

Soils and Crops

This Department is for the use of our farm readers who want the advice of an expert on any 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.

Manure—A Gold Mine on the Farm.
Each horse produces \$27 worth of manure a year (as compared with commercial fertilizers); each head of cattle \$20 worth; each hog \$8 worth. It is estimated that the total value of manure produced is about \$200,000,000—a veritable gold mine.

At least half of this great wealth of fertilizing material is sheer waste. In some good general farming sections not more than fifteen per cent. of the manure produced is used. Even in the most intensive dairy regions, where cows are largely stall fed and comparatively great care is taken with the manure, the loss seems to be approximately twenty-five per cent.

The best plan to prevent this waste is to haul the manure and spread it on the field as fast as produced. When this is not practical, store the manure where it can not leech out.

To save manure, concrete manure pits are being used more and more. These pits have concrete floors and sides so that not any of the valuable fertilizing elements are wasted. A pit 6x12 feet and three feet deep, with walls and floors five inches thick, will serve the needs of the average farm. In ground that does not freeze in, only an inside floor will be needed in building such a pit, except where the concrete extends a few inches above the ground to prevent flooding by surface water. The floor should be reinforced by woven wire fencing, put in after about two inches of cement has been laid, the section of fencing being cut long enough to bend up a few inches at either end into the side walls. When the reinforcing has been put in, the remaining three inches of the floor is laid and the forms for the side walls set up and used immediately. Use one part of cement, two of sand and four of screened gravel. A pit of this kind is large enough to hold the accumulation of manure on the average farm until such a time as it can be conveniently spread on the field.

A manure pit doesn't cost money; it saves money. The value of the manure saved when stored in pits will equal at least five per cent. on the pit investment. Where manure is stored in loose, flat piles in the barnyard, the loss by leaching and decay in six months amounts to from thirty to sixty per cent.

In some places manure is simply thrown out through the barn windows and left to lie against the sides of the barn. The losses in fertilizing value are large—much larger if the water from the roof drips on the manure. Such a practice is not only wasteful, it is also very unsanitary. If it must be followed, the gutters on the barn should be constructed so that the water will be carried away. A lean-to shed may be built as a cover over the pile of manure exposed to the weather.

Another good way to save manure, especially in the case of hogs or beef cattle, is to have a concrete paved feed lot, preferably under a shed roof. Where the owner of the farm can not afford a paved floor, a cheap open feeding shed may be made to serve the purpose very well, if abundant bedding is used to absorb the valuable liquid manure. In such a feeding lot or shed, the manure is allowed to gather under the feet of the animals, each day's bedding being strewn over the well-tramped manure. Some farmers using this system arrange their feed-racks so that they can be raised from time to time, making it possible to feed till solidly packed manure has accumulated to a depth of several feet under the shed. It has been shown that manure thus handled suffers little from heating and leaching.

For saving manure the feeding shed serves the purpose of giving the general farm, or the beef cattle farm, something of the advantage held by the intensive dairy farm. The manure saved on the Canadian farm under present conditions is almost exactly proportional to the number of animals stall-fed on the farm; the manure of animals not stalled has very little effect on yields, except in cases where field crops are hogged down or otherwise pastured down, or where pasture is used in a rotation.

If no shed or pit is available the best method of storing manure in the open is to pile in a compact pile with nearly perpendicular sides. The pile should be left flat on top so that it will absorb the rain water. This not only lessens the amount of leaching, but helps keep the manure moist and thus reduces the fermentation. This method will not prevent leaching; therefore it is recommended only when there is no better way of storing the manure.

By gearing it to the grindstone we could sharpen the mowing machine knives, grind the scythes, axes and other tools with the same source of power. Altogether I find that the machine enables me to do without help that I would otherwise have to keep through the winter months.

McDairy
There are a good many fine things about a milking machine. One of them is that your hands don't get tired milking. The last cow milks as easy as the first one.

That is my neighbor's way of sizing up the milking machine. He was left alone through the shifts and turns of the times and could not get help to do his farm work as it ought to be done. The milking was especially tedious.

"I used to spend from an hour and a half to two hours right on the milking stool. By the time I got through I was tired and in poor shape to begin the real work of the day. Now I am fresh and ready to go at other things after breakfast. I milk my cows in about half the time and they don't mind it as much as they used to when they were pulled and hauled around by careless or indifferent milkers."

He spoke of a number of other good features about the milking machine, but this was the windup.

"You can't tell how long a man will stay if you hire him. I had two or three men last season at different times. I thought I had them for the season, but they slipped away from me. Contracts will not hold men who make up their minds to go. The machine stays right on the job. I know in the morning when I get up that I am going to find it in its place, ready for business. Of course, I have to do some things for the milking machine, but it won't go back on me if I use it right."

Another man told me of his experience with a milking machine as follows:

"It used to take me just about two hours to milk eighteen cows. That meant four hours, counting night and morning, sitting on the milking stool, the best I could do. Last winter was unusually cold, and I actually frosted my feet in the stable, working there so long at a stretch with little chance to move them around."

"Being faced with another winter of like experience, on account of the lack of help, I determined to put in a milking machine. The original cost of the machine was \$200, but by turning it in a separator that we were no longer using, I was able to get the milk by paying \$200 in cash."

"The machine shortens the work of milking about one half, which counts in the short days when chores take such a large part of the time. That gives me a better chance to work at other winter work, such as getting up wood."

"I made a pulley out of a round stick of wood and attached it to the driving shaft of the milker, so that

Protecting Our Furred Friends

Now that the nights are getting frosty, it is time to begin to think again of trapping. Even more important, however, is the proper protection of our fur-bearers until their fur becomes prime and worth full value.

You do not want to begin trapping during September or October, before the pelts are No. 1 in quality, and thereby lose half or two-thirds of the value of the furs, when by waiting they will be worth double price.

Resolve not to trap until the fur is prime, of No. 1 quality. With most furs this will be early in November. When furs are prime, the flesh side of the pelts will remain white, without dark blue streaks, after the animal is skinned. If the flesh side turns blue at any time, even after drying, the fur is not yet prime, and will grade No. 2. If very blue, it may be a No. 3 or 4 pelt; and these last two classes are worth very little. Primeness of skins is judged entirely by this white or blue color of the flesh side of the skin. Whether the hair slips a trifle or not is not considered so much, for the condition of the skin, whether it determines whether the hair will slip or not. Of course, a skin may be perfectly white, No. 1 in primeness, and still grade No. 2 or 3 because of shortness of the fur, cuts in skin, etc.

Primeness of muskrat skins cannot be judged by whiteness. A muskrat never becomes fully prime and white until about February. The skins caught during the fall, if good quality, may be more or less blue streaked, and yet grade No. 1 fall. The same is true with winter-caught skins. These No. 1 fall or winter skins do not, of course, bring so much as a No. 1 spring-caught skin, but they are nevertheless considered prime. Muskrat skins vary a great deal during the fall, however. You may catch a perfectly prime, but if left out in the trap during a hard rainstorm lasting several hours, the pelts are liable to turn perfectly black.

Therefore, resolve not to start trapping too early. See your neighbors so that they will not start before you. Draw up a pile of furs to all, and get them to sign it. Then if any wandering early trapper tries to come in and get furs before they are prime, it is up to you to protect them.

Marten skins, also, are hard to judge at certain times. In some places in Canada they may be caught, being perfectly prime, but if left out in the trap during a hard rainstorm lasting several hours, the pelts are liable to turn perfectly black.

Therefore, resolve not to start trapping too early. See your neighbors so that they will not start before you. Draw up a pile of furs to all, and get them to sign it. Then if any wandering early trapper tries to come in and get furs before they are prime, it is up to you to protect them.

Many people have signed pledges to protect the birds. It is just as important that we should wake up to protecting the fur-bearers, before it is too late. One year there were hundreds of thousands of passenger pigeons, and the next year there was hardly one alive in the world. Now not a single survivor can be found. It pays to protect the birds.

Health Talks

By John B. Huber, AMMD

Dr. Huber will answer all signed questions of general interest. If your question is of general interest it will be answered through these columns; if not, it will be answered personally. Address: Dr. John B. Huber, M.D., care of Wilson Publishing Co., 73 Adelaide St. West, Toronto.

Catarrh.
Nasal catarrh is either acute or chronic. Doctors call the acute variety coryza or acute rhinitis; and say it is either simple or specific.

A simple coryza is due to exposure to cold and wet, to irritating vapors such as workmen are exposed to in some occupations; and it accompanies a good deal of rheumatism, tuberculosis and asthma.

A specific coryza comes on in the beginning of most cases of the "common cold," diphtheria, measles and scarlet fever, and other infections, and is due to the germs of those diseases. The symptoms are sneezing, hoarseness, headache, chilliness, at first dryness in the throat and then, after a few hours, of copious, watery, charges, stuffing up of the nostrils and occasional incessant blowing of the nose. Such a nasal catarrh is very likely to be "catching."

A sufferer from acute rhinitis should take one-half a grain of calomel every hour until there is a movement of the bowels. The calomel should then be topped off by a sedative powder. Then grains of Dover's powder is a good bedtime dose for this condition, after having taken a hot footbath. Net day take Dr. Lincoln's rhinitis tablets, one every half hour, until the throat feels dry; these can be had of any druggist. The best local application is to sniff up and to gargle several times a day normal salt solution (one-half teaspoonful of table salt to a tumblerful of water) as hot as can be borne with comfort.

Chronic nasal catarrh is likely to follow an acute rhinitis. In the course of time the nasal mucous membrane becomes thickened and obstructive, making the breathing labored and difficult. Then after many months or years, the mucous membrane becomes atrophied, with a bad odor and greenish offensive crusts.

Chronic catarrh is more a symptom of some other ailment than a disease in itself. There is generally some constitutional disease which the doctor must cure, upon which the catarrh will generally get well of itself. Any body with catarrh, therefore, must regulate his diet and habits, and must

attend carefully to his general health. Especially must he keep his feet warm and dry. Only the doctor can manage successfully cases of chronic catarrh. For he has to use caustics to the thickened, hypertrophied; and he has to remove the crusts and then make proper application to stimulate the atrophied condition. No alcohol or tobacco habitue can be cured of his catarrh, while he uses these substances. The vast majority of incurable deafness comes from neglected catarrh.

Questions and Answers.
I am a returned man. Was severely gassed in May, 1915, and was invalided home, discharged as medically unfit in 1917 with dilated heart. Since then I have suffered very much with nerves, being very irritable, sensitive and at times have pains in the temple. Also at times I have smarting sensations in the legs and arms. I used to have severe pains around my heart, but have not been troubled much in that respect lately. Sometimes I have a kind of suffocation at night. This mostly happens just when I am going to sleep. At times I get a very depressed feeling and get moody. I have been a fairly heavy smoker and tea drinker. I am at present working on a farm to complete my vocational training course. Do you think that class of work will suit me?

Answer—I can hardly think of an invalided hero more worthy of admiring sympathy than the man who has been gassed in warfare. It is possible that you will never regain 100 per cent. efficiency. But by quiet living, being careful not to over-exert, cutting down the coffee and tea, smoking tobacco in moderation (I should advise cutting it out entirely in your case, unless you don't care much about it anyway), the sensations you mention will in large part disappear. Try to get good sleep, with windows wide open. I am very glad you are on a farm. That is the place and the vocation for the returned man. But until your health comes around don't overwork. I am mailing you further information. Best wishes!

Fall Fertilizers For Lawns

To stimulate the growth of a lawn and to improve its appearance for the following spring no better treatment can be recommended than the application of a properly rotted manure in the late fall. This application should not be made until after the frosts have stopped the growth of the grass. Ten to twenty two-horse loads should be applied to the acre, according as the soil is more or less rich.

It is important that the manure should be thoroughly rotted before application so that all weed seeds are killed, otherwise damage done by weeds will more than offset the fertilizing value of the application. Manure needs careful handling before it is suited for spreading over the lawn. Unless it is properly "composted" it may have most of its valuable constituents destroyed by improper handling. To "compost" manure properly it should be treated as follows:

Pile all manure in heaps with alternate layers of sod or other litter. Keep it wet enough so it will not burn. Let it stand a whole year through summer and winter, turning it over two or three times during the year. It will then be ready for use on the lawns and danger from weed seed will be minimized.

Many object to the use of manure at all, not only because of the danger from weed seeds, but because of its unsightly and unsanitary appearance. These will undoubtedly prefer to use something else, and the most economical substitute is finely ground bone or bone meal. This should be applied at the rate of from 500 pounds to one ton an acre, according as the ground is more or less rich.

With the bone meal it is desirable to use double the quantity of wood ashes, which may be mixed with the bone meal or sown separately. These ashes contain considerable lime in a

very desirable form, as well as other valuable elements.

All applications should be made before the ground freezes permanently for the winter, as otherwise the fertilizer may be largely washed from the soil before it has a chance to become incorporated with it.

Prepared sheep manure is an excellent dressing. As it has been sterilized by drying and rendered odorless, there are not the objections to it that there might be to ordinary manure. If there are parts of the lawn which will be tramped over when they are not frozen, especially when snow is melting there, they should be protected to prevent persons from cutting across. Tramping on the turf when it is covered by slush or snow is destructive to a lawn.

Buy Thrift Stamps.
Potatoes require a cool place not too dry.

The metric system has been officially adopted by 33 countries, and is used to a greater or less extent in 200.

Invest Your Money
In
5½% DEBENTURES
Interest payable half yearly.
The Great West Permanent Loan Company
Toronto Office 26 King St. West

STORM WINDOWS & DOORS
SIZES to suit your windows. Fitted with glass. Safe delivery guaranteed.
Write for Price List. Cut down fuel bills, insure winter comfort.
The HALLIDAY COMPANY, Limited
HAMILTON FACTORY DISTRICT CANADA

Webster
On
"Morale"
HAT is Dr. Webster's definition. Many of us know the word only in its war-time application.

Webster dwells first on the usage of the word "morale" as applied to the common-place happenings of every-day life. His allusion to its reference to an army comes later. And Webster is correct—metaculously so.

It was their private-life morale that made such splendid soldiers of our boys when the time came for them to don the khaki. It was that, and that alone, that made them take the first step, and it was that which carried them through to victory. If their every-day morale had been neglected, the Army could have done little with them and success would not have crowned their efforts.

It is the many little incidents of your daily routine that make up your morale—the morning shave, your clean linen, polished shoes, brushed clothes. Webster speaks of zeal, spirit, hope and confidence. It is by attention to the small details of your personal appearance that these may be attained.

The Gillette Safety Razor enters as much into the morale of every-day life as it did into that of the trenches. It helped our soldiers to maintain their confidence and bearing. It will do the same for you. The Gillette Safety Razor makes the daily shave come easy—there is no pulling or scraping—no honing, or stopping—just five minutes of perfect shaving comfort. And, afterwards, a chin that tells of morale and self-respect.

Sold at most stores catering to men's needs.
MADE IN CANADA
KNOWN THE WORLD OVER
The Gillette Safety Razor Co. of Canada, Limited, Montreal, Que.

USING YOUR SENSES

Using Your Senses.
Not one of our God-given faculties was meant to lie dormant, but after talent has been latent for a time it may require a strong stimulus to rouse it.

Sometimes this incentive is provided by a cogent personal force touching or invading our lives; sometimes it is the force of circumstances themselves, bringing out the best that is in us. "You never know what you can do till you try"; and if the history of the war were to be completely written it would be full of examples of men who have done better than they—or anybody else—thought they could.

Their wits were sharpened by the great emergency; all their faculties were roused by the spur of the thought of dear ones at home, whom they were bound to make proud.

You and I have not begun to live unless we have called into play all the powers of our possession. They are the finite senses by which we learn and develop and enrich our beings, in order that we may create from the raw material something of value to the age and to the earth we inhabit. Beyond the finite senses there is the realization of duty, of love, of religion, of immortality; and life is not complete if we cannot see what is invisible, hear what is inaudible and feel the impalpable.

If we use our senses aright they supply us not with places of final arrival but with points of departure. The mind's eye begins to perceive where the body's eye leaves off. That inner ear which is beside the still small voice in each of us, in order to catch its faintest accent, begins to hear where the gross physical ear detects no sound. The tongue indicates the delicious or the repugnant flavor of the food that is the body's fuel, but still there are the hunger and the thirst of the soul to be appeased by the nectar and ambrosia of the banquet of the gods. We may take in our hands the substantial things for which men and women lay down their lives—but beyond this book is the meaning of the book, which the spirit apprehends; beyond whatever the hand can hold or the scales can weigh is the essence, which cannot be seized in the fingers and translated into pounds and ounces of avoirdupois.

And yet as a stair to the spiritual realm we use the senses. We look at the stars and we are uplifted by what the eye beholds to what the eye hath never seen. We listen to the music and we are transplanted to the place where music dwells and never dies. And then we cannot be content to lead the life that is immersed in the consideration of what we shall eat and what we shall wear and where we shall go. The sensual life cannot make us happy. There are aspirations roused which only the freedom of the spirit can satisfy.

Saving and Storing Seed Corn.
Selecting seed from the field or garden while standing gives one an opportunity to get large well matured ears that were produced under normal conditions and not the result of exceptional opportunity for sunlight and growth.

Selection of seed at husking time is much preferable to taking seed from the crib, where it may have heated and become mouldy.

Good seed corn should be: First, well matured, save the hard, firm, fully grown ears. Second, of good size for the variety. Third, with deep kernels well filled out and with large germs. Fourth, with small to medium sized cobs.

Save all the well matured ears that are large or medium size. These can be more carefully sorted before planting.

The first essential in the care of seed corn is to dry it out as quickly as possible, not by artificial heat but by putting it in a dry, airy room. Ears saved for seed should be thinly spread out as soon as possible and not left in piles or sacks. Any room that is dry, well ventilated, and proof against vermin is satisfactory for storing seed corn.

Seed corn needs ventilation in order to dry well. This may be secured by spreading it on slatted shelves, arranging in specially made racks, or by "stringing" it. Nails may be driven into the walls, or into boards, then after cutting off the nail heads the ears can easily be stuck on the spikes.

Putting a Polish on the Plow.
Many plows, even those that have been well covered with oil or axle grease, fail to scour readily when first taken into the field. The following method is being used by many farmers to overcome the inconvenience attending the use of a plow that fails to clear off quickly. The plow is taken to the nearby branch or creek and drawn a few times through the mud or gravel beds that invariably are found along water courses. It usually takes but a few turns to get off the rust or hardened grease. Under the circumstances does the sand stick to the plow, no matter how rusty it may be; and if the gravel does not contain large stones the plow will not be dulled.

The care of farm implements demands at all times the careful attention of the farmer. Never was there greater need than now for exactness in this direction.

