the opportunity was offered Him of teaching the people. On this occasion He was in His old home town of Nazareth, and was invited by the chief ruler of the synagogue to read the Scripture and speak to the congregation. He chose the sixty-first chapter of Isaiah and read the great declaration of that prophet's mission to his people. Inspired by the Spirit of the Lord it was His to proclaim the coming of a great deliverance, a deliverance, it is true, which was never realized in a material way by the people of Israel, but which Jesus now declares is to be realized through His ministry.

For Jesus has come to preach the gospel (i.e., good tidings) to the poor. He has a message of healing for broken hearts, and of deliverance for those held captive by the world's greed and cruelty. He has power to open eyes that are spiritually blind, and to give freedom to those who are bruised in sin's prison houses. He, too, like the prophet of old, is sent to preach the acceptable year of the Lord, the dawning of a new era, the long-sought and long-hoped-for age of salvation. For those who would listen to His words and believe, that new era was already begun.

All bare Him witness. The words of Jesus are not reported in full, but we can imagine that He spoke of the Father in heaven and His love for men, of human love and service, of the coming age of justice and freedom and the healing of the world's sorrows. "Words of grace" fell from His lips. But among those who heard were townsfolk of cramped and narrow vision, who had no heart to understand or care for these high things. They were only disposed to criticize, and to make little of Joseph's son, the one-time carpenter. St. Matt. 25: 34-40.

Then shall the King say. In this parable Jesus sets forth the things that are above all else pleasing to God. They are to feed the hungry, give drink to the thirsty, show hospitality to the stranger, clothe the naked, visit the sick and those who are in prison.

For those who do these things the kingdom of heaven is prepared. Even though they have not known or heard of Jesus, or have not known that in this way they were serving Him, they will receive this great reward. For Jesus had so identified Himself with humanity and human need, that He could truthfully say Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me.

It follows that the Christian spirit will always manifest itself in this way, and that such kindly, helpful, healing ministries are the true activities of Christ's kingdom. By them, far more than by theories and experiments, is the social order being made Christian. They represent the mightiest forces of progress and of reform. The nations of the world can do without the revolutionary agitator, the preacher of class hatreds, even the clever theorist, but they cannot do without the men and the women of the kindly heart and the open hand.

The greatest evils and greatest dangers of society are those of greed and hatred, and these evils are not confined to any one class. The way of safety is the way of unselfish kindness and love. If commerce and industry cannot be carried on on a basis of unselfish kindness, then either we ought to have no commerce and organized industry or Christianity is impossible as a law of life. Either supposition is inconceivable. The Christian law of love and kindness must be the law of business as well as of home and neighborhood life. He who refuses to be governed by this law is not a true Christian.

For those who have fed the hungry and clothed the naked and ministered to the stranger and the sick and the prisoner, are the great words of invitation: Come, ye blessed of my Father. They have the greatest of all human joys, the joy of service to those who need, and they have the bright hope of an immortal inheritance in the Kingdom of God.

Application.

However ably Jesus might deal with the broad principles of the Kingdom, He never forgot that in improving the social order our dealings must finally be with individuals; not with abstract principles and relations, but with men and women and little children and the conditions in which they live. In political economy it used to be the fashion to talk about the "economic man." There is no such creature. Behind all discussion of sociology or political science, or even religion is "the throbbing mass of humanity, tempted, sinning, sorrowing, suffering, struggling and striving." The social problem is not merely intellectual, it is human. It will not suffice to cherish great ideas and noble ideals. If they are to count for anything they must be expressed in our contacts with our fellow-men. "The enthusiasm for humanity is one thing; the enthusiasm for the individual man is quite another." But Jesus brings us all right up against the problem of our own personal dealings with our neighbors in this memorable picture of the last judgment. He says that lives are to be tested on the basis of what they have meant to other men in terms of food, drink, shelter, clothes and compassion. Many of us have not time to read and ponder as we should like. The pressure of the days upon us is so heavy that we get little chance to examine the perspective of life. But deeds of charity and kindness, words of encouragement and help, the attitude of hearty and practical goodwill, these must become the habitual characteristics of our relations to the brothers and sisters among whom God has placed us, or ours should be a "fearful looking for of judgment."

The Dairy

A little fly dope to spray on cows saves them a lot of pestering. But it is even of greater value to the dairyman and his hired man. Their morale on hot summer nights is never improved by being kicked and switched by fly-bitten cows. One cow with a tail like a bundle of wire can make a milker extremely disgusted with life.

The cows need salt in the summer as well as any season and the large salt blocks are very handy to have in the lane or pasture. It gives every cow a chance each day to obtain some salt and the blocks do not break up easily so that bits of salt can be picked up by poultry.

Sometimes dealers do not like to handle dairy butter in crocks but prefer the pound packages of uniform quality put up in neat wrapping paper. Then there are no crocks to return and they do not have butter of various shades and some crocks which are too salty and others not salty enough. When the producer has a local trade with private customers it is soon possible to find what they like best and make the butter accordingly.

During hot weather young calves are sometimes staked along the road with an inadequate water supply. It pays to remember that water is always the cheapest element in an animal's ration and yet is one of the most important elements in making animals grow.

In grading up a herd of cows it is, of course, necessary to use a sire of the same breed for each cross. Otherwise you are developing mongrels instead of progressing closer and closer to pure-breds of one breed. Many sections are handicapped in developing high-producing herds because of the long distance that must be traveled to obtain high-quality bulls. In such sections it will surely pay to own a good bull co-operatively.

Poultry

It has been commonly supposed that chicks should not roost until they are about half-grown or they will have crooked breasts. We believe that when a chick is well feathered out that its wings are strong enough to lift its body up on the roost and that nature made those wings strong so that the chick could get up off the ground at night and thus avoid as much danger as possible.

When the chicks have learned to roost it is much easier to protect them from mites. If the perches are painted with kerosene oil the mites will be killed and if the birds use protected roosts they will not be injured by the mites. Lice are also easier to control if the birds are on roosts which contain no crevices in which the lice can hide and the birds do not crowd on the roosts and become overheated as they do on the floor and this helps in keeping down colds.

Some breeders do not like to have the chicks roost at an early age and they protect them by providing boards raised a few inches from the floor on which the birds can spend the night. We believe that vigorous birds from mature breeders can roost at an early age without the danger of deformed breasts.

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Bedtime Stories

Buttercups.

Once on a time, so the fairies say, there were no stars in the sky; only a big round sun and a big round moon. Millions of miles below was the big round earth. Up in the moon two persons lived, the Woman in the Moon and the Man in the Moon. The woman had beautiful long hair and was dressed in yellow; the man was fat and jolly and laughed a great deal.

They spent most of their time polishing the moon. They tended it so carefully, in fact, that it grew larger all the time.

"The moon is getting so big," the woman said to the man one day, "that it will soon be too bright and will keep the people on the earth awake at night. What shall we do?"

The man thought a minute and then he began to laugh. His fat cheeks shook so hard and his eyes shone so bright that the people on the earth said to one another, "How wonderful the moon is to-night!"

"I have an excellent plan," the Man in the Moon said. "I will trim the moon down until it is shaped like a slice of watermelon. Then I'll make other moons out of the trimmings."

So he trimmed the moon until it was shaped just like a slice of melon. The woman was very much pleased with her new house.

"Look," said the people on the earth, "we have a new moon to-night."

The Man in the Moon and his wife sat on the steps of their new moon house, and the man tried to make little moons out of the shavings. Snip, snip went the scissors; drop, drop went the little pieces that fell as he cut.

"Oh, look what I've made!" the man said after a while. He held up a little six-pointed star.

"How pretty," the woman said. "A sky full of little stars like that will be much prettier than a sky full of little moons." And she set to work eagerly to help cut out stars.

After they had used up all the trimmings, the Man in the Moon took his little cloud cart, hitched it to a breeze and went skimming along over the sky, hanging out the stars as he went.

"Oh, look," said the people on the earth. "See the little bright lights up in the sky!"

After that whenever the moon grew too big and bright the couple would pare it down and cut out more stars from the parings.

One spring day the Woman in the Moon decided to clean house. She swept and dusted and beat and washed until her husband was out of patience with her. The dust made him sneeze, and the furniture tripped him up. He decided to go away for a while. So he got into his little cloud cart and went off for a ride.

When he came back he found a pile of golden shavings out in the yard. They were the little pieces that he had trimmed off between the points of the stars during the winter. His wife had swept them up all over the house.

"Cart them off somewhere," she said. "They aren't big enough to make stars of, and they are just cluttering up the moon."

So the man loaded his cloud cart with the little pieces of gold and took them out into the sky and dumped them there. Down, down fell the little golden pieces; down faster and faster through the clouds. A saucy breeze came chasing along the sky and helped to carry them down. Faster and still faster they whirled until at last they landed on the earth.

The next morning when the children ran outdoors they were astonished to find myriads of little yellow things shining in the thick grass like pure gold.

They ran eagerly to pick them up. "What beautiful new flowers!" they cried.

Sure enough, during the night a fairy had touched the little pieces of gold and changed them. Every single shaving had become a bright yellow flower with a green stem.

"They are shaped like little cups," said one of the children.

"And they are as yellow as butter!" said another.

And that is the way—at least so fairies always tell the tale—buttercups first came to be.

Intercrop the space in your garden. Keep all the ground busy.

Try out a new vegetable or two this year. Variety is the "spice" of gardening.

Finishing the Late Hatched.

Late hatched chicks may need some forcing to bring them into fair condition before the coldest days of winter. Possibly the pullets cannot be expected to lay before January 1 and yet the laying will commence sooner if these birds are given heavy rations to develop them as large as possible before they have to be housed for the winter. Pullets that are late-hatched and underfed in the fall are nearly always a loss as they frequently become stunted and do not lay any eggs until late in the next spring.

Boiled oats will be consumed in large quantities by the late-hatched birds. Place a pail of the oats on the range where they can have access to them at all times. A large capacity crop can be developed in that way. Boiled pumpkin mixed with bran is an appetizer of which the birds will eat a great deal and it also expands the crop and gives the bird the large capacity which stimulates rapid growth.

Send the late-hatched stock to bed with a full crop. It pays to examine the crops of the birds after they go to roost and note the condition of the crop. If the birds have plenty of food before them and some individuals go to bed with half-full crops it means that those birds are not good feeders and they should be culled out as soon as they are large enough to bring at least their cost of production on the market.

The problem of late-hatched chicks is serious on the farm as too many of the young birds come in that class. Frequently they are underfed, especially if the corn crop happens to be less than usual. It pays to feed them well or they cannot pay for the little that they do get.

Shall I Borrow to Learn?

A young man who was going in debt for his education, gave the following reason for doing so: "By the time I finish I shall be in debt $800. To have waited until I earned this amount before going to school would have delayed me several years. I can pay it back in half the time after I am through college because of increased earning power. I, therefore, consider that I save at least a year in my life."

Thin Out Garden Plants.

Do not allow your plants to grow too large before thinning them. Nearly all home gardeners plant more seed than necessary, in order to get a full stand of plants. As soon as these are large enough to handle easily, all excess plants should be pulled out, leaving enough space between each plant remaining for the vegetables to develop properly. If this practice is not followed, not only do the crowded conditions cause a tall, spindly, unhealthy growth, but the excess plants act as weeds, using up the plant food and moisture that should be available for the crop.

The distances that plants should stand in the row in order to have enough room for proper growth varies with the different crops and with the different varieties of each vegetable. In general, plants of bush beans should be three or four inches apart; beets, carrots and salsify, two to four inches; endive, eight to twelve inches; kale, eighteen to twenty inches; kohl rabi, four to six inches; leaf lettuce, six to eight inches; parsley, three to six inches; parsnips, three to four inches; radish, one inch; spinach, three to four inches, and turnips three to four inches.

Leaf lettuce is generally thinned several times. The first thinning is not done until the plants are of such size that a few removed here and there may be used as salad and will give room for those remaining to grow larger. Later a second and third thinning takes place, again giving room for further growth. By this method a great deal larger crop may be obtained from a limited space than if the small plants were given maximum distance at the first thinning.

Radishes and carrots are ordinarily not thinned until some are large enough to use—unless, of course, the seed has been sown exceptionally thick. Thinning of spinach, too, is delayed until the small plants removed are large enough to use as "greens."

Many gardens are through when the first crops are taken off. Planting the same vegetables ten days apart as long as possible will prolong the period for fresh green food from the garden.