

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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N. A.: I have four or five acres of land which is quite heavy clay. It has been plowed and has been in pasture for about fifteen years, quite heavy June sod. What would be the best crop to plant next Spring, so I could sow it to wheat in the Fall of 1922? When would be the best time to plow it and how many inches deep should it be plowed?

Answer: The answer to your question will depend to some extent upon your location. If you are in the section where corn matures, an early crop of corn can be grown and cut for silage sufficiently early to allow the ground to be plowed and worked up for fall wheat in the autumn of 1922. If you are not in the corn belt I would advise growing a mixture of barley and oats, about a bushel of each to the acre, which could be cut for mixed grain. As soon as the crop is harvested, have the ground plowed immediately from 5 to 7 inches deep and worked up for fall wheat. At the time you seed the fall wheat it will pay you to add additional available plantfood in the form of about 250 to 300 lbs. of fertilizer per acre. For the fall wheat on your heavy clay I would advise using an analysis running about 2 per cent. ammonia, 12 per cent. phosphoric acid and 1 or 2 per cent. potash.

R. S. A.: Would I get as good results from applying acid phosphate to the top surface and dragging it in as I would if I used a fertilizer drill?

Answer: Best results will be gotten from acid phosphate if it is worked into the soil as is done by application through a fertilizer drill. The whole object is to get the phosphate distributed through the moist soil as thoroughly as possible. If the soil is dry and the application is made broadcast on the surface, you will not get as thorough a distribution through the growing area as when the fertilizer is worked into the damp soil, where it can immediately dissolve and spread through the soil water.

T. W.: I have a piece of ground, about six acres, which I planted to oats last spring. I sowed about 200 lbs. of fertilizer to the acre and all I received was two loads of straw (no oats). I want to get some clover on it and I would like to have something to cut for hay next year also. Can I sow timothy and clover this Fall, or just the timothy and sow the clover in the Spring? What can I do to get a catch? Would land plaster help? If so, how much would be proper to sow and when would the best time be to sow?

Answer: The climatic conditions of the past summer were almost opposite to such as would produce best growth of oats. Consequently, this crop is very largely a failure all over the province. The fertilizer which you applied to your oats will remain very largely in the soil for next year's crop. If you are in the Fall wheat section our ground could be worked up immediately and wheat sown this autumn. Under such a system good results are gotten by sowing timothy seed at the time the wheat is sown and applying the clover in the spring just as the last snows are going off, or as soon as the ground is sufficiently dry to bear a team.

While you will have considerable of the plantfood of the 200 lbs. of fertilizer that you applied to the oats still in the soil, if you wish to make still further sure of a catch of grass and clover I would advise the addition of 200 lbs. more fertilizer at the time you are drilling in your Fall wheat. This immediately available plantfood would give the wheat and the grass a good start, preparing it for the severe tests of winter.

I would not advise the application of land plaster because this is simply a temporary stimulant. It does not add any plantfood, and indeed operates to let loose some of the plantfood that is already in the soil. Letting loose this plantfood at a time when the crop is not growing actively may result in the loss of some of the soluble plantfood from the soil, whereas the addition of the fertilizer advised would be actually supplying immediate available food to the young crop.

B. J.: Please tell me what to do with land on which nothing can grow. I have about one-half acre of black sand on which nothing seems to grow. The land is level and though there used to be a great deal of water on it, I have drained it.

Answer: From your description I am not able to determine whether it is the chemical condition of the soil or the bad physical condition of it that causes its sterility. Since it is sand and you have drained it thoroughly, but still without effect, I am of the opinion that the soil is (1) Sour, (2) Altogether too open to retain sufficient moisture for plant growth, and (3) The soil is so poor in plantfood that it cannot maintain a crop. I rather than the poorest one.

Fall Poultry Culling.

The next step in poultry culling is fall culling of the poultry flock. The farmer who is really endeavoring to breed up a high-laying strain cannot afford to breed from his entire flock of hens and pullets. It will pay him to make up a special breeding flock each spring, using yearling hens or older in the flock. If the selection of these hens is left until late next winter, it will be hard to pick them out. The proper time for this work is in September or October. The flock should be gone over just the same as in the summer culling but with the idea of picking out the best hens rather than the poorest ones.

The Country Child's Schooling

An Answer to the Question, "How Much Education Does the Rural Child Need?"

By ADA MELVILLE SHAW.

To the broad-minded and far-seeing educator, there can be but one answer to the question: How much education does the rural child need? It is proverbial that children and fools tell the truth. In a spirit of curiosity I put the question to an exceptionally bright school boy. He considered a moment, gave me a swift glance of near-scorn and hurled at me his conclusion, final and all-embracing: "All he can get!"

I might conclude by dropping the topic at this point as fully covered by my boy friend's brief statement. Still, because he has not had all he could get, so to speak, and because there still exist for him handicaps so great, that while the friends of education are laboring to overcome them, all too many of him grow up, suffer and go out of life without having realized the measure of his possibilities, we must still argue and plead, at every opportunity, each doing our best to clear away the handicaps for as many of this generation as possible and for all who are to come along the path of citizenship via the way of the rural home and the rural school.

How much education can the country child take? would perhaps be the better way of putting this question. When the earth receives more moisture than it can care for, we have destructive or wasteful overflow; flood; when it receives less than it can care for, we have destructive or wasteful deprivation—drought. Our coming citizens must not suffer from educational flood or drought. The proportion of schooling to need must be normal. Men and women must be fruitful according to the need of their day. This conclusion leads us to present this question in still a third way: What must the country child produce in order that he may best meet the demands of his day in the place where he finds himself?

A New Era Dawns.

A full answer to the question, thus stated, would involve an exhaustive study of life and living as they are and as they should be. It would at least involve a study of what constitutes Canadian citizenship and Canadian statesmanship, for it is not too much to say that we have entered upon a world-period when the interests of farmer and statesman are as closely related as my right hand is to my left: the national body cannot afford to cripple or paralyze or amputate either one!

Many of us can remember when the average magazine and newspaper took account of farms and farmers chiefly from the standpoint of condescension toward men and women who made daily close contact with the dirt of the field, the barn, the chicken yard, the hog pen, or, from the standpoint of the farmer as a comic or picturesque contribution to a certain type of fiction; or, in connection with the ruminating cow, the song of chanticleer, the rosy cheek of milkmaids and thank God! To-day the farm and the farmer and his wife and family are on all editorial pages that are worth the name; one great field of journalism sends out, shall I say, billions of pages yearly; well edited, well illustrated, well printed, for rural readers alone; the market reports and the weather reports and the health reports and the insurance reports and a score of other exact statistical documents that concern themselves with the business world in its most serious and vital aspects, turn their clearest spotlights upon the rural population and what it is doing and thinking. The farm vote and the farm thought and the farm action are to be dealt with. The farmer is bone of our national bone, flesh of our national flesh, and what our national life in its evolutionary ongoings has brought into vital union, let him put asunder who dare—at his own peril.

Make Their Calling Sure.

Therefore—to return to our muttons—what education can our rural Johnny and Mary take? I make unqualified answer that: they can take exactly what any boy or girl can take: exactly what education will most perfectly fit them, to quote the great teacher, Paul, to make their "calling and election sure"—a sure success in the broadest, soundest sense of what the word success can mean. And what then is to be the "calling and election" of the country child?

Within my memory and yours, the Three R's have given place to such a bewildering list of special projects that we, who are gray-haired, feel as

though we had been Rip Van Winking and had waked up in a new world. Our Agricultural Colleges are taxed to their capacity—and some of them beyond capacity—not alone with students from the farm but with students from the towns and cities—young men and women who see in agricultural pursuits, not only a richly constructive future for themselves but an opportunity to serve their day and generation, and they are thus preparing themselves to make that future a scientific success as well as a financial success—a citizenship success as well as a personal success—a success looking toward statesmanship as well as a success that will work on the mudsills of local politics. I believe I am not overstating this proposition.

There was a day when fences and walls were more essential to safety than they are now considered to be. In the old city where I was born, the stately homes, the convents, the seminaries, the orchards and gardens, the cemeteries, even, were surrounded by walls of stone or brick or tall spiked iron railing. And—let us mark this well—the jails were full of fence-climbers, wall-breakers, provokers, thieves. We have lived to see most of these ponderous protections done away. As we came better to understand the psychology of mental reactions, we saw that possibly walls invited climbers, perhaps created thieves; as we also found out something about the real spirit of brotherhood and the shared good, we saw that it might be safer to have a velvet lawn extend clear down to the sidewalk without a visible sign of fence, or even to lose an apple or a tomato stone than to weaken men by connoting weakness. The vanishing of such walls and fences is perhaps an outward symbol of the passing of other barriers, as for instance, the wall of differentiation between man farmer and man merchant, between woman on the farm and woman in the city. The period of the Great War brought to a climax this demolition of walls between country and town and, blessed be the law of momentum, which is the servant alike of ill and good, the good work goes on! Mutual needs mutual anxieties, mutual service and suffering, modern machinery, good roads, rural postal service, clubs for boys and girls, clubs for women, clubs for men, clubs for the whole family, clubs for the rural citizens of county and province and nation, community enterprises of all sorts from co-operative marketing and buying to co-operative worshipping and playing—these, crudely classified, are some of the battering rams which have broken down the old line fences and opened up avenues of exchange between farm and farm, farm home and town home, farm supply and town demand, farm demand and town supply.

A Sacred Trust.

This breaking of barriers means that hosts of children will most certainly find their "calling and election" anywhere but on the farm and, of course, not an inconsiderable number of town and city children will find theirs anywhere but in the towns and cities. As already suggested, this is no matter for dismay, either way it falls out. It means surely that Nature is at her age-old business of restoring a lost balance, getting a new grip on her children, putting new blood into tired veins, taking care as she best knows how of the total interests of her one family—the human race.

In my own mind I make no difference between the educational needs, fundamentally speaking, of the country child and the city child. Does not each man-child and each woman-child need to be ready for LIFE, first of all and last of all? And dare you say, or I, dare any teacher or educator or leader of any type or kind say into what grooves the life is to be forced? To accord to the rural youth one whit less privilege than "all he can get," is to rebuild the fences of long ago and continue to create the type of mind that, resenting fences, attacks that which the fence protects or else refuses to see the fences come down no matter how it might gain thereby! Each child that comes into the world is absolutely entitled to the best the world has for him—"all he can get!" Each child is his own man, so to speak, and until he can act and choose for himself, his training is a solemn trust—a national trust—a world trust—to be administered without the damning decision which in the past has said, in the case of the farm child, all too plainly:

"You will raise wheat and hogs—

The Sunday School Lesson

SEPTEMBER 25

Review. Golden Text—Galatians 6: 10.

Review Paragraphs.

The character of Paul is full of interest and full of surprise. A young man highly educated and trained for a dignified and honorable profession in which he might have lived a life of comparative ease he becomes the strenuous advocate of a weak and struggling cause to which at first he had been violently opposed. Though of a narrow and exclusive Jewish sect, jealous and proud to excess, he becomes the champion of a broad humanity which, he believes will triumph over all prejudices and barriers of nation and race and creed and make all men one in brotherhood and goodwill. Though intellectually of the highest rank, and able to stand upon an equality with statesmen and scholars, yet he chooses to consort with the humblest, going from place to place maintaining himself by the labor of his hands and becoming, as he says, all things to all men that by faith and following of Jesus Christ.

The story of Paul's life as far as we have followed it will be a fascinating subject for review. We see him first as the carefully educated child of a good Jewish home, in the schools and university of his native city of Tarsus, learning the mathematics and the philosophy of his time, the Hebrew and Greek languages and literature, and acquiring skill in rhetoric and debate. We see him again in the wonderful city of his dreams, Jerusalem, renowned and glorious both in its history and its prophetic hope, studying the ancient law, with the great Gamaliel as his teacher. And again he is the zealous officer of the Jewish council actively engaged in trying to stamp out a mischievous sect of people who profess to be the followers of a crucified Nazarene. Then by the way, as he proceeds with authoritative letters to the Jewish magistrates of Damascus, he is suddenly stricken as with a thunderbolt from heaven and in vision he hears the voice of the One whose people he has been persecuting. He goes on to Damascus not to persecute but to join himself to them.

We may follow him there to some quiet retreat in the Arabian wilderness where he goes back in thought over all his studies, where he reviews and considers deeply what he has learned about Jesus Christ, and finds in that the crowning wisdom, the law which is henceforth to govern his life. He goes back at length to Damascus and to Jerusalem to preach Christ. But he meets hostility, is in peril of his life and is persuaded to return to his home in Tarsus. Here and in the neighboring regions of Syria and Cilicia he bears his testimony and carries on his work, until Barnabas comes to invite him to Antioch, to share in the work of the mixed Jew and Gentile church of that city.

A year passes and the city missionary work in Antioch leads to the inauguration of an enterprise which is to carry the gospel to distant lands. Jewish communities in the islands of the Mediterranean sea, and all about his coasts, seem to invite them to come. Their knowledge both of Hebrew and Greek makes it possible for

Barnabas and Paul to preach and to teach wherever they go. For the Hebrew will admit them to the synagogues, and the Greek is the universal language of intercourse between men of different nations. Moreover, the Romans had made the seas safe from pirates and have made roads overland, and established peace and firm rule throughout all those lands, so that the travelers may go safely upon their journey.

We may follow Paul and his companions through two long journeys—to Cyprus and Asia Minor, Macedonia and Greece. We enter with him into city after city, into Jewish synagogues and marketplaces, and workshops, and quiet hospitable homes. We see assembled throngs, eager listeners, and some open and willing ears glad to receive so great a message. But we see also jealous and hostile faces, Jews that cannot endure to hear that the future age of salvation of which they dream is to be for the Gentile as well as for the Jew, and Gentiles who are offended when told of the folly of their idol worship. We follow Paul and his companions through scenes of riot and confusion, amid the fierce clamor of the mob, before Roman magistrates, who usually tried to do what was just, into prisons, and then in flight to farther cities and new places of toil.

Paul's life becomes to us a great example of unselfish toil, a living sacrifice. He gives himself wholly to his task. He has become, he confesses, the bond slave of Jesus Christ. He lives only to proclaim the love and saving grace of Jesus Christ. Or, as he himself wrote, "For me to live is Christ." And he believed that, in all his toil and sacrifice, Christ was with him. "Never forget," writes Paterson Smyth, "that inner secret of Paul's life, the constant realizing of the close presence of his Lord. The whole value of this biography is lost if we forget Christ in thinking of His servant; if in admiring his faith and courage and endurance we lose sight for a moment of the secret of it all. He lived in Christ's presence. Behind, over the heads of priests and governors and howling mobs, he could always see Jesus. He sought only his approval. He knew Him for his friend in life or in death."

Application.

Paul's own experiences give point to the exhortation with which the lesson for to-day begins. He knew what it was to be overtaken in a fault. Right in the midst of a career of persecution he had been smitten to the ground and convicted of his sin. It was when humbled and chagrined, blind and confused, that a messenger of Jesus came to him, calling him "Brother Saul," and leading him out into liberty. Again, when he went to Jerusalem, filled with remorse for his past actions and seeking to atone by redoubled zeal on behalf of the church, he was met with suspicion and disability by "all" but one man, Barnabas, who had faith to believe that Saul had been converted and not only took his part then, but afterward, having a special piece of work to be done, sent for him to be his partner in it. Paul knew the sweetness and strength of brotherly helpfulness, and what others did for him, we may do for others.

Poultry

E. J. S.: I have a duck which laid over seventy-five eggs. Then she wanted to set and we let her. When she came off she drooped around and her feathers looked rough and she would set around and gape or open her mouth as though gasping for breath. Thought perhaps she was moulting but it seems as though she ought to be better by now. Can you tell me what to do for her? Also give the best feed for young ducks and tell if they can be picked during the summer.

When mature breeding ducks gape and appear rough and lacking in vitality it is usually due to lung trouble. It is often caused by dampness in the house or lack of range. Possibly the strain of heavy laying followed by a long period of sitting on eggs reduced the strength of the bird and made her susceptible to lung trouble. A little cayenne pepper in the food may be helpful. Locate the bird in a dry, sunny house and the may recover, but treatment of such cases is difficult.

Ducks can be picked the same as geese and at the same time. When the birds begin picking at themselves in the spring and seem about to shed, it is time to make an examination and pick them if the feathers seem ready.

A good ration for ducklings can be made of one part corn meal and four parts bran with a little low-grade flour to stick it together. Then add about five per cent. of coarse sand. After the third day a sprinkling of beef scrap and green rye should be added to the mash.

After the eighth week a good fattening ration for ducklings consists of three parts corn meal, one part low-grade flour, one part green food and three-fourths part of beef scrap. This is given three times each day.

Be noble! And the nobleness that lies in other men, sleeping, but never dead, will rise in majesty to meet thin own.—James Russell Lowell.

Farmers should not endeavor to raise hens under natural conditions. For a hen raised that way is a liability rather than an asset. To make a profit out of hens a farmer should keep them in the pink of condition. This can only be done by giving extra good care and plenty of proper feed.

An Illuminating Subject

The coal-oil light's a burning bright;
(It will, sometimes, when it feels right);
Pat sets there reading, slick as sin,
The latest poultry bulletin;
Then, half to ma, and half to me,
Pa ups and speaks: "I see," says he,
"As how correct illumination
Will make hens lay like all Creation;
I've thought it out; the help's all hired;
I guess I'll have the henhouse wired."
Ma stoops and peers and sews away,
Does Ma, and then I hear her say
"I wish I was a blinded old hen;
Maybe they'd wire the homestead then!"

The Right Hammer for Metal

For rough work and heavy pounding a machinist's or blacksmith's ball-peen hammer is the tool to use. It is made for the special purpose of pounding iron or driving metal tools.

Carpenters' driving tools, such as hammers and hatchets, are not intended to be used in pounding on heavy metal. To use them with cold chisels will soon batter the faces off the carpenter's tools, rendering them virtually useless, inasmuch as a nicked or battered hammer face will not drive nails without constantly slipping from the nail head. This slipping results in damaged work and bruised fingers, bent nails and lost tempers. To get rid of the evil, grind the face of the hammer till it is perfectly smooth; then keep it in that condition.