

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.

H. J. S.—I had a field of beans last year, would it be all right to put in beans this year again? Is fertilizer any good for growing beans? 2. What percentage should fertilizer have for growing tobacco? 3. Is there any way of finding out if the winter wheat has been killed before spring comes? Would it be advisable to sow spring wheat?

Answer:—1. The largest bean growers of the East, are large users of fertilizers. The bean crop is a rapid growing crop and thrives where there is a ready supply of available plant food. Investigation of their methods show that many successful growers use from 200 to 600 pounds of fertilizer per acre, carrying 1 to 2 per cent. ammonia, 8 to 12 per cent. available phosphoric acid and 2 per cent. or over potash. In applying this fertilizer, on account of the tenderness of the crop, do not apply the fertilizer too near to the row. Many successful growers apply the fertilizer through the fertilizer attachment of the grain drill 7 to 14 days before planting the beans, and never at planting time. If you do not have a drill, any broadcast distributor may be used, provided that you thoroughly harrow and disk the land after the fertilizer is spread. When the fertilizer is applied with the grain drill at planting time, it should be allowed to run in the hoe on either side of the one dropping beans, and not in the hoe dropping the seed. 2. A good tobacco fertilizer for medium loam soil, carries 3 to 4 per cent. ammonia, 4 to 8 per cent. available phosphoric acid and 3 per cent. or more potash. 3. There is no way of finding out whether wheat has been killed or not, until there has been sufficient growing weather to allow for the germination of the crop. Do not be in too great a hurry to plow up your winter wheat field. In view of the shortage of food cereals, it is my opinion that Ontario farmers would do well to put in a conservative acreage of spring wheat.

F. C.—I have 8 acres of wheat that was sown in good time but didn't get a very big top. Would it be advisable to top-dress with manure on the snow? Now, I am going to seed this field in the spring, and I thought of getting some kind of fertilizer, then

seed with the disk drill, running the disks light, and sowing the fertilizer at the same time. If you think this would be all right, would you advise sowing the same way this wheat is sowed or go crossways?

Answer:—I believe you would do well to top-dress your spring wheat with manure or fertilizer. Indications from experimental tests are that you will get biggest return by applying the manure at the rate of about 5 tons to the acre. If you have a manure spreader, you will be able to distribute the manure evenly over the wheat. In view of the fact that you are going to seed this field to grass and clover, I would advise you to top-dress it with a fertilizer carrying 3 to 4 per cent. ammonia and 8 to 10 per cent. available phosphoric acid. The method you have in mind of applying the fertilizer is all right. I would by all means advise sowing the same way that the wheat was drilled.

C. F. H.—Please advise me if the culture of inoculating alfalfa sold in bottles is a success? What kind of alfalfa seed should I sow, Grimm or common alfalfa? I have a fairly good ground, sandy in character. Is it all right to sow with oats in the spring?

Answer:—Well prepared inoculated cultures for alfalfa, sold in bottles, have proven very successful. I believe the Bacteriological Department of Ontario Agricultural College is putting out such cultures. Best results are obtained by sowing Grimm seed. Common alfalfa seed does not tend to be as strong in germinating quality. The oat crop, I am afraid, will provide a little too much shade for a good catch of alfalfa. I would rather recommend about a bushel and a peck of barley seed per acre instead of oats. I know a successful alfalfa grower in Wisconsin who never attempts to get a good catch of alfalfa without applying 250 pounds of fertilizer per acre. This available plant food gives the young crop a strong, vigorous start. The fertilizer for this purpose should analyze 2 to 3 per cent. ammonia, 8 to 10 per cent. available phosphoric acid, and possibly 1 per cent. potash. It can be applied with the fertilizer dropper of the grain drill at the time the alfalfa is sown, or broadcasted like lime and then harrowed into the soil just before the seed is sown.

Canker is best treated by the trained and experienced veterinarian, but there is no specific remedy. Before succeeding with a bad case it usually is necessary to alternate remedies and try a great number. The first step in all cases should be to cut down the sprouting growth level with the walls of the foot; then it is usual to cauterize the sole with a red hot iron or with some strong caustic. We usually employ terechloride of antimony, or full strength formaldehyde to start with, and if that does not suffice change to chromic acid, or strong caustic, oakum saturated with tincture of iron, or a solution of two ounces of sulphate of copper (blue stone) to the pint of hot water, is bound upon the sole in such a way as to cause firm pressure, for pressure is absolutely necessary. The dressing is changed or renewed every twenty-four hours. Dry dressing powders also are useful, such as a mixture of equal quantities of calomel, subnitrate of bismuth and tannic acid or burnt alum, or a cheaper mixture of slaked lime, alum, sulphur and charcoal. Naphthalin sometimes is added.

The Centre of Hospitality. The centre of hospitality in the home is that point about which the family itself gathers most often. This point is in most homes the fire-place. Hence its location and construction are of vast importance in building a home. The fireplace, if there is only one, should be in the living-room, for there the family and friends can enjoy it most. It should be located in the centre of a wall space, either on one side or at one end of the room. Select the space which will permit the greatest number of people to sit around it. In the construction of the fireplace you must not forget that its chief purpose is for a fire. The more simple the lines of construction, the better taste is displayed, and the more room the open fire receives.

There is a great variety of materials suitable for a fireplace, and your individuality and taste can be well expressed in this important factor of the home. Brick, tile, wood, and many tile substitutes may be used. These offer great possibilities both for good color and design, and lend themselves to any style of architecture.

Sewing Hint. When sewing on hooks and eyes, pin a tape measure where the hooks are to go and sew on hooks an inch apart, then pin the tape measure on opposite sides and sew on the eyes. This is much simpler than measuring for each one separately.

Greater Crop Yields In 1918

If you cannot increase the area of your fields in crop you can increase the yields by means of proper fertilization.

An increase of 8 bushels per acre in wheat yields in Ontario this spring would mean 6 1/2 millions of bushels more food grain. This increase was reported in 1917 by the Ontario Agricultural College as a result of top dressing wheat in the spring with suitable fertilizer.

The Canadian Fertilizer Association announces the establishment of its Soil and Crop Improvement Bureau, under the direction of Henry G. Bell, (a native of Ontario, and graduate of Ontario Agricultural College), formerly Professor of Agronomy at the University of Maine.

The purpose of the Bureau is to collect and disseminate practical information regarding soil tillage, fertility management and crop production.

The Bureau co-operates with all organizations working for the betterment of Canadian Farming.

Write for bulletin, "How to Increase Ontario Crop Yields."

Soil and Crop Improvement Bureau
OF THE
Canadian Fertilizer Association
1111 Temple Building Toronto



INTERNATIONAL LESSON
APRIL 7

Lesson I.—Jesus Sets Men Free
Mark 7. 1-37. Golden Text, John 8. 36.

Verse 24. The borders of Tyre and Sidon—Jesus' purpose in going so far, and into Gentile territory, seems to have been for retirement, which he may infer from the statement "He would have no man know it." The hostility of the Jewish leaders was growing in Galilee, and the multitude was increasing in enthusiasm, so for a time he would get away. These two Phoenician cities figure prominently in biblical history. They were great centres of commerce and culture, but at the time of Christ had lost much of their ancient importance. He could not be hid—the report of his great works had penetrated even to these remote parts.

25. Straightway a woman—At once when it became known that he was in the neighborhood, the seclusion which he sought was broken in upon by a suppliant.

26. A Greek, a Syrophenician—Matthew describes her as a Canaanite woman. She belonged to the Phoenicians of the Roman province of Syria. Though a Phoenician, she spoke Greek. Besought him—Matthew tells us that she adjured him by the title "Son of David" to have mercy on her. Through the Jews in the vicinity she had doubtless become acquainted with their Messianic expectations and with the name "Son of David." Her use of this title would not necessarily mean that she had accepted the Jewish Messianic hope, or that she had a religious faith in Jesus as the Messiah; but that she adopted the title bestowed upon him by his countrymen as a way of approach to him in her need.

27. Let the children first be filled—This is the principle on which his mission was to proceed. The Jew had the first claim, but his was not the only claim. The Greek also was included.

28. The dogs under the table—Dogs are seldom mentioned in Scripture except in terms of contempt but it is usually which infests Oriental cast animal which infests Oriental cities as scavengers. The Jews alluded to the Gentiles as dogs. The dog here alluded to is the little house dog, the family meal. Yea, Lord: even the dogs under the table eat of the children's crumbs—"It is as if she said—I grant, Lord, that the meal is for the family, and that the children must be fed. But are not the dogs also of the house, and is there not also something for them in their turn?" She does not think of contradicting Jesus, but accepts what he says as true, and turns it into an argument in favor of her appeal.

29. For this saying—Matthew men-

tions the greatness of her faith as the reason that Jesus granted her request. He shows how Jesus met her first by silence, then by refusal, and finally by seeming reproach (Matt. 15). Over this apparent rebuff her faith triumphed. She was willing to take the humblest position and take the slightest favor, anything, so that her little daughter might be cured.

30. Found the child laid upon the bed, and the demon gone out—Her faith had its reward. The demon was gone, though the child was not yet recovered from the exhaustion of its possession. It will be noted that it was not the faith of the sufferer but the faith of the mother which here was honored. This is one of three instances of healing at a distance. The nobleman's son (John 4. 46-54) and the centurion's servant (Luke 7. 1-10) are the two others.

31. He went out from the borders of Tyre—Having come out of Galilee for retirement, the performance of this miracle with the inevitable gathering of the populace around him determined Jesus to leave the neighborhood of Tyre for other regions further removed from the border and therefore more likely give him the settled retirement he needed. Through Sidon into the Sea of Galilee—This would lead him northward along the coast through the city of Sidon, then southeastward over spurs of the Lebanon mountains—a difficult journey of several days. We have nothing of the details of this journey nor of any incidents on the way. There must have been some reason for such a detour, which ended not as we would suppose, at his favorite lake home, Capernaum, but which led around to the other side of the lake through the borders of Decapolis.

32. One that was deaf, and had an impediment in his speech—This region was the one from which he had been practically expelled some time before, but now he is received quite differently, and exercises his healing power upon the deaf mute. This is one of the cases in which the sufferer is brought by his friends to Christ. They had sought Jesus to leave their region, now they seek his gracious help.

33. Took him aside—Usually his cures were performed before the people. In this case, for reasons not stated, a less public treatment was necessary. Instead of the cure being immediate he now uses means—the thrusting of his fingers in the ears, the spittle, and touching his tongue. These were no doubt simple, yet visible signs to help the man's faith.

34. Looking up—As when he brake the bread in the feeding of the multitude. Sighed—Or groaned. The word in the Gospel is used in only one place when it is used in the Gospels. An expression of Jesus' deep sympathy. Ephphatha—Like the Aramaic word, treasured as having been used by Jesus.

35. Spake plain—No stammering or stuttering now. Which indicated that he could speak articulately and at once. The cure was complete.

36. The more he charged them, so much the more a great deal they published it.—The command to sil-

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.

Rickets. / X. Y. Z.—Please write an article on Rickets. My baby eleven months old cannot sit up, and seems to have no power in her back. What kind of food is suitable and how long does the disease last?

Perhaps your child is not affected with rickets, but with some other disease. Rickets, or rachitis, is the result of bad nutrition, affects all the tissues of the body, and chiefly leaves its mark on the bones—which it softens and then deforms.

It usually occurs before the third year, but the bone deformities appear later. It is caused by food which is not assimilated, but also by neglect of the skin, bad air, insufficient sleep, etc. The child of the poor have it, but so do those of the rich.

In the great European cities one sees it everywhere. The urine of rachitic children contains phosphates in abundance and the bones, being deficient in lime, bend and break easily. Rachitic children have soft spots in the bones of the skull; and the membranous portions of the skull, where you notice throbbing and pulsation in an infant, and which ought to harden during the first few months of life, remain soft.

All the bones of the skull, instead of being firmly united, are loose and easily moved. The face of a rachitic baby is small, and the head seems disproportionately large.

The liver, spleen and lymphatic glands are enlarged, the muscles soft, and the ligaments weak.

The child's appetite may be good, he may even seem voraciously hungry, but his food doesn't appear to nourish him, he becomes fretful, gets diarrhoea and this alternates with constipation.

He is sensitive, cries when touched, his diarrhoea is offensive, the appearance of his teeth is delayed, and when they break out, they are irregular and of poor quality.

When he begins to walk, the weakness of the bones of the legs becomes apparent and they bend or break easily; the joints are weak and he falls frequently.

ence had been earnestly and repeatedly laid upon them. In their excitement they disregarded it, and the more the charge was urged, the more did it stimulate their zeal to proclaim the work. They filled the neighborhood with the good news.

37. Beyond measure—A very strong word, which is the one occurrence in the New Testament. The impression produced in all cases by our Lord's mighty works was in this case, far greater than ever. He hath done all things well—He has everywhere distributed his works of mercy and has been successful in everything.

This cure stands out for the comparative privacy in which it was performed and for the manifestation of intense feeling on the part of Jesus.

Poultry

Our meat supply is short and more poultry will help solve the problem. More poultry means more eggs and more eggs and poultry meat means a greater food supply. Poultry can be raised at lower cost and brought to maturity quicker than any other kind of live stock.

Never allow the mother hen to range with the young chicks until they are at least two weeks old. Enormous numbers of young chicks are lost each year by allowing them to run in the wet grass during their early life.

Eliminate the male bird at end of hatching season. Many million dollars are lost each year by allowing the rooster to run with the hens during the summer months. Produce the infertile egg. Dispose of the male bird not later than June 1. Market a better quality of eggs.

Green feed is excellent for poultry and can be substituted for a considerable amount of the grain ration. Grow oats, vetch, and rape for summer use; cabbage and mangal beets for winter. Store cabbage and beets in a dry room or bury in a pit and cover with straw and earth.

Save eggs during April and May for winter use by preserving in water-glass. Mix nine quarts of water, boiled and cooled, with one quart of water-glass. Will preserve fifteen dozen eggs.

Place the solution in a five gallon jar. Store in cool place for winter use. Poultry meat can be raised quicker than any other kind of meat and could be made a most important source of supply for the nation. If breeding is started in March the surplus roosters may be dressed for meat in July at fancy prices and egg laying will begin in September.

Lloyd George recently declared that the British have 2,000,000 horses engaged in this war. It is estimated that on the whole Western front the number of horses and mules in service is close upon 5,000,000.

When he tries to move himself with his arms, the arm bones bend or break and there may be an outward hump on the spine. On the ends of the ribs there are knobs or bead-like structures, the breast bone projects and the child becomes pigeon breasted.

The pelvis may become deformed and, in females, this has a very important bearing upon the successful delivery of offspring, if impregnation should ever occur.

Rachitic children are frequently bow-legged, knock-kneed or flat-footed; they are also sensitive to bronchitis and croup, and die from these diseases more frequently than children who have better physical development.

If they reach maturity, they are short and poorly formed and their limbs often reveal the marks of early disease. Rachitic children should be taken to the mountains or sea-shore, if possible, and should have abundance of good plain food which they can assimilate—which will be indicated by the change in their stools and in their general nutrition.

Fats in the form of cod-liver oil, or olive oil, should be given them; also as much of eggs, milk, and cereals as they can dispose of. Treatment with mechanical apparatus is important to prevent deformities, and they should have all possible benefit from public parks, sea-baths, sleep, fresh air, and life in the country when this can be provided.

QUESTIONS AND ANSWERS.

X. 1.—Can water on the brain be cured? The patient in question is a child two years and nine months.

2.—Do you advise an X-ray examination?

Answer—It is sometimes possible to tap the skull and draw off some fluid in this condition—which is known as "Hydrocephalus." But unless skillfully done, this is likely to do harm—and even when skillfully done, it is by no means always successful. The condition is usually a hopeless one.

2.—There would be no harm in having an X-ray examination.

Sheep Notes

Raising Lambs by Hand. When raising lambs by hand the only caution is: Do not feed too much. A baby lamb should receive only a few spoonfuls of fresh cow's milk. When a couple of days old give one-fourth pint, which should gradually increase to one-half pint when the lambs commence to eat grass. When two months old they may have a pint of milk.

So much for quantity; now for feeding times. The first three weeks, feed regularly every three hours during the day; after this feed every four hours. When they begin to eat grass, feed morning, noon and night, and finally drop the noon feeding.

I always use bottle and nipple, to feed with until the lambs learn to drink. Where one has a large number, feeding from a pan is more tedious, as each lamb must be measured, rate pan, and milk must be measured, for some drink faster than others.

Feeding too much will produce scours. Lessen the quantity of milk and give a dose of castor-oil (one teaspoonful) followed by ten drops of ginger extract. In severe cases increase the dose and give browned flour gruel. To live weak, chilled lambs give a little milk, and keep them in a warm room. If lambs look droopy and walk stiffly, give castor-oil.

I have had lambs brought me which were wet and chilled, and appeared dead. I pour a spoonful of milk down their throats and lay them on the furnace register. In a few hours they get up and walk.

I feed the lambs for about three months; skim-milk the last two months.

Try, Try Again!

Young writers will do well to remember that Lord Bacon rewrote one of his works twelve times, and Pascal his letters several times, and one of them thirteen times; while Edmund Burke had his works printed two or three times on a private press before offering them to a publisher.

Mussed pieces of tissue paper are excellent to clean mirrors. First rub the mirror with a damp cloth, then polish with the paper.

In Canadian cities 28 per cent. of the buildings in business districts are of frame or brick veneer, whilst in residential districts the proportion is 69 per cent.

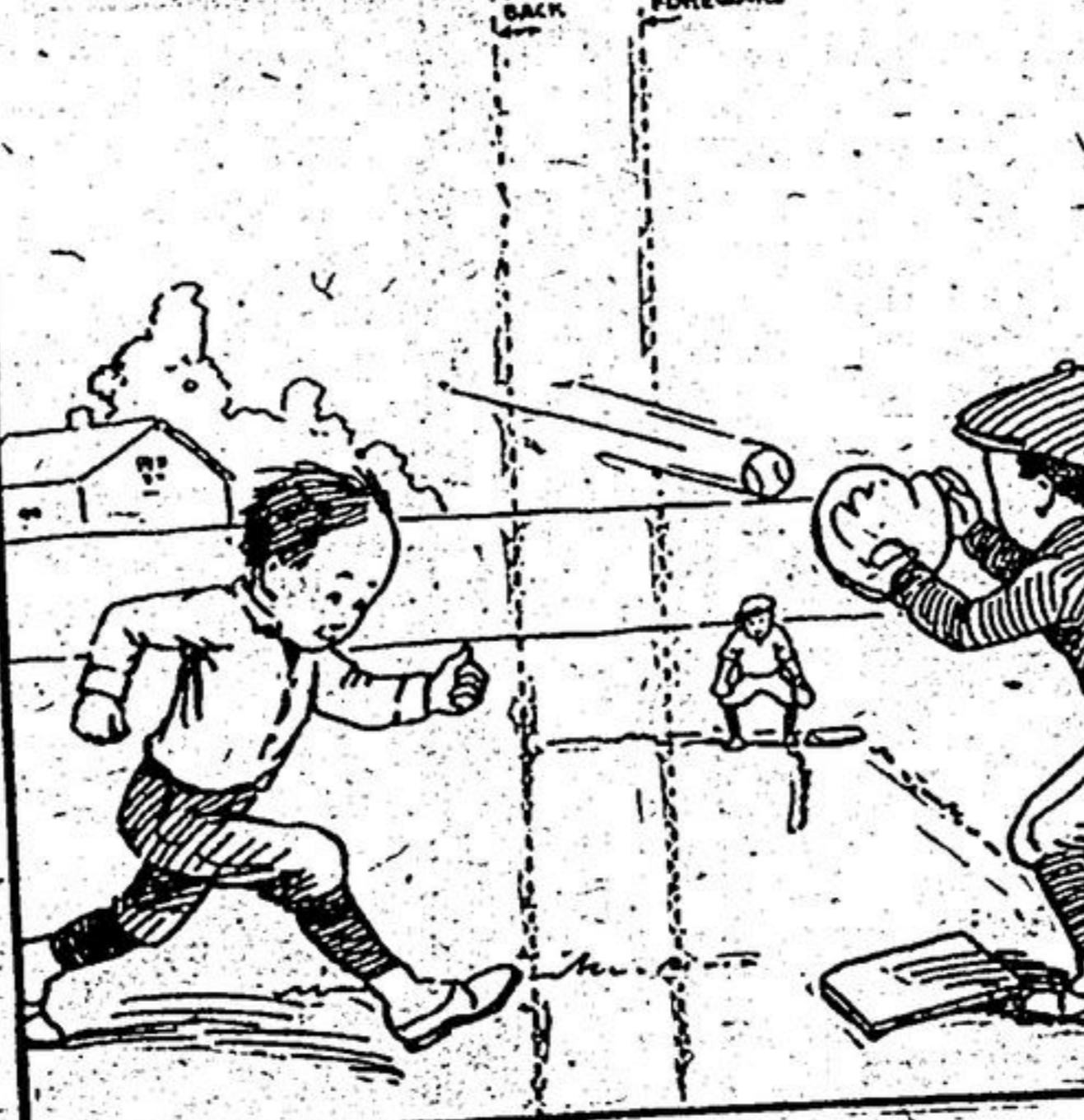
"The world is always romantic if you have the three gifts needful to make it so—faith and sense of beauty and the sense of humor."—Henry Harland.

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