

Soils and Crops

This Department is for the use of our farm readers who want the advice of an expert on an question regarding soil, seed, crops, etc. If your question is of sufficient general interest, it will be answered through this column. If stamped and addressed envelope is enclosed with your letter, a complete answer will be mailed to you. Address Agronomist, care of Wilson Publishing Co., Ltd., 73 Adelaide St. W., Toronto.

W. W.:—I have a six-acre field which is part clay and part muck. This muck runs from a foot to a foot and a half deep. Would this ground be best for oats or barley and how much barley should be sown to the acre? Will barley do as well on high ground as low?

Answer:—I would advise you to use barley on your low ground. Your black soil will tend to produce too much straw, but the shallow-rooted nature of the barley and the fact that it grows more rapidly than the oats, will tend to the production of a better crop of barley than you would get of oats. In order to assist in the ripening of the barley I would advise you to add 200 to 250 pounds of acid phosphate to the acre at the time that you are sowing the crop. This is best applied through the fertilizer-dropping compartment of the grain drill, but if you do not have a grain drill so equipped, apply the acid phosphate broadcast and work it into the ground by disking and harrowing. Sow about a bushel and a half of barley to the acre. Barley should do very well on high ground.

B. S.:—Please give me some information about bean growing: best variety, quantity per acre, time to plant, best soil, whether in hills or drills, and how to harvest, present market prices.

Answer:—The question of the best variety of beans to grow is a difficult one to answer. The Ontario Agricultural College in their last bulletin on beans, claim that they get the biggest yield from Pearce's Improved Tree Bean. The next in line is Scholfield Pea Bean, then Marrowfat. If the small white pea bean is used, three pecks per acre are required. The Marrowfat variety would require 5 pecks per acre. The time to plant is as soon as danger of frost is past. The seed should be thoroughly prepared. As a rule beans do best on a medium loam soil, although they are successfully grown on many soil types. As a general rule, the large bean growers practice row planting. In Michigan they are in the habit of using about 250 lbs. per acre of a fertilizer analyzing 2 to 3% ammonia, 8 to 10% phosphoric acid, and 1 to 2% potash. This is applied either with the bean planter with fertilizer-dropping attachment, or it is successfully applied by a grain drill with fertilizer-dropping attachment. In applying it with the latter machine stop up the fertilizer dropping section of the tubes that sow the beans, by either pulling the beans and stacking them or by cutting them with a scythe, or by a bean harvesting attachment for the mower. Of course the last method is quickest for large areas. As present market prices are changing frequently, we would advise you to consult the market reports of any of the agricultural papers.

F. B.:—I thought of sowing sweet clover on two small gravelly hills on my farm. What kind would you advise? How much per acre? Do you advise sowing with a nurse crop? Is it possible to get two crops in a season?

Answer:—You will do well to sow sweet clover on your gravelly hills. There are two general types, a white flower and a yellow flower. I have seen exceedingly good crops from both. It is usually figured that the white flower gives a little better yields than the yellow. About 6 to 8 lbs. of seed are sufficient for the acre. This can be sown with or without a nurse crop. I am inclined to think on the exposed condition of your gravelly hills it would be better to use about a bushel of barley to the acre for a nurse crop. If you are not too far north it is probable you will get two good cuttings a season when the crop is well established. When making hay from sweet clover be sure to cut it early enough so that the stalks will not become woody.

The Soy Bean.

The soy bean may be grown either for its stem and leaves as a forage plant, or for the seeds only.

The only seeds are especially valuable as a stock-feed since chemical analysis has shown that they stand in the front rank in the amount of nutritive material present. The oil is used mainly for making soap, but as it is a semi-drying oil it is used to some extent as a substitute for linseed oil in certain kinds of paint. It is also used in the manufacture of linoleum.

The soy bean will grow on almost any kind of soil and its climatic requirements are somewhat the same as those of corn. On this continent it is grown for seed mainly in the south-eastern United States. As the seed is sown only after the danger of frost is over, it follows that the season

in many parts of Canada is not sufficiently long for the seeds to ripen properly. However, experiments conducted at the Central Experimental Farm at Ottawa during the last three years have shown that there are certain early maturing varieties which are quite satisfactory.

The yield of seed per acre in the United States varies from 15 bushels in the Northern States to 40 bushels in the Southern States. During the year 1916 seeds of two varieties were, through the kindness of the Bureau of Plant Industry at Washington, D. C., obtained for trial. These were Manchou and Black Eyebrow. They were sown in plots 16 to 12 feet each plot measuring 1-227 of an acre. The seeds were planted in five rows with intervals of 2 1/2 feet between the rows. The particular rate of sowing was not determined, the seeds being sown fairly thick and the plants being thinned out afterwards.

The variety of Manchou was sown on May 22, 1916, and attained an average height of 3 feet. The plot was cut on September 25, the weight of seeds after removal from the pods being 6 pounds 14 ounces. Dr. Shutt, Dominion Chemist, analysed these seeds and found the amount of oil present to be 20.38 per cent.

The variety Black Eyebrow was sown on the same date, and attained the same average height. It was cut on the same day as Manchou and yielded 7 pounds 2 1/2 ounces of seeds on an oil content of 20.05 per cent. If 7 pounds of seed be taken as the average of the two plots and if 56 pounds be reckoned to the bushel the yield would work out at about 28 1/2 bushels per acre.

In the same year a few seeds of another variety obtained from the Botanical Garden at Nancy, France, were sown on May 29. The plants attained a height of 16 inches. The plot was harvested on September 25, the seeds being well ripened by this date. As only a few seeds of this variety were available they were given plenty of room to grow, with the result that one plant bore 185 pods, while another had 217 pods, only a few pods being counted which contained one or more seeds.

In 1917 the seeds were sown on May 22 and harvested on October 3. Another sowing was made on June 6 and these were harvested on October 9. Well-ripened seeds were obtained in both cases, the later sown plants being about 6 inches taller than those sown earlier.

In 1918 seeds of four varieties were sown on May 20, and harvested respectively on September 23, October 8, October 18, October 19.—Experimental Farms Note.

Hoos

Rearing Spring Litters.

A comfortable house with dry bedding means much to the spring pigs. In fact, all other conditions may be perfect, and yet if this point is neglected failure may result. It is a wise plan to get the pigs on milk or a milk and shorts ration by the third week of their existence if possible. This may be done by building a small creep or pen near their sleeping place and putting milk in a small shallow trough in it.

The pigs will soon learn to eat. The amount of feed can be increased as they advance in age, but they shouldn't be fed more than they will clean up nicely. An occasional scolding and sunning of the trough will keep it clean.

The first four months of a pig's life determine largely what his after success is. Never let him lose his pig fat during this time. Prepare for ample grazing as soon as the soil is warm enough by sowing rape or rape and grain mixed. This can be grazed by the pigs within six to eight weeks after sown. Allow them to run on any green crops, especially clover or vetch, as soon as they will graze.

A succession of field grazing crops maturing through the summer and fall will supplement their daily grain ration, and will enable them to produce their gain at a profit. Pigs that are fed on grain alone, with little or no grazing crops, will return little or no profit to their owner.

"I see you are advertising that heifer of yours." The man of whom that was said took it to heart and he went and took the poke off the heifer. A little while afterward the heifer took a walk toward the butcher shop. I did not blame the man at all. An unruly cow, especially a heifer, is about as poor property as a man can have for his own peace of mind. No poke can alter that fact.

Ensilage is good stuff to have, but it is not an all-round feed. Some hay and a bit of grain should go with it. The more ears of corn we cut into the silo, the less grain we need of that sort; but hay gives bulk and needed roughage.



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Food Control Corner

"Sap's Rannin"

So reports say in Western Ontario. Was anything like it ever known for so early in the season? On January 21st, Charles McCallum's boys on his farm at Nairn, Ont., boiled syrup.

Last year was late. This year should produce a lot of sugar. Chairman Thomson of the Canada Food Board held a meeting with representatives of the Maple Sugar Association and others and urged that the greatest possible production be undertaken this year as there is a profitable domestic market, and a wide export demand. Every dollar of wealth produced from the farms of Canada this year counts not only for the farmer himself, but for national prosperity in general. The war has piled up our national debt enormously. Our natural resources and the industry of our people comprise our only means of financial salvation.

"Every dollar of our Canadian maple sugar and syrup produced is a dollar saved for Canada," says the Chairman of the Canada Food Board. Indications point to a big run of sap this spring and it would be a pity to let it go untapped, when a little extra effort would turn it into money.

The maple trees of Canada, if they were brought to an approximation of their full power of production, could supply enough sugar to make Canada independent of the commercial cane product. While this is not practicable under present conditions, still the industry has the opportunity of a permanent future, and a much greater expansion. Farmers with sugar maple bush should figure on 60 cents per tree at a low average.

A dustless mop can be made from the fringe of an old breadpad. The German Mercantile Marine must not be allowed to go to sea again as if nothing had happened.—Sir Alfred Booth.

Raynaud's Disease.

R. S. M.:—I hope this article will prove of benefit to you.

In this disease there are functional changes in the blood vessels, but none in their structure, so far as the known facts go. The fingers and toes are mainly, but not exclusively attacked, the blood-vessels being contracted, which results in pallor and apparent deadness of the skin.

This may be followed by dilatation of the blood vessels, the color becoming purple and red. It may lead to loss of vitality or even death of some of the tissues. It is like the reaction of the skin to cold, and is seen more frequently in cold than in warm weather.

When exposed to cold, the skin first becomes flushed, then blue, then pale and then a dead white, while the pulse is very feeble.

If the process continues, the tissues become frozen with more or less disastrous results.

Conditions being favorable, there is gradual return of heat and color, the pulse at the wrist becomes distinct again and there is a sensation of pain and tingling as the blood circulates freely.

Prolonged frost bite ends in gangrene, or death of the frozen tissues and they have to be amputated.

In Raynaud's disease we have the same symptoms, but they do not depend upon the cold.

In both cases, the vaso-motor nerves connected with the blood vessels are involved, being stimulated at one period with squeezing of the blood from the vessels, and paralyzed at the other, when the vessels again dilate, the blood again flows in its accustomed

Poultry

Mercuric ointment has been found effective in exterminating head lice of poultry in flocks. This material is also sold as blue ointment, or "blue butter," but mercuric ointment, which contains 50 per cent. of metallic mercury, is cheaper at present prices, on the basis of mercury contained, than the other form. Since it is stiff and difficult to apply by itself it is best mixed with vasoline, lanolin or a similar substance in the proportion of one part of the ointment to two of the ingredient used and is then fully as effective.

The material is applied by taking a lump of it about the size of a pea and rubbing it thoroughly at the base of the feathers about the head. Head lice rest mainly upon the feathers, usually at the point where the barbs begin.

Remedies for combating other chicken lice proved less effective in exterminating head lice. Crude oil kills hog lice, but has little or no effect upon chicken head lice. Vasoline by itself will not exterminate the pests.

Bedtime.
A vessel lies swinging, asleep in the bay,
Swinging, swinging, swinging;
The gray birds are trilling songs over the way,
Singing, singing, singing.

My mother is hushing the baby to sleep,
Rocking, rocking, rocking;
The clouds o'er the house-tops are gathering like sheep,
Flocking, flocking, flocking.

The flowers in the garden are curling their toes,
Swaying, swaying, swaying;
Dear children are kneeling in sleepy-time clothes,
Praying, praying, praying.

GOOD HEALTH QUESTION BOX

By Andrew F. Currier, M.D.

Dr. Currier will answer all signed letters pertaining to Health. If your question is of general interest it will be answered through this column; if not, it will be answered personally if stamped, addressed envelope is enclosed. Dr. Currier will not prescribe for individual cases or make diagnosis. Address Dr. Andrew F. Currier, care of Wilson Publishing Co., 73 Adelaide St. West, Toronto.

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MOTHER-WISDOM

What Shall I Do For My Child Before the Doctor Comes?

By Helen Johnson Keyes.

It is a dangerous mistake to try to get along without a physician in severe and persisting illness. On the other hand it is wise to know what to do until the physician can arrive.

In the first place, put your sick child to bed. Badly excited nerves, brings repose to tired muscles and warmth to a body which is chilled. In the case of fevers, it is the only safe place to take care of the little patient.

The great majority of the disorders of boys and girls comes from poisonous substances in the digestive tract. This condition may result from bad eating, from chill, from decayed teeth, or from several other causes.

Where stomachache, headache, fever, roughness of the skin, coated tongue, bad breath, or any of the other familiar symptoms of indigestion exist, administer a safe laxative. Feeding should be omitted altogether for several hours and the begin with liquid diet, returning very gradually to normal food. In the case of a severe fever, a high enema of warm soap suds should be given at once with a fountain syringe to which has been added some rubber tubing which will reach the high intestine. The rapidity with which the temperature falls after this treatment is often extraordinary.

Fever, which has other causes and do not yield to evacuation of the intestines are often relieved by sponge baths at intervals of about fifteen minutes with water at a temperature of between 70 and 85 degrees. Sweet spirits of nitre can be given also.

Almost every mother is familiar with the treatment for babies' convulsions, consisting of a bath made by mixing four or five tablespoonfuls of dry mustard in a gallon of warm water and immersing the child until the skin is red. After recovery is complete a high enema should be given, the tubing passing several inches into the bowel.

Epileptic attacks cannot be averted or shortened except by regular treatment for the condition which produces them. This may be eye strain, stomach trouble, or some similar cause, which seems, to every one except the doctor who understands the intricacies of the human body, very remote and disconnected. It is an act of mercy to lay a pillow under the head and a soft cloth between the teeth to prevent biting the tongue.

Chills which have not as yet been followed by a fever require the application of hot-water bottles, hot bricks or bags of hot salt. Warm milk should be fed the patient until perspiration sets in, when all heat-producing measures must be discontinued and the skin kept dry with rice powder, starch or cornstarch.

Lightning stroke and electric shock are treated with hot applications and hot drinks.

For sunstroke put the patient in a cool place and pour cold water over the body, rubbing it with ice, if ice is to be had. When he is able to drink give him cold water, not ice water, in small quantities. This is the treatment for sunstroke which can be distinguished from heat exhaustion by the hot, dry, red skin of the patient and the deep breathing.

Heat exhaustion differs in its symptoms by producing a cold, damp skin and shallow breathing. The treatment consists of placing him in the shade, opening his clothing about the neck, lowering his head below the rest of his body and administering coffee or other stimulants.

These conditions, but in proportionally small quantities. Afterward he should be wrapped in a blanket or several blankets and rubbed till his legs are warm.

A sprained or fractured member should be plunged into cold water, which is kept cold by fresh supplies being added, or by ice, for half an hour. In the case of a sprain a tight bandage will give relief until the doctor comes.

A fracture needs splints put on so tightly that there can be no movement of the broken ends of bone, yet pain and pressure must not be felt. To make splints, use pieces of board and pad them with soft cloth.

When a lump appears between joints after an accident, the diagnosis is probably a dislocation. Pull the member straight, very gently, and bind it between boards which are wider than it is. This is only first aid; a doctor must complete the treatment.

A bleeding wound is a dreadful thing for a parent to look upon and is likely as any condition to produce excitement and helplessness. But the bleeding can be controlled often by pressure above the wound or by a tight bandage placed either above or below it. Spurting of red blood from a wound indicates a cut artery and the bandage should be placed between it and the heart. If the bleeding is it and the heart, a darker color, it comes from a vein and the bandage needs to be beyond the wound instead of between it and the heart.

For nose bleed, succussion of plugs of absorbent cotton or cotton wads soaked in peroxide or, better still, in adrenalin chloride, will check the hemorrhages in a short time. A very cold cloth on the back of the neck and pressure at the base of the nostrils on the upper lip are effective also. When a child manifests a

"INSTANTLY"

The men who get things done are likely to be the men who do them at once.

"I must take time for thought," says one of the older statesmen. "I must bring to bear on this grave problem the wisdom of many minds. I cannot afford the costly luxury of a mistake."

Such grave deliberation sounds praiseworthy; and frequently it results in an extended description of the excellent reasons why the profound thinker is able to make no move at all.

On the whole, the world's business is advanced by those who mobilize speedily and decisively, instead of cautiously peering under all the hedge-rows lest lions might be ambushed there.

Procrastination is not merely a thief of time, but a foe to civilization. In countries of the siesta and the manana there is wanting the initiative of brisk endeavor one finds in the northern temperate climes.

There faces you on the calendar a disagreeable duty. There lies on your desk an uncomfortable letter awaiting a response.

Take the dilemma by both horns on the spot.

It's like going to the dentist to have the tooth out—the sooner you meet the ordeal the sooner it's over.

And the courage of resolution is half of the battle.

"The worst things," said Eckley Cox, "were those that never happened to me."

Go to meet the redoubtable adversary—and as you draw near, lo! the apparition turns to the dissolving vapor of a ghost.

He is no more a foe you need to fear.

If you do now what there is to do, you have no longer hanging "heavy, heavy over your head" the apprehension itself, as well as the object of that apprehension.

Some of us revolve a nervous worryment as though we enjoyed it and made a pot of it. Deprive us of it and we are as disconsolate as Ireland would be if she were without a grievance.

Look at the efficient men of affairs (not just the moneyed men, not just the magnates of the vested interests, but the men who are prime movers in every sort of going concern, be it little or large) and you find they are men who reach decisions speedily, and act on those decisions promptly.

A young lad has learned much in relation to the world he lives in when he has learned to obey at once.

A command obeyed late is only half obeyed at best; and paper soldiers, who delay amounts to a flat disobedience.

Soldiers cannot move into battle when they please, if they are to hope for victory. They must respond to the instant's quick imperative. The soldiers of peace may lose the day or the cause as surely by folded hands and slumber.

The Daily Reminder.

Robert Lewis, an Ontario farmer, has a plan for reminding him of things that need attention. He keeps a small pad of paper and a pencil in his pocket, and while he is in the stables or out in the field he makes a note of everything that comes to his mind in the way of repairs or new tools that he may require.

Time after time Mr. Lewis has difficulty in remembering about making certain repairs to fences or sheds or buying needed tools when he went to town, but now he has no more trouble. He makes his notes wherever he might be at the time they come to his attention, and when he returns to the house he puts the notes where he can find them when wanted. He has saved himself many a trip to town, just because he always knew just what he wanted after he got there.

Any old scrap of paper will serve the same purpose just as well as the pad, and it is cheaper. This idea has saved Mr. Lewis many dollars, and he recommends its use to others.

Feeding Poultry.

When feeding corn to poultry it should not be forgotten that when using the whole grain fowls can readily obtain a full meal with very little exercise. This is detrimental to egg production inasmuch as birds are apt to become too fat. It is much better to have the corn cracked and scattered in the litter so that the fowls will have to work for it. Oats when fed whole are not eagerly eaten unless prepared in some way. A new oat called "Liberty", originated at the Central Experimental Farm, and now being introduced into public use, threshes out free from hull, and has therefore a special value in poultry feeding.

These points are brought out in a recently issued bulletin No. 91 of the Dominion Experimental Farms, and obtainable from the Publications Branch of the Department of Agriculture at Ottawa, which deals fully with poultry feeds and feeding. It takes up the balanced ration, grain and by-products, green foods, animal foods and mineral foods, and tells how to combine and use these in the feeding of hens, turkeys, guinea fowl, ducks, and geese.

When other helpers are busy somewhere else, try the milking machine. It will save lots of time and hard work.

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