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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A. B.: **Is corn poisonous that has been attacked by the corn-ear worm? We have some pop-corn which is affected and we were told it was not fit to use.**

Answer: Corn is not poisonous after its having been attacked by the corn-ear worm. Popcorn which has been attacked by the ear-worm may be unfit for use on account of its being shrivelled up, or on account of many kernels being broken and dirty.

F. P.: **I would like some information in regard to growing alfalfa. Would it be all right to sow it in a cornfield the last time cultivating? I have a muck field, well drained. I would like to sow alfalfa if it would be all right. Also, what time should alfalfa be sown on a summer fallow?**

Answer: I would not advise sowing alfalfa at the last cultivation of corn, because the frosts of autumn render the growing season that remains so short that the alfalfa crop will not make sufficient growth to protect it against winter cold. Fall plow the cornfield or work it early in the spring. Immediately after plowing or before the spring working add about 1,000 lbs. of ground limestone per acre so as to sweeten the soil. About ten days or two weeks later sow your alfalfa along with a nurse crop such as barley, using a bushel of barley to the acre and about 15 lbs. of high grade alfalfa seed per acre. At the time you are sowing, either drill in or scatter broadcast 250 lbs. per acre of a fertilizer analyzing approximately 3 per cent. ammonia, 8 per cent. phosphoric acid and 3 per cent. potash. If this is thoroughly worked into the soil it will give a vigorous start to the young alfalfa.

M. B.: **Is it safe to use potatoes for seed which are infested with wireworm?**

Answer: I do not find any record of wireworms wintering in potatoes that have been infested, yet it would be better practice to use the infested potatoes in some other way and if possible get fresh seed. At the same time be sure to put the potatoes on a different part of the farm next summer. As a rule wireworms, which take about four to five years to develop, live in ground that has recently been thick sod.

M. O.: **I have a strawberry patch and the plants are affected this last two years something the same as the potato plants with the blight; the leaves dry off and there are little holes eaten in the stems of the buds and flowers and green berries, and in consequence they die and fall off and I can see no insects. Could the plants be sprayed with something to overcome that? I sprayed them twice with paris green and once or twice with zenolium but it did no good. I wonder if Bordeaux mixture would be good to spray them with, or maybe you know something better to spray them with. If so, how often will I spray them? I think I have to spray in the Spring, as soon as the leaves come out, and the few strawberries that were left the robins ate.**

Could you please tell me something to drive the robins away? Some are talking of stuff called Balcikil to spray with for potato blight. What do you think of same to spray the strawberry plants with, as I believe that is the same disease on the strawberry plants as on the potato plants, the blight.

Answer: The disease your strawberries are affected with is leaf spot, which is a fungus disease. About the only thing you can do is to spray with a strong mixture of Bordeaux before the flowers open. If the disease has become very persistent, of course it will be necessary to plow down the patch. In locating another strawberry patch choose a section quite removed from that which is now growing and procure healthy plants for setting. The formula for the Bordeaux mixture is 4 lbs. of copper sulphate, 4 lbs. of lime and 40 gallons of water. Dissolve the lime and the copper sulphate separately in wooden pails or containers and bring them together with the additional 40 gallons of water, or in proper proportions, just before spraying is begun. If Bordeaux mixture stands for any length of time the chemical action, which continues, renders it useless.

I know of nothing to drive robins away better than scarecrows in the strawberry patch.

A. G.: **I sowed a piece of wheat this fall without fertilizer, being unable to get it at the time. Wouldn't it be profitable for me to sow a good grade of fertilizer broadcast on this field now? The soil is of a sandy mixture and is in need of it.**

Answer: I would advise delaying the use of fertilizer on your fall wheat until next spring. As soon as the ground has become sufficiently dry to drive over apply 200 to 300 lbs. per acre of a good grade of fertilizer—3 to 4 per cent. ammonia, about 8 per cent. phosphoric acid and 3 to 4 per cent. potash. The spring rains will in all probability wash this into the soil. The application of this top dressing of fertilizer can be made successfully until the wheat is 4 or 5 inches high.

S. T.: **I have sixteen acres in rye, which I intend to sow to sweet clover this spring, about four quarts of clover and three quarts of timothy to the acre. I think I will try sweet clover, the white blossom variety. My land is a sandy loam, some is level and the rest is quite hilly and in fairly good condition, I think, as I have had clover growing there before, although I have lost the last two stands of cloverseed through winter killing and dry weather. The seed I am going to get is to be double scarified. Now, would I have to inoculate this seed or would it be all right to sow it that way? If I would have to inoculate, which would be better and cheaper, buy the inoculating bacteria in the liquid form or use ground from a small sweet clover field which I have, where it grows quite rank? How would you spread the ground and how much to the acre? I intend to sow the clover seed on top of the ground and drag it in with a weeder.**

Answer: I note you say you have had clover growing before on the land that you plan to seed this coming spring. Very likely the clover is of the ordinary Common Red and Alsike type, which is a different species than white clover. Either of the methods of inoculation which you mention are considered good. I have seen exceedingly good results coming from sowing soil which is taken from a section where sweet clover or alfalfa grows successfully. In taking the soil, do not go below 5 or 6 inches in depth. Scatter about 1,000 to 1,500 lbs. per acre on the ground that you are seeding during the dark time of the day, either early morning or late in the afternoon, preferably the latter. As soon as the sweet clover soil has been distributed harrow it in thoroughly. Remember bacteria cannot stand direct sunlight. Very good inoculation material is put out by the Bacteriological Department, O.A.C.

To make sure of a good stand of clover it would pay you to add some fertilizer as advised in the answer to the question above.

J. V.: **I am a farmer on muck. I raised onions, celery and peppermint. How much potash would you advise to the acre of peppermint, and the other crops named? My land is in good shape, is kept with manure and commercial fertilizer, cheap grade mostly. What kind of spray would you advise me for blight on celery? Please let me know, as I want to spray my plants before transplanting.**

Answer: Regarding blight on your celery, there are two blights—the early blight, which must be controlled by early spraying with Bordeaux mixture of formula 5 lbs. of copper sulphate to 5 of quickline, to 50 gallons of water. This spraying should be thoroughly carried out in the early periods of celery growth. The late blight is also controlled by Bordeaux sprays. Some growers find it advantageous to use ammoniacal copper carbonate as a spray.

I am of the opinion that you lose money in using low grade fertilizer rather than higher grade. Remember that low grade fertilizer is like low grade machinery, it cannot contain the merit of the higher grade. Pound for pound it costs just as much to handle low grade material as it does high grade. Therefore, the delivered value of high grade fertilizer is more than proportionately higher than the low grade.

With regard to fertilizer for peppermint, I find on looking up the analysis of the crop that it is not unlike potatoes. For that reason I would advise the use of a fertilizer high in potash, possibly containing from 6 to 10 per cent. This would be especially good on your crops on muck soil.

The Man Who Sticks.

There are two kinds of stickers—those who stick in ruts and those who stick to purposes. The rut sticker gets nowhere, while the purpose sticker arrives.

May we suggest if you have no definite plan for your farming that you consider impartially the factors involved, such as soil, location, climate, etc., make a plan to the best of your ability, and then stick to it?

We offer this suggest because we believe it is as necessary for you to have a plan to follow for building the foundation and superstructure of successful farming as it is for the builder to follow the plans of the architect.

You Could Have Prevented That Accident

By HARRY BOTSFORD.

Accidents on the farm and pursuits allied to it, are more numerous than in any other industry. Farming is not necessarily a hazardous occupation, but each year accidents take a toll of more than 400 lives, to say nothing of 8,000 disabling accidents which necessitate absence from work.

Why does this unfortunate condition of affairs exist? Because, first, farmers are prone to believe the hazards few and of minor importance. Second, farmers have no fixed hours of labor. Working two eight-hour days in one brings on physical exhaustion which blots out ordinary precautions that should be observed. Variety of work on the farm makes farmers "jacks-of-all-trades" and they can hardly be master of them all. But farm accidents, like industrial accidents, can be avoided and prevented by accident-prevention methods, which are simply a direct application of common sense. The old adage about the relative value of an ounce of prevention and a pound of cure has a direct bearing on accident prevention on the farm. Let us look into the matter in detail.

Buildings.

A great many accidents occur in the farm buildings. Falls in connection with the use of ladders are a common cause of farm accidents. Stairways should be used when practical, and if a ladder is used, it should be strongly and substantially built of sound material. Top and bottom of every ladder should be firmly fastened, and if ladder leads to a landing, it should project at least four feet above the opening. Vertical ladders should be placed at least eight inches from the wall to provide room for the worker to place his feet firmly on the rungs. Inspect the ladders frequently for wear, and repair immediately if needed.

Stairways, Railings, Platforms.

Don't build stairways too steep. Three sides of every stairway opening should be railed off to a height of three feet with substantial railing. A toe-board should be nailed around the bottom of the railing to prevent objects from accidentally falling down the opening.

Open runways which are inclined, manure pits, sunken water-barrels and deep ditches around the buildings should also be railed in.

Many accidents on the farm are caused by men and animals breaking through floors in barns, stables and outbuildings. Inspect all the floors frequently and repair at once when a worn place is found. Keep manure from being piled around wooden posts in the stable, as it rots them.

Doors, Windows, Roofs.

Oil the hinges on all doors frequently and never use cast-iron hinges, as they break easily. Make all swinging doors swing outward.

Never use a stick or tool to hold a window open, for such a makeshift usually results in an accident. Replace broken panes of glass at once, and dispose of the broken fragments in some place where neither man nor animal can be injured by them.

Watch your step when working on the roof! It is dangerous work and every precaution should be taken for safety. A safety-belt should be worn and attached to the roof by a strong rope. If the incline to the roof is not too steep, the wearing of rubber-soled shoes will prevent slipping.

To permit an inexperienced man to start to work plowing, cultivating, harrowing or harvesting is to invite accidents. The man should be familiar with the machine in use, the work being done, the character of the ground and the team of horses which he is driving. The operator, for example, should be instructed, if riding, never to lean over to remove weeds from the teeth of the cultivator, or harrow, or harvesting machine, while it is in motion. Frightful farm accidents have occurred in this way. The driver should never walk in front of any machine he is driving but should be at one side or behind t.

In harvesting time, care should be exercised in hauling the scythes, sickles, rakes and pitch-forks. These instruments should be placed, when not in use, in such a manner that no one can step on them and be injured. Loads of hay or grain should not be built too high to pass through barn doors, as this may cause a serious accident to the driver of the load, by his head striking the top of the door right at a time when the team is putting forth an extra effort to bring the wagon into the barn and can not be stopped easily and promptly.

Explosives.

The use of powder and dynamite on the farm is now common. It is used to dig ditches, remove stumps, repair roads and loosen soil. Accidents from the use of explosives are common and could all be prevented. Store all explosives in a locked building. Keep the explosive caps in another locked building. They are very sensitive.

Never try to thaw dynamite over a fire or in an oven. The only proper way to thaw it is in a special thawing kettle in which warm water is placed. This operation should take place at a distance from the fire.

Use a special crimping tool to fasten the cap to the fuse and use a sharp wooden rod to make the hole in the dynamite. Never use a nail or wire for this purpose. Use nothing but soil and sand for tamping and tamp with a wooden tamper. In case of misfire, do not go near the charge for at least three hours, as the fuse may be smouldering and go off at any moment.

Miscellaneous Machinery.

Recent years have seen some great strides in the placing of machinery on farms. Motor-driven machines are now replacing many of the old hand and horse-driven operations. Steam and gasoline engines, electric motors, and windmills are now being used to drive pumps, circular saws, feed-cutting machines, cider-mills, threshing-machines, cream separators, ensilage-cutters, trucks, automobiles and tractors. There are many hazards involved in the use of all of this machinery and this hazard is greatly increased because farmers, as a rule, are not familiar with the use of machinery.

Driving belts, shaftings, and pulleys should be screened or boxed in, if they are less than seven feet from the floor. Never attempt to clean or oil any moving piece of machinery. This is the cause of nearly all machinery accidents.

Circular saws should be guarded as completely as possible and only operated by competent workmen. The driving belt should be protected by a screen. Wood should not be piled near the saw as the vibration might jar the pile into the saw, with serious consequences.

Electrical Apparatus, Gasoline.

As a rule, electrical apparatus requires the care of an experienced man. Care should be taken to see that all wires are properly and fully insulated. The location and use of every switch should be known.

The storage and handling of gasoline requires more than ordinary precaution to eliminate any possibility of accident. The only safe method of storing gasoline is underground, in tanks. Never permit a receptacle of gasoline to remain open longer than necessary. The vapor will spread very quickly and the introduction of a spark or flame means an explosion and a fire. The vapor from ten gallons of gasoline has the same potential energy as 833 pounds of dynamite. Remember this and it will prevent many accidents.

Chores and Odd Jobs.

"Doing the chores" on the farm is not usually considered as being specially dangerous, yet there are some real hazards connected with this part of farm work. Chopping and sawing wood are both dangerous work. The head of the ax should be fastened firmly to the handle and the chopping block should rest on a level surface and the top of the block should be even. Split sticks should be thrown away from the block where they will not interfere with the worker's action.

First Aid for Injuries.

Injuries that might seem of small importance in a town or city often lead to serious results on a farm on account of the isolation of the farm from a physician and the consequent difficulty of securing immediate medical attention.

The purchase of a first-aid kit is only a small outlay as is a small book on the treatment of accidents. In an emergency such a first-aid kit will prove invaluable and will often save life. First aid assistance should be given while waiting for the doctor to arrive.

In conclusion, there is nothing complicated in accident prevention on the farm, but owing to the multiplicity of tasks imposed upon farmers, constant attention must be paid to a number of details. Some have been outlined in this article.

An accident insurance policy is one of the most valuable things a farmer can possess. There are good policies issued by various reliable companies. A small payment each year insures an income of $1,000 or a lower or higher amount, in case of accident. A combined health and accident policy provides in addition an income of so much a day or week during sickness. These policies can be had in amounts that will fit any pocketbook.

Bedtime Stories

A Dog's Chivalry.

It was the habit of our next-door neighbor's cat to climb over the dividing wall and share the dinner of our collie dog, who invariably showed his chivalry by standing aside till the cat had had her bit.

One day the dog, cat and myself were surprised by a very sudden deluge of rain. I ran into a shed.

The dog stood still; and the cat sped to her friend and took shelter under his big head until the shower was over.

Then she emerged quite dry, and gave her friend a rapid lick on the cheek before she went away.

I thought the incident did credit to both of them.

The annual loss owing to bruises on carcasses of both hogs and cattle is very high. It can be prevented by every stockman, drover and packing house employee using better judgment in handling the animals.

Using a whip or sharp stick on the hogs injures the meat and causes a loss to the producer. A piece of board or belting will be effective if force must be used and is less injurious.

The Sunday School Lesson

JANUARY 22.

Elijah's Flight and Return, 1 Kings, 19: 9-18. Golden Text—Ps. 40: 1. (Rev. Ver.)

Time—The reign of Ahab, B.C. 875-853.

Place—Mount Horeb in the peninsula of Sinai.

Connecting Links—Queen Jezebel, the champion of Baal worship, was not present at the contest on Mount Carmel, but when she heard that the prophets of Baal had been slain at the instigation of Elijah (ch. 18:40) she vowed a fearful vengeance on him. Her threat threw Elijah into a profound depression. It was the reaction of a strong nature from the high tension involved in a difficult task. His subsequent flight to the southern wilderness was as much for spiritual recuperation as for safety. Mount Horeb (also called Mount Sinai) in the peninsula of Sinai was the original home of Jehovah. There after the exodus from Egypt, he appeared to Moses, delivered the law and formed the covenant with Israel. And there he might appear again to Elijah to reassure him in his despondency. At that time the universality of Jehovah was unknown. He was present in some places more than others, but Mount Horeb was His special home—hence Elijah's flight thither.

I. The Flight. 9, 10, 14.

V. 9. **A cave.** In the mountainous regions of Palestine caves are abundant and were used as places of shelter by fugitives and travelers. See 1 Sam. 13: 6; 22: 1; Heb. 11: 38. **What doest thou here?** This question, although it brought Elijah's despair to utterance, was also a rebuke. Why was he not championing God's cause in Samaria?

V. 10. **I have been very jealous,** etc. He would not allow any other god to share Jehovah's honor or receive his people's worship. **Forsaken thy covenant.** The covenant, formed in the wilderness between God and the Israelites (Ex., ch. 19) was fundamental in Old Testament religion. Its terms were—undivided allegiance and obedience to Jehovah on the part of the people, and protection and well-being to the people on the part of Jehovah. By going over to Baal the people had broken it. **Thrown down thine altars;** had destroyed the means by which they might worship Jehovah. **Slain thy prophets;** refused the revelations which came through God's appointed ministers. **I only, am left.** See ch. 18: 22. In his despondency Elijah forgot that there were other prophets who still clung to Jehovah. But he was the only one who had the courage to come out in the open against Baal.

II. The Vision. vs. 11-13.

Vs. 11-13. **The Lord passed by.** Compare His passing before Moses on the same mount, Ex. 34: 6. Frequently in the Old Testament, disturbances in nature were thought to be the mark of the Lord's passing. "The majestic though terrible phenomena of nature are the expression of His presence." (Kirkpatrick). See Ex. 19: 16-18; Judg. 5: 4. 5; Ps. 18: 7-15. So in the natural upheavals that follow, Elijah would be expected to discern God's presence. There were three disturbances: (1) **A great strong wind;** a hurricane of terrific force. (2) **An earthquake;** said to be frequent in the peninsula of Sinai. (3) **A fire;** possibly flashes of lightning or a volcanic eruption. None of these disturbances moved Elijah to feel that God was in them. Then after the storm followed the calm. **A still small voice;** or "a sound of thin silence," and in that audible silence Elijah was aware of God. His discovery of God in the still small voice marks a great advance in the conception of God. (1) Elijah learned that God is a spiritual rather than a physical presence; the greatest forces in nature were not adequate to convey Him. (2) He perceived also that God's methods are gentle rather than violent and this would rebuke his own fiery, impatient methods of exterminating the Baal worship. (3) He saw that God appears in quite ordinary ways—a still small voice—as well as in unusual things. This new revelation would encourage Elijah to feel that his work was not a failure.

III. The Message. 15-18.

V. 15. **God lifted Elijah** out of his despair by giving him more work. His own prophetic mission was now drawing to a close and he must prepare for his departure. It will be noticed that the commission which followed was of a political and revolutionary nature. By anointing these men for office he was to set a revolution going which would overthrow the dynasty which had attempted to introduce the worship of Baal. **The wilderness of Damascus;** the Syrian wilderness south of Damascus, the Hauran. **Anoint Hazael.** The kingdom of Syria with its capital at Damascus was a foreign and heathen nation but Elijah was commissioned to interfere in its internal affairs and set up a king who would make war on his own nation.

V. 16. **And Jehu . . . over Israel.** On account of his Baal worship the kingship was to be taken from Ahab and given to another. **Elisha . . . in thy room;** the first intimation that his life was drawing to a close. He must appoint his successor.

V. 17. **The sword of Hazael;** "symbolizes the Syrian wars (see 2 Kings 8: 12) whose disastrous course is fully recorded in the subsequent narratives. That of **Jehu** refers to the massacres described in 2 Kings 9: 10; but what is meant by **the sword of . . . Elisha** the history does not reveal." (Skinner).

V. 18. **Yet will I leave,** etc. (Rev. Ver.) The later prophets commencing with Isaiah, taught that the nation must be destroyed because of its sin, but a remnant who had been faithful to God would be spared. This doctrine that there is an Israel within Israel seems to be anticipated here. **Kissed him.** The worship of Baal may have included the kissing and stroking of his image. The Mohammedans at Mecca still kiss the sacred stone known as the Kaaba. See Hosea 13:2.

Application.

1. **A discouraged and broken prophet.** Elijah fell from the giddy heights of victory and exalted feeling to the depths of despair. Jezebel's threat unnerved him. The tremendous experiences through which he had passed, also exhausted his nervous energy, and he collapsed under the fierce oath of revenge that the queen swore, v. 2. The long race for his life completed his breakdown and caused him to pray that he might die.

2. **The cure for despondency.** The first remedy was sleep, so well called "nature's sweet restorer." The second was food. Afterwards came the words of expostulation (v. 9) and finally the prophet learned that God was not in the wind or earthquake or fire, but in the "still small voice."

3. **God advances through history with a quiet but sure step.** This was the lesson that Elijah had to learn as we have just observed. It is most necessary for us to lay it to heart also.

The secret of progress never lies on the surface. It is deep as the heart of man. What caused the upheaval of the Great War? The teaching of the German schoolmaster and the steady quiet inculcation of wrong-headed ideals in the minds of the children. The secret of the nation's greatness is to be found in the character, the quiet, daily character of the people. The success of the church in Canada will be measured by the extent of the unobtrusive piety, the effective religious education of the home.

Timely Topics.

Idle Horses—Now that we are seeking to economize, one course open to many farmers who are obliged to keep some or all of the horses idle, is to feed a little more roughage and a little less feed.

Producing Beef—Cheap feed and relatively low prices for feeders are tempting many to turn surplus roughage and feed into beef. This course ocers one of the most attractive ways of marketing certain grains and coarse feeds. It is important that one buys his feeders at a reasonably low figure.

Cow Stables—The dairy cow cannot do her best when cold. When she becomes so cold that she humps up, her milk flow is certain to be reduced for several milkings. She is affected more by low temperatures than are beef cattle. The latter have fat which acts as a blanket to keep the vital organs in normal condition. The dairy cow produces fat but it goes into the milk pail and consequently does not aid in keeping her comfortable in extremely cold weather. The milch cows should have exercise, but don't leave them out till they begin to hump up. When they do this it should be the signal for the stable boy to get a hump on and open the stable doors.

Green foods supply the poultry with necessary vitamines. Mangels, sprouted oats, cabbage or clover leaves make good green food.

Provide a dry sleeping place, and let the brood sows winter in the barnyard. They will give stronger litters than if kept confined to a pen.

Birds are real hired men, and their wages are low. A few crumbs and bits of suet in the yard will help the birds over the time when they can't get the bugs they like.

Poultry

When the hen has chickenpox try removing scab and painting the spot with iodine. Then give the birds a dose of powdered sulphur at the rate of about one-half a teaspoonful per hen mixed in a moist mash. The next day the hens can be given a dose of epsom salts in the mash at the rate of half a steaspoonful per hen. This treatment is reported to have cleared up several outbreaks of chickenpox.

Carbolated vaseline is useful to rub on frozen combs or scaly legs. It may also help to prevent infection in wounds caused by stepping on sharp objects or fighting. Camphorated vaseline is sometimes useful to rub on the heads of birds with slight colds. A little can be rubbed in the mouth and nostrils, but keep it from the eyes.

Hens with bronchitis are difficult to cure when the trouble is long-standing. But when the rattling sound in the throat is first noticed mix up a solution of five parts of sweet oil to one part turpentine and give the sick bird about ten drops every day until cured or the case appears hopeless.

The commercial coal tar disinfectants have saved many poultry losses. They can be diluted with water to such an extent that a gallon of disinfectant costs very little. They help to destroy the germs of infections, making other remedies unnecessary.

If a hen appears ailing and off feed without apparent cause, try giving a teaspoonful of cod liver oil three times a day and isolate the bird to see if her appetite returns.

Probably one of the most useful simple remedies is the hatchet which at once removes the danger of a sick bird infecting others. It is necessary treatment in many diseases that should have been avoided by preventative measures.