

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.

Planting the Garden.

A study of good seed catalogues will enable you to decide many people needed in the course of the season's work, as the information they contain is compiled with a view to being of service to their readers to enable them to decide just which varieties will best suit their purposes.

To insure the best germination there should be three things: the proper degrees of heat, moisture, and contact between the soil and the seeds. It is distressing to the knowing gardener to see people carefully and lightly covering their seeds with a thin film of soil—which perhaps the wind will blow away—and expect good germination.

There are some seeds which are slow of germination, on account of their hard protective covering, such as peas and beans, the coating of which must be soaked, allowing moisture to enter the interior, before germination can take place. We can assist the process by soaking such seeds in warm water over night and plant while still moist.

Some vegetable seeds are so fine that the only feasible way to plant them is to broadcast them. Others are planted this way by custom and thinning out done later.

Aids to Seed Planting

There are a number of aids to seed planting which will be of service to you. A straight-edge is one of them. With this, and a pointed stick, you can mark off the furrows into which to plant fine seeds, drawing the stick lightly along the edge, which will make a tiny furrow. By bearing more on the stick you can in this way make a furrow of any depth up to two inches.

If this straight-edge, which can be made out of a piece of board, eight feet long, four inches wide and half an inch thick, is marked off in equal spaces, say one inch, it will be a guide for quick and even planting, as you can lay it along the furrow and set the seeds at the right distance very rapidly.

To cover these small seeds use the straight-edge, pushing the soil back into the small furrow, lay it on top

and walk on it. It is an advantage to use these devices to make the rows straight, as beauty adds much to the interest in the garden. A crooked row is not beautiful.

If quick germination, especially of small seeds, planted shallow, is desired, the top of the soil must be kept moist. To accomplish this without washing out the seeds requires some care. The average watering pot has a nozzle too coarse for the purpose. But if you have at command a garden hose with a spray nozzle it can be done to perfection. Turn the nozzle down until the water comes in a fine mist. Direct the hose upward so that the mist will rise into the air and fall on the soil containing the fine seeds. Once a day is usually sufficient.

The Required Quantity

Keep in mind, however, that as soon as there are signs of germination be careful not to overwater, or there is danger of a fungus disease known as "damping-off," which attacks the young plants and for which there is no cure. This is more likely to occur when watering is too heavy when the weather has been cloudy for several days in succession.

In order that you may have some idea how many seeds to procure, I give below a list of the vegetables ordinarily grown in kitchen gardens. The quantities are for a family of five, and will plant a row of each 100 feet long:

Beans, snap, one pint; beans, pole, half pint; beans, bush, lima, one pint. Beets, four ounces. Cabbage, early, half ounce; cabbage, late, half ounce. Carrot, one ounce. Cauliflower, one packet. Celery, one packet. Corn, sweet, one pint. Cucumber, half ounce. Eggplant, one packet. Kale, half ounce. Lettuce, one ounce. Parsley, one packet. Parsnip, half ounce. Muskmelon, one ounce. Onion sets, two quarts. Peas, two to four quarts. Salsify, one ounce. Spinach, four ounces. Squash, summer, half ounce; squash, winter, half ounce. Tomatoes, quarter ounce. Turnip, one ounce. Melons, one ounce. Potatoes early, one peck; potatoes, winter, one half bushel or enough to plant desired space.

Poultry

Just because you culled your pullets at the age of five or six months is no reason why a second culling is not necessary. Also, a culling of the yearling hens, to determine which should have a right to hold over for breeders, is equally important. That these statements are good poultry gospel I have proved again and again.

Pullets of the smaller breeds, and even Rocks, Reds, and Wyandottes, if well fed and properly housed and handled, should be laying when six months old, or soon after. Any well-raised pullet that delays laying longer than six and a half to seven months from the shell, seldom will make a profitable egg producer.

The profitable yearling hens to hold over are the ones that commenced laying comparatively young (not too young, before being well-matured), and continued with but few and brief interruptions for ten or eleven months before molting. The productive layer will then have a ragged, tail-worn condition of plumage, toe nails worn to stumps, and shanks bereft of their color. But, in spite of her disreputable appearance, the hen that has laid heavily will still wear a bright, velvety comb and head furnishings, and exhibit plenty of hustle and life even up to time the molt begins. The hens laying steadily eleven and twelve months in their pullet year before molting are treasures, and are worth keeping for breeders as long as they continue vigorous and their eggs prove fertile.

If the weeding out of loafing hens has been neglected, delay no longer. Slacker hens have no business consuming feed at present prices.

The Dairy

An experience in my herd has convinced me that it pays, and pays well, to feed grain to dry cows—even at the present high price of grain, says a successful U. S. farmer.

In November, 1916, I bought an ordinary grade cow from one of my neighbors. She had been fresh for about two months with her fourth calf, and was giving 18 pounds of milk a day. Her owner told me that she had been out on pasture and received no grain while dry, and that she had given three gallons, or about 26 pounds, of milk a day when she was fresh.

As feed was high last winter, I fed

Gunns Shur-Gain Fertilizer

grain rather sparingly; but when she went dry in June she received a small amount of grain along with the other cows—to keep her quiet, more than for any other reason. In August she gave us a fine heifer calf, and began milking 33 pounds daily. Two months after calving—being in the same stage of lactation as when I bought her—she was giving 24 pounds, and was still going strong.

She was dry a little less than two months, and during this time she consumed not over 120 pounds of grain, being fed at the rate of about two pounds daily. At \$52 a ton for the feed, it cost a little over \$30. But during the first two months after calving she gave on the average about 6½ pounds of milk more per day than she had given during her previous lactation. At a net price of \$2.60 per hundred for the milk, the increase in milk was worth a little over \$10 for the two months. Beginning with the first of October, when the net price of milk is about \$3.50 per hundred, the showing will be still better.

This increase in milk was due to the grain fed while the cow was dry, because her former owner and I manage our herds very much alike, even to feeding the same brand of dairy feed.

Sheep Notes

Ewes which are in poor condition must be sorted out and given a little extra feed and care. When the flock has not been properly cared for during the winter, the lambs are often too weak to stand, and unless given immediate care will become chilled and die.

Pens four feet square should be provided for the ewes at lambing time. These protect the young lambs from the rest of the flock and keep them from becoming separated from their mothers. If the attendant sees that the young lamb gets up and nurses by the time it is fifteen or twenty minutes old there will be little need of giving it further attention.

Twins or triplets are not uncommon, and the ewe sometimes refuses to own the weakest one. In case of twins, if the stronger lamb is removed for an hour or two the ewe will turn her attention to the other lamb, and when the stronger one is put back she will own them both.

Binder Twine Available.

An ample supply of binder twine for Canadian requirements next year at reasonable prices has been secured, as the result of an agreement reached between the United States Food Administration and the Mexican sisal growers of Yucatan.

The Sunday School

INTERNATIONAL LESSON
FEBRUARY 10.

Lesson VI.—Jesus Chooses The Twelve—Mark 3. 7-35. Golden Text, Mark 3. 14.

Verses 7, 8. Withdraw—No doubt to some more secluded part of the lake. A great multitude—From a wide area, north, south, especially from Galilee, where he had done such mighty works; from Judea and Jerusalem, whose priestly leaders saw in him a dangerous innovator; from far southern Idumea, the old Edom; and from the Phoenician territory of Tyre and Sidon.

9. A little boat should wait on him—Be in constant attendance so that he might step into it any moment to avoid the crush of the crowd. Lest they should throng him—Literally, fall upon him. Expressing the turbulent eagerness and excited pushing of the great mass of people.

11. Unclean spirits—That is, men possessed by them. Thou art the Son of God—Here indicating his messianic more definitely than "The Holy One of God" in Mark 1. 24.

12. Charged them much—It would hardly help his cause to have such heralds, and then, it would be inopportune.

13. Into the mountain—Not far from the lake. Luke tells us he went there to pray and remained all night in prayer. Called unto him whom he himself would—An event of supreme importance in the ministry of Jesus. It is recorded by all three of the evangelists, though it is not presented by each one in the same connection. Crowds were about him, but he needed a select company of sympathetic followers, to be constantly with him, as

companions, and to whom he might impart the full significance of his work and whom he might send forth to proclaim the good news and to heal the sick.

14. He appointed twelve—The number corresponding, in all probability, to the twelve tribes of Israel. They had been his followers, now they were to become his intimate associates and helpers. To preach—Their first duty was to herald the good news of the kingdom.

15. Authority to cast out demons—This is Mark's significant miracle. Matthew adds "to heal."

16. Simon he surnamed Peter—There are given four lists of the apostles in the New Testament (Matt. 10; Mark 3; Luke 6; and Acts 1). Each list begins with Peter and ends with Judas. Peter (Hebrew, Cephas) means "rock." It is the new name for Simon. He was anything but rock-like in his early career.

17. Boanerges—Literally, "sons of uproar," indicating their fiery, vehement temperament. It was these same fiery men, James and John, who wanted to call down fire upon the Samaritan village because of its discourtesy to the Master (Luke 9. 34).

18. Andrew and Philip—Both Greek names. These came from Bethsaida and are mentioned by John (12. 20). We hear no more of Philip in the first three Gospels. Bartholomew—"Son of Tolmai." He is considered to be the "Nathanael" twice mentioned by John (Chapter 1). His full name would be Nathanael Bartholomew, Nathanael the son of Tomai. Thomas—especially prominent in John (11. 16; 14. 5; 20. 24; and 21. 2). James the son of Alphaeus—To distinguish him from James the son of Zebedee, sometimes called James the Less.

Thaddeus—the same as Lebbeus and Judas. The Canaanite—The zealot (Luke 6, 15), member of a fanatical patriotic party distinguished for its hatred to foreign domination.

19. Iscariot—The man of Kerioth, a village in Judea. The name of Judas almost always is accompanied with the terrible clause—"who also betrayed him."

BOYS AND THE CHURCH

By Beatrice Brace.

"Why is it almost impossible to keep our really worth-while boys, after they reach the age of fourteen and upward, interested in church and Sunday school?" is the query of an anxious mother.

As a lover of boys, as well as the mother of boys, I want to tell you how I think we might do so. Of course, every boy is worth while, no matter who he is or what he is; but what the anxious mother meant was red-blooded, healthy, bright, and life-abounding boys.

All too often this class of boys are not found interested in the church, and their love of life, and excitement, and adventure often leads them into wrong paths. They could do so much for the church, and the church so very much for them, if only we would meet them on their own plane.

I think all who understand boys from fourteen to eighteen years of age, know their shrinking from any show of sentimentality. All their tender thoughts and feelings are hidden under an assumed brusqueness of manner, and they are so afraid of being "sissified."

On the other hand, they have a good deal of penetration, and the majority of them are doing considerable thinking on their own responsibility these days. They can't see any harm in going into an orderly, well-regulated poolroom and knocking a few little balls about on a table. It does not harm them so far as they can see, nor anyone else. They meet many boys there from the best families in town. There are seats and places to lounge—everyone is at ease and sociable and jolly. Where is the harm? they reason to themselves, and to their mother and father.

But the church says, "It is wicked and they are bad boys." If their love of motion and music and life leads them to want to dance, the church doesn't approve. If a few get together on Sunday afternoon

and send up a few shouts of joyous, exuberant laughter, the neighbors are shocked. If they smoke a cigarette they are on the way to the gallows.

Now, why can't the church gather these boys together and lay aside some of its staidness, and sobriety, and sanctimoniousness, and teach the Bible as simple ancient history, with Jesus a simple pattern for all mankind to follow? They would be interested almost immediately, for nearly every boy likes history. Boys are not naturally devout, and they dislike things taught in a devout manner. To them it seems affectation, and what man's man can endure affectation? And the boy is only the younger man.

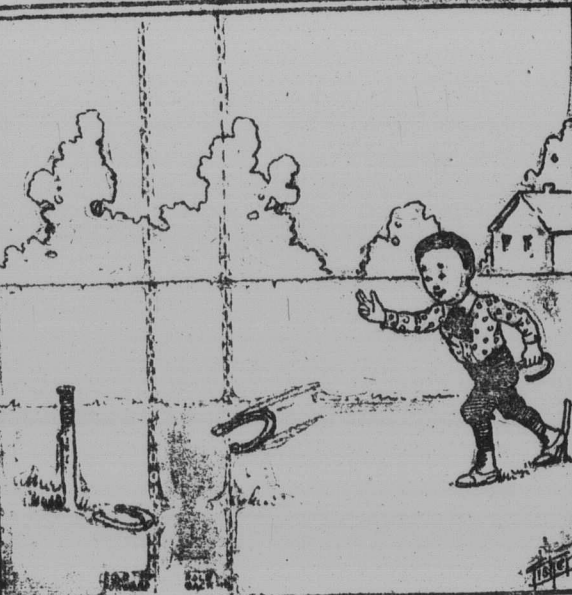
Again, teach the Bible from the standpoint of its literary composition. For classic simplicity, dramatic element, dignity of style, power and forcefulness of expression, brevity and terseness, it stands preeminent.

Taught from this standpoint, boys who are already studying English literature in school, and making a study of many of the classics, will find the Bible fascinating. Teach right for right's sake. Teach them that they may reap what they sow in the hereafter, but they must certainly will reap just what they sow in this life. Teach them the power of right thinking. Teach them the value of a moral life to them now. Healthy, normal boys are not thinking of dying; they are thinking of living—living abundantly; if they have a religion they want it to be a religion to live by. And, after all, don't you think a religion to live by would be a good one to die by?

Teach not how to die, but how to live. Let us gather our boys into the church and guide them into ways that will lead to their highest good, and do it by getting their point of view. Then I think we will have our "big boys" in the church—and we want them there.

FUNNY FOLD-UPS

CUT OUT AND FOLD ON DOTTED LINES



Now Brother Paul is fond of ball, While sister, she's a singer; My specialty is pitching shoes, Just watch me make this ringer.

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

How to Avoid Pneumonia.

Pneumonia is a winter disease identical with lung fever, a disease to which the mature and the aged are very susceptible. It is especially prevalent at the present time in conjunction with war, pestilence and famine, and because of strains of all kinds, which have made people unusually susceptible to it, its toll of victims is unusually high.

The young are suffering from it in great numbers this winter, and because of high prices and poor nutrition they have not the power to resist it they have in normal times. Those who are enfeebled by disease or dissipation particularly alcoholics, are its easy victims.

Pneumonia is a germ disease due to one or perhaps several varieties of bacteria. When doctors speak of a mixed infection they mean that several kinds of germs are found in the material which is coughed up by the patient.

This disease usually begins with a hard chill, high fever, severe headache and soreness and aching of the entire body. The air cells of the lungs become filled with mucus and other material and therefore are impervious to air. When both lungs are filled up in this way the patient is bound to die for want of air as surely as if a rope were tied around his neck. When only one lung or a portion of it is obstructed there is hope for him, but he will be compelled to breathe much faster than usual in order to get the requisite volume of oxygen into his blood.

He coughs and expectorates the substance in his air cells to get more breathing space but if it accumulates faster than he can get rid of it he will lose the game. His blood is carrying poisons which it cannot get rid of while its supply of the vital oxygen is diminished; the candle is being burned at both ends. The

chances of the patient's recovery naturally diminish with the diminution of his resisting power. It is better to ward off such a deadly disease altogether than to try and cure it.

Sometimes it will attack a person when there is a sudden drop in the temperature no matter how carefully he has been living.

Sometimes it follows sudden cooling of the body when one goes out of a warm room without adequate protection. Or it may follow fatigue and exhaustion, as it often does when a doctor has been out all night with a trying obstetric case. Deep breathing is important in preventing it; because the aged are shallow breathers they often die of pneumonia.

The whole body, but especially the feet, must be kept dry and warm. Constipation and indigestion must be controlled, habits in eating and drinking must be simple, and, above all things, one must get plenty of sleep and not worry. Simple as these statements may seem, it will pay to heed them.

Questions and Answers.

M. E. 1. What is the difference between chronic arthritis and rheumatoid arthritis?

2. Would a sufferer of disease be injured by a house which has sewer gas in it?

3. To whom should one go to find out whether sewer gas really is present in the cellar?

Answer: 1. Chronic arthritis is any form of inflammation of the joint. Rheumatoid arthritis is chronic joint disease with wasting and deformity and loss of power.

2. Anybody would be likely to suffer from such a condition, sewer gas being one of the most pervasive of gases.

3. To your local health officer. He would make the proper tests to determine its presence or absence.

The Lost Thimble

Prue withdrew her head from under the sofa, brushed a bit of lint from her eyelashes, sneezed, scrambled to her knees and glanced at the clock. Twenty minutes! She came to, her feet and rapped firmly on the table with her thimble forefinger. The others, some tiptoeing, some crawling, some pawing over the piles of completed work, some shaking out their skirts for the dozenth time, turned expectant faces.

"Oh, have you found it?" cried Louise Bemis.

"No, I'm sorry to say! But, girls, this won't do; we're losing too much time. Remember, this is a special meeting called expressly because we were notified that this month's assignment must be ready earlier than we expected, if it is to go by the first ship. That means using every minute, and we shall only make good by the skin of our teeth at that. Now, Adele's gold thimble is here, in this room, safe if it's where it can't be stepped on—"

"It isn't on the floor. I've crawled over every inch!" interrupted Louise.

"Well, then, I propose we stop hunting and go back to work. I'll hunt again, alone, after our job is finished and you're all gone, and simply keep on till I find it. Of course, you're all eager to help Adele, but I'm sure she'll understand if I don't let you—won't you, Adele?"

"Oh, of course," assented Adele stiffly. "I'm sorry to have made trouble—very sorry. It was a present, and set with a turquoise band and my initial in diamonds, or I'd never have mentioned it; but, of course, it's of no consequence."

Prue's heart sank. Adele was plainly resentful. Nevertheless, she set her committee to work once more, and the last comfort pillow was triumphantly completed before the meeting broke up. She invited Adele to remain; but Adele declined, and departed abruptly to keep an engagement.

"Prue, you were fine, and you did exactly right!" declared Louise, her "chum," who had lingered. "Adele's a pig of selfishness, anyway, and it doesn't matter what she thinks."

"Oh, yes, it does, I'm afraid—when she was the loser and my guest!" sighed Prue. "But the work came first; and then, we were all flustered and hindering one another and wasting precious minutes, and all of a sudden I remembered one of Aunt Prudence's maxims—it's the first time I ever did remember a maxim at the right time, and I acted on it. But, all the same, I'm frightened! Suppose we shouldn't find the thimble? It must have been valuable."

"I suppose so—it was fairly lumpy with ornament; I don't see how she could sew with the clumsy thing," said Louise, withdrawing her hand from exploring behind a shelf of books and daintily flipping the dust from her fingers with her handkerchief.

As she pulled the handkerchief from her apron pocket, the lost thimble came with it, and rolled clinking and glittering on the floor. The

girls uttered a simultaneous cry of delight.

"It must have dropped off into my lap when Adele leaned over to watch how I turned that fussy corner of my bag," said Louise; "and then it slipped down into my pocket. We might have hunted the whole afternoon and never have found it. Lucky you stopped us. Prue, what was that maxim you were talking about? How did it happen to fit the circumstances?"

"When I was a heedless youngster, visiting my Quaker name-aunt Prudence, I was forever losing my toys, and then upsetting everything and everyone hunting for them immediately, insistently and frantically, looking half a dozen times in the same place—you know how an impatient child does hunt,—and Aunt Prudence used to sit back, exasperatingly calm, and give me good advice.

"Child, child, if thee has lost one article remember thee does not improve matters by losing three others, which are generally more important: thy head, thy temper and time."

"Good for Aunt Prudence!" said Louise, with a laugh. "Likewise, good for Niece Prue! Let us telephone Adele we've found her thimble."

A Real Youngster's Day.

A good breakfast to start him off—milk, cornmeal mush, apple sauce. It makes him fit for school and fit for play.

Milk and plenty of it makes him grow—a quart each day if you can. Put it on his cereal and in his cup. Make it into soups, puddings or custards for him.

While milk is best, of course, but skum milk is good if there is a little butter in his meals. Cottage cheese is good, too.

No coffee or tea—not even a taste. Leave them for the grown-ups. Milk, cocoa, not too strong, and fruit juices are the drinks for children, and plenty of water always.

Fruit they enjoy, and they need it, too—baked apples, apple sauce, thoroughly ripe bananas, prunes, oranges, etc. Give them vegetables, fresh or canned. Plenty of fruits and vegetables tend to prevent constipation. Use proper food and do not depend upon laxatives. The youngster can't be well unless the bowels move regularly. Don't let him hurry off in the morning without attending to this duty.

Other foods a child needs: Whole-wheat bread, not too fresh, corn bread, well-cooked oatmeal, cornmeal, rice. They help make strong boys and girls. Some fats, butter or margarine or meat fats on his bread or in gravies. An egg, perhaps, particularly if he doesn't get his full quart of milk, or he can have a little meat or fish, but he does not need much.

Sweets are good for them—the right ones at the right time. Dates, raisins, stewed fruits, simple puddings, sugar cookies, are better than candy. Give them let them have bread and butter, a cracker or fruit. They won't spoil the appetite, and candy will.

"Utmost wisdom is not in self-denial, but in learning to find extreme pleasure in little things."—Ruskin.