

# Soils and Crops

By Agronomist.

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.

## Farms Less Fertile Than 40 Years Ago.

Canada has about 28,000,000 acres in field crops of which probably 20,000,000 acres are in the three Western Provinces. Is the fertility of the soil being kept up, is it being exhausted, is it being increased? To get an answer, the Commission of Conservation carried out a survey of 2,245 farms. We asked questions of 2,245 farmers located all over Canada. We took them in groups of about thirty or forty—in all about 60 groups, from British Columbia to Prince Edward Island. On this point, we made a definite enquiry of the farmer as to whether the fertility of his farm was being maintained or was deteriorating.

Here is the answer: 30 per cent. of them reported about the same yield per acre as 20 years ago, 40 per cent. reported some increase in yield, and 30 per cent. reported some decrease. That is to say, the land, as used by 30 per cent. of all the men reporting, was poorer in its power to produce crops, than it was 20 years before. From Manitoba, 32 per cent. of the farmers reported about the same yield per acre as 10 years before; not one man reported an increase; and 46 per cent. reported some decrease. That is a summary of the answers to the question when put under an intelligently conducted survey.

We want in Canada more serious and intelligently conducted surveys of our conditions in order that we may acquire real knowledge of facts as they are. Then we can come to conclusions and plan our course of action to deal with the facts discovered and properly interpreted. In the West, the lure of land was for a time similar to the lure of the Yukon; and the lure of the Yukon in the main led on to disappointed men, deteriorated health, and parts of the Yukon left with less material substance than could be called wealth than it had been.

There is some excuse for the pioneers taking more than one generation's share of the fertility stored in soil by the beneficence of nature during long ages of preparation. In the pioneer days they needed and had some right to more than their share of this store of natural wealth while making the place ready for occupation; but, after that first need is satisfied, it becomes their duty to make the place more fertile while in their hands.

The history of other countries and other farmers sheds light on our problems; and we may be instructed, to our great advantage, by their experience. In central New York, wheat growing was followed successfully for 40 years. During 20 years more the success was doubtful. Then it became definitely unprofitable. With a climate favorable for agriculture and propitious for crop-growing, it took 40 years of exclusive grain growing to make that system unprofitable, and 20 years more to compel the farmers to stop that sort of practice.

Ohio, Indiana, Illinois, Iowa and other Western States either have or are making similar history. I have gone over them and talked to the old men; from 30 bushels of wheat to the acre they came down to 14. We can afford to take a lesson from even our enemy, Germany is a country with a soil which on the whole is not naturally very fertile. Within about 30 years she has been able to effect an increase of about 30 per cent. in the yields per acre of her crops.

On the other hand, over large areas of Canada our methods of farming are exhausting the fertility of our farms to some extent, and there is danger that the fertility of considerable areas will be reduced below the point of profitable farming.—Dr. J. W. Robertson, Chairman of Lands Committee, Commission of Conservation.

## Poultry

When goslings over six weeks of age are to be fattened they can be fed three times per day with a ration of one part corn meal and one part bran. Geese which have been pastured through the summer can be fattened on a ration composed entirely of corn meal. This should be given over a period of four or five weeks,

## WANTED POULTRY

Better quality preferred. Write for prices. STANFORD'S, Limited 128 Mansfield St. - Montreal

## Raw Furs

RAW FURS and GINSENG ROOT 21 years of reliable trading. Reference—Union Bk. of Canada. N. SILVER 320 St. Paul St. W. Montreal, P.Q.

## WANTED POULTRY, EGGS and FEATHERS

Highest Prices Paid Prompt Returns—No Commission P. POULIN & CO. 80 Bonsecours Market - Montreal

## If You Want the Highest Market Prices

Ship all your

## RAW FURS

to us—We pay all express charges. ABBEY FUR COMPANY (In business for 30 years) LOUIS ABBEY, Manager 310 St. Paul St. W. Montreal, P.Q. Reference, Bank of Hochelaga, St. Henry, Montreal.

Arrange to attend the Ninth Annual

## TORONTO FAT

## STOCK

## SHOW

Union Stock Yards, Toronto.

Judging 10 a.m., Thursday, Dec. 5th. Auction Sale of Prize Winners 10 a.m., Friday, Dec. 6th.

Everybody Welcome. Admission Free.

## FREE TO GIRLS

Big Doll and Doll Carriage

This Big Doll is 18 inches tall, has jointed legs and arms and natural head, hands and feet. The Doll Carriage has steel frame and wheels, and the seat, back and hood, are made of leatherette. It is 24 inches high and is just the right size for the Big Doll.

Just send us your name and address and we will send you 30 Packages of lovely embossed Xmas Post Cards to sell at 10 cents a package. When they are sold send us the money and we will send you the Big Doll, with all charges prepaid, and we will also send you the Doll Carriage without any charge if you will show your Doll to your friends and get just three of them to sell our cards and earn prizes too. Send us your name and address to-day so you can get your Doll and Doll Carriage quickly.

Address: KIMBERLY-CLARK COMPANY Dept. 193, Toronto

Doing Over the Old Barn.

For a moment when I came in sight of the place I did not recognize it, so changed was it in appearance. The buildings did not look like they used to; the fences were different, and the fields had been arranged on a new and more economical plan for saving time and lessening labor.

But the barn was the outstanding feature of the place. The old barn had stood in the midst of a low, wet place, quite a distance from the house. The man who owned the place before it changed hands must have travelled many miles every day to do the chores.

This old barn was taken down and the solid timbers moved away to a site 200 feet from the house. Such of the old stiles, beams and other timbers as were of the right size and length were worked over for the new frame. The woods afforded logs for what more heavy timbers were needed, as well as for the siding. These siding boards were all surfaced, so that they could be painted. Some of the old siding was used in the new barn, although much of it was worn very thin by the weather. A basement was put under the new barn, with a thirty-foot shed attached. The whole was given a fine coat of red paint, and trimmed with white. It looks fine now, and it is as good as it looks.

Inside are some devices to save time and strength. Stairs lead from the basement to the first floor and up to the scaffolds. Good swing stanchions make it comfortable for the cows and easier for the men folks. Feed carriers and litter carriers lessen the

## GOOD HEALTH QUESTION BOX

By Andrew F. Currier, M.D.

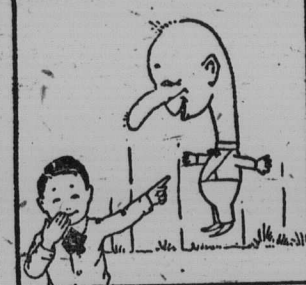
Dr. Currier will answer all signed letters pertaining to health. If your question is of general interest it will be answered through these columns; if not, it will be answered personally if stamped, addressed envelope is enclosed. Dr. Currier will not prescribe for individual cases or make diagnosis.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

## Measures for Preventing Infectious Diseases.

Armed with the facts in regard to the nature of infectious diseases we are in a position to eliminate them to a certain extent. This must come about, first by keeping the body in so fine a condition for its daily work that it will be able to offer successful resistance to the great army of disease germs ever lying in wait to attack it. A good engineer never overlooks the requirements of his machine, he gives it pure water, good coal, good draught; he keeps it clean and well oiled, he is constantly on the look-out for weak spots and when he finds them he remedies them, at once, if he can. In this way he gets the maximum of efficiency from his engine. Precisely in the same way if one would keep off disease he must have proper food, exercise, sleep, clothing, recreations and everything else which will enable his physical organism to work smoothly. There are also extra precautions which he might take but in the majority of cases does not. He can take better care of his skin, which is one of the avenues for the elimination of poisons, by more frequent and thorough bathing and scrubbing, especially with warm water and plenty of soap. He can be more particular about the functions of his bowels and bladder which are identically as important to his well-being as sewers to a city. He can accustom himself to deep breathing, flooding his blood current with oxygen and getting rid of poisonous carbon compounds. It is from the want of this vital oxygen that so many people are dying to-day of pneumonia. Furthermore if it is true that germs are so omnipresent and so malevolent, so abundant in the mouth and nose and so prone to migrate from this base to the parts of the body which are more vulnerable, the neglect is inexcusable if they are not destroyed before they have had an opportunity to accumulate and move on. In other words the daily washes in the mouth and nose with suitable sprays, atomizers and mouth washes is as important as, is even more important than the use of the tooth brush. Good atomizers are easy to get and there are many combinations of antiseptics which will efficiently disinfect the upper air passages, destroy germs and prevent much of the sickness which is now so

## FUNNY FOLD-UPS

CUT OUT AND FOLD ON DOTTED LINES



LAST NIGHT I DREW THIS FUNNY MAN. OUT ON THE BARN—AND GEE!

WHEN I WAS FAST ASLEEP IN BED I DREAMED THAT IT WAS ME—



labor necessary to feed the stock and clean the barn. A drilled well near-by affords water. Altogether, it is a good, labor-saving barn.—E. L. V.

## To Keep Chickens at Home.

A yard surrounded by a five foot fence will under most conditions keep chickens at home. If the hens show a tendency to fly over such a fence the flight feathers of one wing should be clipped. A fence made of woven wire is preferable to a fence made of board or other material. A board should not be used at the top of a wire fence, as this gives the hens a visible place to alight and tends to teach them to fly over. The larger the yard which can be provided the more contented the hens will be. It not only gives them greater opportunity to exercise but often makes it possible to maintain a sod on the yard, which is advisable.

Seed corn selected at husking time should be stored where it will thoroughly dry out before winter. The ears should not touch each other during the drying process. The ears can be suspended in a well ventilated shed or attic. Seed corn that is thoroughly dry will not be injured by freezing.

## Questions and Answers.

X-1—My twelve year old daughter has symptoms of goitre. Could you suggest something which will keep it from enlarging?

Answer—Are acid fruits, including tomatoes, useful for one who is bilious? Answer—If your child has goitre, the proper thing would be to place her under the care of a physician who understands the treatment of that disease. If you care to read my article on goitre, send stamped, self-addressed envelope and you will receive it.

2—I do not know that the acid fruits have any particular relation to biliousness. Drugs, like mercury and ipecac and a few others, are useful in the treatment of biliousness, but one should take them under the direction of a physician.

G. E. N.—I am told that if two cakes of yeast are eaten each day for several months, it will cause reduction of enlarged glands and will also increase the weight. What is your opinion as to this?

Answer—My opinion would be that it would be an undesirable form of treatment; and the constant fermentation and gas which it would produce in the stomach, would be most annoying and uncomfortable.

F. C.—I am troubled with corns. Will you kindly advise me in regard to their care and cause?

Answer—If you will send stamped, self-addressed envelope. I will send you my article on corns.

E. S.—My baby is 18 months old, has hiccoughs everyday. Seems bright and well otherwise. Please tell me what I can do for him.

Answer—If the phrenic nerve is slightly compressed, it will usually stop hiccough. This nerve passes down on either side of the neck, and could be compressed by passing the fingers gently, but firmly, along each side of the neck.

## MOTHER-WISDOM

One Speck of Dirt Too Small to See May Bring Disease to You and Your Child.

They are worth every ounce of the wisest love and utmost care we can give them, these priceless little ones from Heaven.

By Helen Johnson Keyes.

How much knowledge and wisdom go into the making of a good mother!

Constantly I am surprised by discovering new things which a good mother should know and do. The truth is, there is scarcely any knowledge, scarcely any skill which cannot be used directly in bringing up children.

Two strong children went from home one summer to visit an aunt. Two days after their arrival they were taken violently ill with cramps and vomiting. After a week of illness they recovered, with the help of a doctor, and by following his very wise counsel to go without food entirely for twenty-four hours and then to begin with the very lightest diet. After a week, however, one of them fell ill again in just the same way. The doctor happened to be brother-in-law of the aunt and he quietly made an investigation of her kitchen, for he had often been called into this household to cure cases of acute indigestion and ptomaine poisoning.

Before very long he found the explanation of these many illnesses: There were saucers of left-overs which had been standing uncovered evidently for more than twenty-four hours; yesterday's milk was beginning to sour in the pail; a loaf of bread which had not been put away in an air-tight box was coated with mold.

The doctor's imagination pictured a dish of scalloped fish made from some scraps of canned salmon left-overs, some inside cuts of that moldy loaf, plus the souring milk. In his fancy he saw every one of the family ill after that feast and being a man who believed in preventing illness, if he had a chance, instead of waiting for it to develop and then curing it, he took the left-overs and the milk and the bread and pitched them out into the place where such things belong.

Now this article is not intended to discourage thrift, it is just a reminder of those tiny disease-carrying organisms, bacteria, yeasts and molds, which develop in foods if these are exposed to slow heat, dampness and air. When foods "spoil" bacteria, yeast or molds are spoiling them.

These are hundreds of varieties of bacteria, many of which are now even necessary to life. I am now speaking about the poisonous bacteria which breed in foods, dust and dirt, and which cause more death among children and among grown-ups whom the children need than has ever been put on record. Twenty-thousand of these bacteria might scarcely cover the head of a pin, none the less, they have the power to bring desolation into families, robbing parents of children and children of parents.

Milk rapidly develops great colonies of bacteria as soon as it is left standing in a warm condition. That is why I insist that when baby's bottle has been warmed for a feeding what is left in it must be thrown away, not kept for the next feeding. Many a fatal case of diarrhoea has resulted from the practice of warming baby's bottle twice or more. (This of course, does not refer to warming once after pasteurization.) Ice cream which has melted into a warm fluid and is then refrozen is very dangerous, for freezing does not kill bacteria; it only checks their farther development. Many epidemics of indigestion which have swept through villages after a party or picnic have been due to the fact that the ice cream eaten was refrozen in this way. Other bacteria develop in meat, fish and in canned goods which are allowed to stand in the cans after they are opened. These are ptomaines.

To see one's child suffer from ptomaine poisoning and understand its cause would surely cure any mother of carelessness with left-overs.

Yeasts are familiar in great multitudes in the cakes which make our bread light, but even they may become unwholesome, when, for instance, they ferment fruit juices.

Mold, unlike bacteria and yeast spores, is visible and spreads a sickly green danger-signal over the food it is poisoning.

It is the duty of every farm mother to control the growth of these organisms. The difficulty or impossibility of getting ice on farms makes the problem harder but it must be faced and conquered or we shall have continually-recurring cases of indigestion, followed by chronic sickness and occasional unnecessary deaths. Foods require to be used up almost at once unless they can be kept very cold and covered.

The utensils used in preparing and keeping foods must be of the kind which contain no insanitary cracks and crevices where crum? and drops may lodge and grow old, breeding poisons. The baby-bottle with the wide mouth ought to be the model for all milk-containers.

The housewife should wear tub dresses and wash them frequently that they are clean. Her hands and nails must be spotless when she cooks and even so, should not be used as tasting implements. Our mouths always contain the germs of disease which most of the time tend to develop their deadly possibilities within us because certain curative forces are at work in our bodies destroying their power; but transferred from our mouths into food and thus into other people's stomachs, they may produce the disease of which they are seeds, the curative forces being absent or weak in the systems of the victims who eat them.

Rats, mice and even pet animals should be rigorously kept out of the kitchen. They are carriers of disease germs.

So much has been said and written about the nasty fly, its foul habits and its power to infect the food and the bodies of the babies, children, and grown-ups on which it alights that one may indeed say that no woman is a good mother who does not screen them out of her house and use every method of driving them from the neighborhood and from her children. They are the great carriers of typhoid.

Dust is not dangerous in itself, it is dangerous because in it grow death-dealing bacteria. A mother must know how to sweep so as to collect the dust and destroy it, not merely to scatter it. She must diligently scrub floors and corners with soap and water and expose her rooms, particularly her kitchen and pantries, to bright, direct sunlight.

After food has been cleanly prepared and served it must be cleanly eaten. Children should be obliged to wash their hands and feet before scrub and clean their nails before coming to the table. Most bacteria are conveyed from the hands to the mouth and thus eaten. Children put their hands without dainty scruple, under their nails and may contain bacteria, which lodging on their food and passing into their digestive tracts are likely to cause cramps, nausea and all the symptoms of indigestion.

A child-specialist once said to me that if all children in Canada were forced to wash their faces, hands and nails before eating there would be a truly amazing fall in the death rate.

## The Dairy

Cabbages furnish a great, succulent food for dairy cows but usually they are worth so much for human food that it would be impracticable to feed them to the cows. Cabbage should be fed rather sparingly. It will not do to give a cow all the cabbage she wants to eat, especially at first, because it will taint the milk and the cow will not do well, but a comparatively small feed of cabbage in the morning to take the place of roots or of corn silage would be very beneficial. They are not only a good food but their succulence assists digestion and a cow would eat more dry food and digest it better by including cabbage as a portion of the ration.

If you would attempt to feed a cow nearly an entire ration of cabbages you would be very likely to get extremely poor results because of the large percentage of water. There would be so little dry matter and food nutrients in the cabbage that a cow couldn't eat enough to produce a good flow of milk for any considerable length of time. That, I imagine, is the reason why some people have had poor results with cabbage. You get the poor results with beet tops. People harvest their beets and then they turn the cows into the beet field and if there are plenty of beet tops they think they don't need hay or grain, but they make a sad mistake. It would be much better to haul the beet tops up and feed a small feed in

the morning together with hay and grain, and the same principle will hold true with cabbage, but rest assured that if cabbages are properly fed to dairy cows they will not dry them up but, on the contrary, they will stimulate the flow of milk.

## Save Wood Ashes.

Save the ashes from wood fires. Store them in boxes or barrels in a dry place until spring, when they should be spread over the garden for their high fertilizing value.

Recruiting Officer: "But what would a boy like you do in the Army?" Lad: "Don't you need a caddie to carry your swords and things?"

Do not apply paint to concrete work before the concrete has hardened, as paint retards the setting of the concrete.

The entries which have just closed for The Toronto Fat Stock Show to be held at the Union Stock Yards, December 5th and 6th, indicate a splendid display of finished livestock. This, despite the fact that the management have discontinued the offering of premiums for female cattle in the hope that animals suitable for breeding purposes will be kept on the farm for that purpose. It will be well worth anyone's time to take in this show and also to be present at the Auction Sale of Prize Winners which is attended by buyers from all over America.