

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.

By Agronomist.

Amount of Bordeaux Needed for an Acre.

The amount of Bordeaux needed per acre varies with the size of the potato vines to be sprayed and the method of applying. Fifty gallons will cover an acre of small plants. Very large plants may need 100 gallons. Seventy-five gallons per acre on an average for each spraying will be ample. The number of sprayings will be varied according to the weather. Three may be enough during a season of light rainfall but five is a common number used when conditions favor blight development.

Some things to keep in mind when making Bordeaux and applying it to potatoes.

1. That Bordeaux is a preventive and not a cure. To be effective it must, therefore, be applied before the disease gets a start.

2. That the quantity of lime should always be equal to the quantity of copper sulphate. An excess of lime will do no harm as long as it is not used in sufficient quantity to clog the nozzles.

3. Use only wooden or earthen vessels in which to handle the copper sulphate. This material corrodes tin or iron.

4. Have both the copper sulphate and the lime diluted before they are combined. If they are put together when too strong, they will not stay in suspension.

5. Strain everything which goes into the spray barrel through a copper gauze sieve with forty meshes to the inch, or two or three thicknesses of cheesecloth.

6. Do not use Bordeaux which has stood over night after being prepared. Do not use air-slaked lime when making Bordeaux.

7. Keep the foliage as completely covered as possible after the plants are five or six inches tall until frost or the maturity of the crop.

8. To be most effective Bordeaux should be applied with a pressure of 160 to 200 pounds. This should not, however, discourage growers from using any form of sprayer which may be available.

9. Remember that Bordeaux is used to prevent blight and other foliage troubles. It will not overcome

the effect of poor seed, poor soil conditions or poor cultural practices.

R. F.—Our maple shade trees are being cut back every year because of electric wires running along our roads. Will this injure the trees?

Answer—The only danger that would occur to the shade trees would be by pruning off large limbs and leaving wounds that would "bleed" severely. If any large limbs have to be pruned off, I would advise painting the scar immediately so as to prevent the loss of sap as far as possible.

B. G. H.—I wish to discover the proper fertilizer to use on my farm. Is it necessary to have a chemical analysis made of the soil?

Answer—The chemical analysis of the soil tells the total amount of plantfood:—nitrogen, phosphoric acid and potash in the soil,—but does not distinguish between the available and unavailable supply of these materials in the soil. A chemical analysis is therefore only indicative and is not a sure basis on which to advise fertilizing practices. To a farmer that understands chemistry, of course, it would be of value, but to the average man, untrained in this science, a "chemical analysis" would not be of particular assistance. Probably the best way the practical farmer can get at information as to what fertilizer will pay best on his soil is by choosing a plantfood suited to make up for the characteristic weaknesses of the soil and to meet the needs of the crop which is being fertilized. For instance, clay soils are fairly well supplied in all three important plantfoods. After they have been farmed for sometime the nitrogen and phosphoric acid become deficient. If you are attempting to grow a good crop of grass on this land you will need to add fertilizer high in nitrogen. If it is grain you are fertilizing a medium amount of nitrogen and relatively high amount of phosphoric acid with a little potash would pay best. If these crops are to be grown on sandy soil you must keep in mind that sandy soil is poor in all three of the plantfood constituents. Hence, a larger quantity of all three ingredients will have to be used to give satisfactory results.

The Sunday School

INTERNATIONAL LESSON
AUGUST 11.

Lesson VI. Christian Helpfulness.—
Luke 10. 25-37; Gal. 6. 1-10.
Golden Text, Gal. 6. 2.—
Luke 10. 30-37

Verse 30. A certain man—The implication is that he was a Jew. From Jerusalem to Jericho—One of the routes eastward from Jerusalem to the Jordan, winding down a steep descent of four thousand feet in eighteen miles through a wild region of beetling cliffs and chalky canyons. Fell among robbers—Jesus is calling attention to a well-known experience of the traveler of that day on this lonely road. The same thing has occurred in recent years in this region, inhabited by Arab tribes, to obtain protection from whom a good fee must be paid for the privilege of passing unharmed through their territory. They do not to-day beat travelers but content themselves with stripping and robbing him.

31. A certain priest was going down that way—The force of priests ministering at the temple services was several thousand, many of whom resided in Jericho. This man was returning home. Right in his road was the wounded traveler, just as in our ordinary comings and goings appear unfortunate claimants upon our sympathy and help. We need not go out of our

way to reach them. They lie before us. He passed by on the other side of the road. A wounded man, all covered with grime and blood, arousing in the dainty priest, a faint but unmistakable feeling of pity and disgust. He passes by, as many another passes by the opportunity of loving service to a suffering brother. The priest does not even come over to look at him.

32. In like manner a Levite—A servant of the official religion, who with cold curiosity, looks upon him and continues his journey with no manifestation of interest. The priest and the Levite considered that they had done their part in the day's religious life in attending to their round of official temple duties, and were now going home. But outside of prescribed duties lie the countless providential opportunities for brotherly service.

33, 34. A certain Samaritan—Roundly hated by the Jew as the devotee of a mongrel religion; a heretic and whose testimony would not be accepted in a Jewish court. Came where he was . . . saw him . . . with compassion . . . came to him . . . bound up his wounds . . . set him on his own beast . . . brought him to an inn—Left undone nothing that compassion and brotherly kindness could do. We may well fill out the picture in any way we please, remembering that the Samaritan went the whole length of sympathy, self-denial, helpfulness, generosity, and persistent kindness.

36. Which now of these three, thinkest thou, proved neighbor?—The inference is inevitable. The lawyer finds himself compelled to give an answer, and only one answer can be given. He that showed mercy on him—The answer is virtually forced

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 diagnoses. Address Dr. Andrew F. Currier, care of Wilson Publishing Co., 73 Adelaide St. West, Toronto.

TEETHING.

Mrs. J. M. C.—Will you please write an article on infant teething?

It is an old story that teething has been held responsible for multitudes of ills in babies and young children, if no more definite cause could be found.

It is only a round-about way, at least in many cases, of saying, "I don't know what ails the child." Teething is a most important process, but is seldom so serious a matter and so likely to produce disease as many of us have been brought up to believe.

There is no fixed rule for the appearance of the teeth, the lower ones usually come before the upper, the first set between the seventh and twenty-fourth months, the second between the sixth and twenty-first years.

Six front teeth in either jaw seize the food and cut it to four laterals; it is transferred by the tongue and teeth for partial cutting and grinding, while the finishing grinding and crushing are done by six back teeth.

A full set of second teeth, thus, numbers thirty-two. Teeth have an important relation to one's looks; they aid articulation and they help greatly in determining hard and soft, heat and cold in food.

There are practically no third teeth, and in some cases there are none at any period, just as there are cases without hair.

There may be teeth at birth or their eruption may be deferred indefinitely, especially if a child has rickets, syphilis or tuberculosis. Delayed first teeth often have a bearing on the appearance and condition of the second.

Wisdom teeth are frequently diseased, deformed and of little use. Extra teeth are possible but are usually imperfect and defective.

Teeth may be irregular in various ways from disease or mechanical conditions.

Pain is an ever possible symptom, before, during, or after the eruption of the teeth.

It is due to their sensitive struc-

ture and nerve supply, to disease, decay and poor nutrition, local or general.

Such pain may be accompanied with neuralgia of the head and face, contraction of the muscles which close the jaw and, in infectious cases, with abscess.

In infancy, there are certain conditions not present in subsequent life which have always tended to magnify the importance of the teething process.

An infant's nervous system is excessively sensitive and easily thrown out of equilibrium, with the production of convulsions, by causes which would not disturb an older child; he vomits his food at the slightest provocation; his body temperature would be fatal in an adult; he reacts to sensations of pain with persistent crying or screaming.

There is no doubt that many infants suffer pain when the teeth are trying to break through; hot, red and swollen gums indicate this, also the rubbing of the mouth and gums with the fists, the desire to bite hard substances, abundant flow of saliva, restlessness, flushed cheeks, skin eruptions, diarrhoea, and many other evidences of disturbance.

Neither is there any doubt in these cases that there is irritation of the nervous system; but many of the symptoms may be removed by rational procedure, such as the use of proper cases, a dose of castor oil, applications of cold, change in the food, etc., but seldom if ever by pulling out the teeth; the teething process has to go on.

In regard to the diseases which teething was supposed to produce, most, if not all of them are germ diseases, with their particular and specific cause; and, while teething may act as an irritant, increase the child's susceptibility and diminish his resisting power, it does not, in the opinion of the best modern observers, cause these diseases.

It is inconclusive, when meningitis and teething are present, to reason that the former was produced by the latter.

MOTHER WISDOM

This Scourge Which Sweeps Away Its Victims as by Fire Must Be Understood to Be Conquered.

By Helen Johnson Keyes

Do you realize that tuberculosis is usually contracted during early childhood and that when the disease appears in older persons, it is usually a second or third stage of that childhood infection?

Every year there die in Canada from this disease about 12,000 people. In this country alone 40,000 people are constantly ill with it and there are now about 16,000 children attending our public schools who will be victims of it before middle life unless more is done to prevent it than ever has been done in the past. Yet at least 8,000 of these children could be saved by the means which we already know and could put into practice if parents, teachers and communities would make use of them.

You wonder, perhaps, that I do not put this responsibility squarely to the doctors but no drug has ever been discovered which will cure tuberculosis and most of the cases which arrive in the doctor's hands are already passed almost beyond cure. Health officers, school doctors and nurses may do, indeed, are doing much to prevent the spread of the disease by discovering it in its early stages and pointing out to mothers and fathers the ways to cut it off at that point. The work of the doctors and nurses is to discover it; the work of curing it must be done by the home.

Infection usually occurs during the first three years of an infant's life by contact in the home with a grown-up who is suffering from the disease.

Family ties and affections being what they are, it is impossible to prevent these first infections, for that could be done only by removing all victims of the disease from their homes and friends and setting them apart in hospitals. As long as our sentiment does not permit this, our only course is to fight off the disease after it is already present in its first form so as to prevent its running into the second stage; or, if the second stage occurs, to do our utmost to forestall the third.

These first infections, which occur in infants and children, are not contagious. They travel four different roads, according to the general health and resisting power of the patient, his way of living and his surroundings.

The first type recovers without showing any symptoms of the disease. Only a test made by a physician could prove that the germ had ever been present.

The second type passes quickly on to death.

The third fights hard and finally recovers.

The fourth appears to have recovered then suddenly develops the symptoms again and they prove fatal to the child.

It is rather a strange fact that there are about equal numbers of these different kinds of cases in the city and in the country. The reason is that the city has overcome its natural disadvantages by means of health laws, housing laws, milk pasteurization, sanitary public baths, drinking fountains, school inspection, playgrounds and other wise precautions.

The country, possessing all the advantages of pure air, fresh food and limitless space for play, has neglected them. It has often shut its sunlight out of houses and schools, has

been dirty in its care and marketing of milk, careless in its choice and preparation of food. It has not educated its communities to an appreciation of the dangers of contagion through common drinking cups, towels and so forth; and it has not appreciated the health value of free play. City conditions were naturally so bad they had to be improved; country conditions were naturally so good they have not been safeguarded.

Steady loss of weight, accompanied by fatigue, nervousness and a pale, run-down appearance, may be the first symptoms of tuberculosis although they may be accounted for by several other conditions. Because an early recognition of the disease is of the utmost importance for the sake of its cure, it is best to take these cases at once to a responsible doctor for a thorough examination.

Tuberculosis is not confined to the lungs. It appears also as hunchback, hip disease and what is known as white swelling. In these cases the infection attacks the lymph glands or bones, instead of the lungs. Between the ages of two and nine years children are very sensitive to this form of infection and twenty per cent. of those who are thus infected die from it within a few years. Enlarged tonsils and adenoids and decayed teeth are often breeding grounds for the germs which produce such fatal results and for this reason, as well as for many others, ought never to relieve the patient.

The cure for all forms of tuberculosis lies in:

- 1.—Large quantities of wholesome food, particularly milk and eggs.
- 2.—Long hours of sleep in fresh air.
- 3.—Free play in fresh air, without hard exercise or fatigue.
- 4.—Clean bodies, sound teeth, clear breathing passages.

As we have said, children in the first stage of tuberculosis do not convey contagion; therefore, the elementary school does not spread the infection except through its teachers. About three per cent. of all public school-teachers are suffering from the malady so that many, many children are endangered by them. Of course, such teachers should be retired at once on pensions. High schools and colleges are greater sources of infection as their pupils may have passed into the contagious stages.

The preventives are well-cleaned, sun-bathed rooms, individual washing and drinking utensils, fresh air through all parts of the buildings, with fewer desk studies and more agriculture and manual work done out-of-doors. Sports and athletics without too much competition and strain, are excellent.

Every community ought to exist in the army which must fight to destroy tuberculosis. Write, asking for information, to your Provincial Board of Health and to your Provincial Board of Education. From these sources you will receive help in organizing your community for a war against the destructive army of the "great white plague." Every woman should enlist!

We are not merely to wait until the occasion occurs; we are to seek occasion to do good.

The White Plague.

Too strong emphasis cannot be placed on the statement made by Mrs. Keyes in her authoritative article on this page, namely, that on the home and the home alone rests the greatest burden of responsibility for the cure of tuberculosis. Doctors and nurses can diagnose and advise but, as Mrs. Keyes rightly says "no drug has ever been discovered which will cure tuberculosis."

It is a fact, unpleasant to face but one that must be brought home to all mothers if our children are to be saved, that thousands of cases of tuberculosis have ended fatally because parents either paid too little attention to colds and coughs, loss of weight, nervousness, paleness and debility, or else mistakenly tried to relieve them by giving the children advertised cough remedies and so-called "tonics."

As the cure of the individual victim of this plague rests with home treatment so the health of the community rests with the community itself. To find out why the disease is present and then vigorously to remove the cause or change wrong conditions of living—this is our holy duty.

Don't try to keep house without a small can of kerosene. It helps in a dozen ways: clean bathtubs, basins, window glass, etc., and is excellent to put on furniture dusters. A little kerosene added to the water with which linoleum is washed helps to preserve the floor covering, besides giving it a polish. Boxes, chests, bureau drawers, well dusted with it are immune to moths. A square of cheesecloth dampened with kerosene makes a good dustless duster. Place it in a covered tin box for twenty-four hours. By that time the oil will be evenly distributed.

Poultry

On many farms poultry accounts have been entirely neglected even when other accounts have been carefully recorded. The result has been that the farmer has never known what his hens were doing. In some cases the flock has been a paying proposition and the hens have received no credit for the work. The raising of poultry has not been increased because the amount of money the hens have added to the farm income has not been known. In other cases the flock has been consistently a losing proposition when the farmer has considered it as profitable. This has

been due to estimating the amount of food used and the return for the eggs. The estimates have been very inaccurate on some farms and the poultry business will be in line for reorganization.

The time and effort required to keep poultry accounts is very small. When once the habit of entering up sales and feed bills has been formed it becomes almost an instinct to place the hand on the record book at the first opportunity after a transaction has been completed. Personally, I feel uncomfortable after a deal until I have had a chance to unload my mind and transfer my rough notes to the columns of the poultry account book. A complicated system of book-keeping is not necessary to determine the profits and losses in the poultry business. The principal point is to record all sales or bills promptly and then at the end of each month it is possible to quickly strike a balance and know how the business stands. Of course, it is not possible to know exactly how a poultry business stands each month because of the growing stock which is being fed. Its value is not definitely known. However, if the receipts and expenditures are carefully recorded, it will be possible to tell the profits in the poultry business at the end of the year and also make a report on the income that will be accurate and satisfactory.

Nesbitt, Thomson & Company
Investment Bankers, Limited
Mercantile Trust Bldg. Hamilton
222 St. James Street Montreal

WOOL

Farmers who ship their wool direct to us get better prices than farmers who sell to the general store.

ASK ANY FARMER! who has sold his wool both ways, and note what he says— or, better still, write us for our prices; they will show you how much you lose by selling to the General Store.

We pay the highest prices of any firm in the country and are the largest wool dealers in Canada. Payment is remitted the same day wool is received. Ship us your wool to-day—you will be more than pleased if you do, and are assured of a square deal from us.

H. V. ANDREWS
13 CHURCH ST., TORONTO

SMOKE TACKETTS
T & B CUT

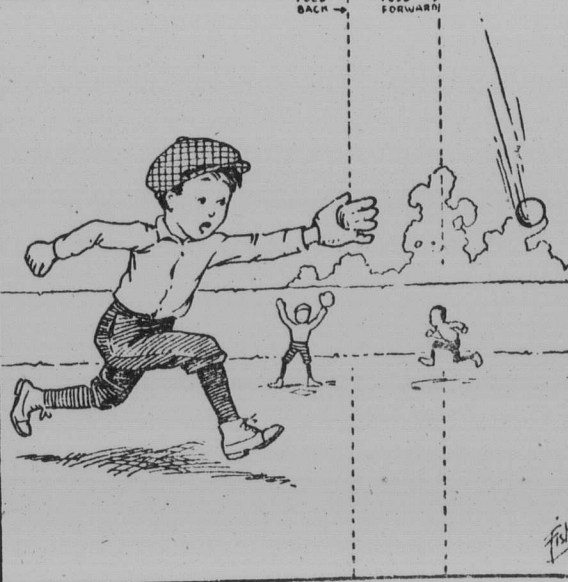
The Dairy

The dairy cow is a most important factor in winning the war. Food, we are told, is as necessary as munitions, and meat is one of the prime articles of food. The beef supply of the near future must come solely from the present stock of cows. Dairymen generally attach not very much value to ordinary calves, but keep cows wholly for milk production, especially those dairymen who sell the whole milk. The stock of calves for the country's beef supply will depend largely, then, on the price of milk. If the beef supply is increased it must be done primarily by milk commanding sufficiently high a price as to encourage its production and the keeping of a larger number of cows, and then by a price for beef that shall insure a profit in raising the calves to beef age. A considerable proportion of the pork, too, comes from pigs raised by dairymen who sell cream or butter and keep the pigs to consume the skim milk. It is admitted, I think, that pigs can be grown more economically in this way than in any other. So that an increase in pork supply is dependent in large measure on the dairy cow.

The ruble, normally worth about 20 cents, is the standard coin of Russia.

FUNNY FOLD-UPS

CUT OUT AND FOLD ON DOTTED LINES



While the money just as fast as his feet will take him. But he'll never catch that bait unless you fold and make him.