

# 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.

## FACTORS INFLUENCING CROP YIELDS.

Crops require moisture, heat and food in suitable amounts and proportions to make rapid, strong growth. Nature supplies the essentials for crop life and growth, the farmer's task and problem is to utilize these resources in such a way as to ensure satisfactory yields. Investigations conducted at the Central Experimental Farm, Ottawa, have led to the conclusion that the following factors exert a telling influence towards increasing crop production.

Underdrainage—Probably the most important and indispensable where the rainfall is great.

- (a) To carry off surplus water.
- (b) To allow air to enter the soil.
- (c) To aid in raising the soil temperature.

It is equally a necessity in soils where moisture conservation has to be considered. Drainage lowers the natural water table in the soil leaving the soil in shape to absorb rain as it falls, that is preserved for use of crops.

On the whole drainage improves the mechanical condition of the soil and assists in influencing the liberation of plant food elements.

Plant Food.—In proper proportions for the different classes of crop to be grown. This involves the adoption of a good crop rotation. This rotation should be a short one, say of 3 to 4 years' duration, and the order of crops is most important. Crops such as corn, roots, potatoes and hay, require large supplies of food from the soil for stem, leaf and root growth. This may be most easily supplied by clover or other sod turned down, or by heavy manuring. The cereals, such as wheat, oats and barley require less of this food and generally do best if sown the year

following an application of manure. The area sown to these cereals, if seeded down to clover and grasses, will supply a hay crop the third, or the third and fourth years, and the sod turned down, manured if necessary, fits the land for corn or roots once more.

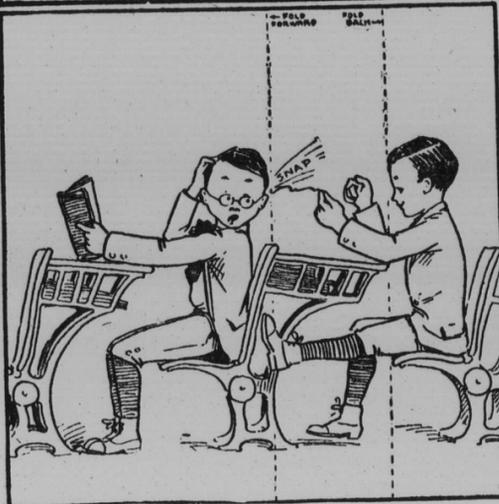
Such general plan of rotation may be modified by such farmers as will best suit soil and needs, but some such scheme is necessary in order that humus, probably the most valuable of all soil constituents, be added and maintained in the soil, to keep it in good producing shape. Humus decomposed and decomposing vegetable matter is provided in applications of barnyard manure, in legume crops such as clovers and in green manuring crops like buckwheat. Humus absorbs and holds soil moisture and is a means of raising soil temperature since dark soils absorb heat readily and rapidly.

Manure.—Barnyard manure is most effective fertilizer and furnishes humus forming material. Fresh manure gives crop yields almost equal to those from rotted manure and when applied directly it can be handled more economically with regard to labor. Manure should be spread evenly and incorporated thoroughly with the soil. Applications should be made in moderate quantities frequently rather than in larger quantities at longer intervals. Apply the manure for hood and clover or other hay crops in a suitable crop rotation which provides that each field in the farm will receive regularly its fair share of manure.

Proper Cultural Methods.—To make a good seed-bed requires thoroughness in carrying out each step in its preparation.

# FUNNY FOLD-UPS

CUT OUT AND FOLD ON DOTTED LINES



Willie's always up to tricks. Hope the teacher doesn't look; Till we fold him up and fix His attention on his book.

## A Home-Made Stone Boat.

A very convenient stone boat for hauling big rocks can be made easily. The simplicity of this device leaves little to explain. It consists of two two-inch planks about eight feet long, with a crosspiece two inches by six inches, having two three-quarter-inch holes, 20 inches from centre to centre. This piece is bolted loosely to the planks at one end with five-eighth-inch bolts, the heads of which are counter-sunk in the undersides of the planks.

At the other ends of the planks, about six inches from the ends, two-inch holes are bored. A piece of chain with a toggle on one end is slipped through these holes. The planks are drawn up to straddle the boulder. The chain being held in one plank with the toggle, is drawn tight through the hole in the other plank, bringing the planks as close up under the boulder as possible. A hook,

spike or an old bolt may be used to hold the chain in the other plank after it is drawn tight.

The team is then hitched to the chain between the planks. The first pull draws the planks together under the boulder which will ride perfectly as if on a rigid sled.

To unload the boulder, a stone or a chunk can be placed where one of the planks may be drawn over it. The boat will tilt, rolling off the stone.

## Riced Potatoes Help Out Flour.

Freshly cooked potatoes, put through a ricer, or forced through a fine strainer, can be used in place of the flour in batters or doughs. Cold, left-over potatoes may be used, but are not so easily blended as the fresh hot potatoes, nor is the flavor quite as good.

Beef can be made more tender by soaking in vinegar and water.

# 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.

## Ulcers.

X.—Please say a word about ulcers, their cause and effects, and the proper treatment—if they are responsive to treatment. I have heard a strict diet is beneficial in ulcer of the stomach. What are some of the symptoms?

Answer—An ulcer is simply a sore upon the skin or mucous membrane, in other words, a breaking down of the cells, frequently with only slight tendency to get well.

In the latter respect ulcers differ from healthy wounds which begin to get well almost as soon as they are formed or made.

Ulcers may be caused by injury, by burns, and by poor nutrition of the tissues where they occur. They may be accompanied with sloughing or destruction of the tissue, and perhaps by reabsorption of dead and poisonous material.

They are often attended with haemorrhage and with great weakness in consequence of the prolonged discharge which comes from them, and which means waste of tissue without proper strength for repair.

This is particularly the case with ulcers which attend such diseases as syphilis and tuberculosis.

Ulcers which accompany these diseases are often incurable unless means are found to cure the diseases which caused them. The treatment of ulcers should be constitutional and consist in building up the general condition; and also local, which is directed to the sore itself.

The first will include all necessary hygienic measures, comfortable and well ventilated housing, sleep, exercise in the open air, good food, including an abundance of milk, and perhaps such tonics as cod-liver oil, quinine, strychnine and iron.

Local treatment includes cleanliness and frequent dressing of the

ulcer, and the application of astringent and stimulating substances, especially such minerals as lead, copper, zinc, mercury and silver.

In ulcer of the stomach a strict diet is almost imperative—that is, the stomach must be given just as little work as possible.

Some of the symptoms of ulcer of the stomach are sharp pain, indigestion, loss of appetite and haemorrhage.

If the ulcer perforates the peritoneal coat of the stomach, there may be serious haemorrhage and even fatal peritonitis.

## QUESTIONS AND ANSWERS

J. H. H.—For two years I have suffered with dull pain on the back of both legs, from knees to toes, and I have thus far been able to get very little relief. Is there any cure for this trouble?

Answer—I should imagine, from what you say, that you are suffering from sciatica. There are many things for the treatment of this trouble—including blistering, heat, baths, massage and electricity—and sometimes it is necessary to make a trial of all of them before finding the proper means of relief.

A young Mother—My baby, seven months old, is healthy and strong, but cross and fretful and has no teeth. She nurses my breast. Shall I begin to feed her with any other nourishment?

Answer—Do not worry because of the non-appearance of teeth. If they are delayed for a few months, it usually does no harm. If you have sufficient nourishment in your breast, there is nothing better for the child; and if your supply continues, I would advise you to nurse the baby through the summer—perhaps supplementing the breast with milk by the bottle if the breast supply should fail.

Do not neglect to plant gladioli every ten days from, say, May 5 to

July, for a succession of flowers late into the autumn.

# The Dairy

An easy, quick and thorough way to get the lice off, or keep them off cattle is to put about equal parts of wood ashes and sulphur in a salt sack or close-woven gunny sack and hand it where cattle will run under it, and rubbing against it dust themselves.

Infectious abortion is retarding some farmers in developing a dairy business. It causes losses in the herd increase but does not unfit the milk for human use although the germ is frequently located in the udder. It is a source of great discouragement to some cattle owners but as yet there is no way of overcoming it. The animal diseases are a warfare between the microbe and the host and they make a high degree of intelligence necessary in the successful live stock owner. If it were not for the skill which is necessary to fight diseases, almost anyone could be a live stock farmer. Stable sanitation is an important factor in the control of animal diseases.

It takes just one dairyman in a community to start the movement to obtain a community-owned pure-bred bull. In many sections scrub bulls are used because everyone knows that they need a good bull, but no one wants to bother his neighbor with the suggestion of starting an organization.

A dairyman owning forty cows recently said: "The milking machine has taken all of the 'sting' out of dairying on our farm. We now obtain more satisfaction in caring for the cattle and save much time." He is the type of a man who has milked cows all of his life and knows the dairy business thoroughly. He is also the kind of a man who has sometimes been discouraged with the drudgery of milking a large herd of cows. His milking machine has given him quite a little inspiration and as he says, it has helped overcome one of the unpleasant features of dairying on a large scale.

There are many old barns still rendering good service and they have to be used, but it is unfortunate that the value of sunshine as a disinfectant has not always been appreciated. It is the dairyman's best friend for keep-

ing a stable in good condition and when the sun can shine on the gutters, the work of keeping the barn sanitary is not so difficult. In buildings used for live stock it pays to arrange for plenty of sunshine and it pays to study bulletins and building literature before using expensive material to experiment with home-made plans.

# Horse Sense

The brood mare that seems to have the least trouble and produces healthy sound colts, and also has little trouble at foaling time, is one which has been worked moderately, or has had regular daily exercise. Of course, she should have plenty of nourishing food of good quality, especially during the latter gestation period. It is also important that she should be supplied with clean drinking water, groomed once a day and her stable well supplied with fresh air. The brood mare does best when kept in a box stall. The writer knows of no very good reason why a brood mare cannot be used to do moderate work up to within ten days or two weeks of foaling time. A box stall should be thoroughly cleaned and disinfected with either coal tar disinfectant or white-washed with fresh lime wash for her to foal in. She should be kept in this stall for a week before she foals. The bedding should be clean. A quiet secluded place where the mare can hide away from other horses seems to be her choice location. Her food supply should be nourishing, but of a laxative nature. A few well-salted bran mashers or roots will open her bowels. A mare that is constipated sometimes has trouble foaling.

When she foals, notice if she cleans properly. The udder of mare should be washed clean before the colt is allowed to suck; this will often prevent the young colt from becoming infected. The navel of colt should be washed with one part bichloride of mercury and 1000 parts water; or one part coal tar disinfectant and twenty parts water, then the cord immediately painted with one part tincture iodine and two or three parts of glycerine or olive oil two or three times a day until it shrivels completely. It is not necessary, and sometimes a great mistake to tie the cord. If there is much hemorrhage, it sometimes has to be done to stop the bleeding, but the string should not be left on more than twelve or twenty-four hours. The bowels of the new born colt are usually constive, but if it is allowed to suck the first milk from mother, it will usually loosen its bowels, but if not, inject two or three ounces of olive oil cautiously into rectum occasionally until bowels move fairly free. Both the mare and colt should be kept in a warm, dry, clean portion of stable until the colt is two or three days old; then you need to pay little attention, more than to feed the mare. During warm pleasant weather the brood mare that is running on pasture seldom requires much watching or special care.

Apples cored and baked with rasins in the cores are delicious.

# CANADA'S PRIDE

CANADIANS have good reason to be proud of the position Canada holds in the world today. This pride is justified by the activities of her people, by her unlimited natural resources, by her splendid institutions, and particularly by her Industries.

Facts about the immensity of some Canadian industries would astonish most people.

These industries, when viewed in the light of comparison with other countries, are simply tremendous.

The growth of any industry is limited to the number of people it can serve, and that is a fact not often properly appreciated when Canadian industries are compared to similar enterprises in, say, the United States.

For example: the population of the United States exceeds 100,000,000. Opportunity for industries there is almost unlimited. In comparison, Canada with its seven million population is a small country—yet in spite of this comparatively small population, Canada possesses several industries which in actual size rank among the biggest in the world.

In shoemaking, one Canadian concern has developed a volume of business and a service to the Canadian people which is not

equalled by another shoe manufacturer anywhere in the world. This concern, if located in the United States, would rank as one of the twelve largest out of some two thousand shoe manufacturers there.

While the sales of the largest shoe manufacturer in the United States—selling to the American people—do not exceed twenty-five cents per capita per year, the sales of Ames Holden McCready to the Canadian people last year were approximately eighty cents per capita.

In a comparative sense, therefore, this Canadian concern is greater than the foremost American shoe manufacturer in the United States.

Thus Ames Holden McCready truly merit the distinction of their title "Shoemakers to the Canadian Nation."

Just imagine for a moment the enormous work of supplying a large portion of Canada's 7,000,000 people with its boots and shoes:

—it requires—huge up-to-date factories equipped with the most modern machinery able to turn out 8,000 pairs of shoes a day.

—it requires—a variety of nearly 800 different styles to meet the requirements of all classes of people, for different grades, shapes and kinds of shoes.

—it requires—the maintenance of six large distributing branches in principal cities from coast to coast, and in these are carried over a million dollars worth of stock, ready for quick delivery to retailers.

—it requires—sixty travelling salesmen to call on the retail trade, because out of approximately 10,000 retail dealers who sell shoes in Canada, more than 5,000 handle A.H.M. Shoes.

—it requires—many other details of organization and equipment, but this brief outline will give you some slight idea of the part that this great shoe concern is playing in the business of supplying footwear to the Canadian people.

You will be interested in these facts, because the next time you buy footwear bearing the A.H.M. Brand, you will know that they are the product of a large and efficient organization making shoes which will in every case give you the greatest value for your money.

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