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.

EXPERIMENTS WITH FARM CROPS

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1919 they are prepared to distribute into every Township of Ontario material of high quality for experiments with Grains, Fodder Crops, Roots, Grasses, Clovers and Alfalfas, as follows:—

LIST OF EXPERIMENTS FOR 1919.

Number.	Grain Crops.	Plots.
1	Testing two varieties of Oats	2
2	Testing O. A. C. No. 21 Barley and Emmer	2
3	Testing two varieties of Hulless Barley	2
4	Testing two varieties of Spring Wheat	2
5	Testing two varieties of Buckwheat	2
6	Testing three varieties of Field Peas	3
7	Testing two varieties of Spring Rye	2
8	Testing three varieties of Soy, Soja, or Japanese Beans	3
9	Testing seven varieties of Flint and Dent Husking Corn	7
	Root Crops.	
10	Testing three varieties of Mangels	3
11	Testing two varieties of Sugar Mangels	2
12	Testing three varieties of Swedish Turnips	3
13	Testing two varieties of Fall Turnips	2
14	Testing two varieties of Carrots	2
	Forage, Fodder, Silage and Hay Crops.	
15	Testing the planting of Corn at six distances in the row	6
16	Testing three varieties of Millet	3
17	Testing two varieties of Sorghum	2
18	Testing Grass Peas and two varieties of Vetches	3
19	Testing Rape, Kale and Field Cabbage	3
20	Testing three varieties of Clover	3
21	Testing two varieties of Alfalfa	2
22	Testing four varieties of Grasses	4
	Culinary Crops.	
23	Testing three varieties of Field Beans	3
24	Testing two varieties of Sweet Corn	2
	Fertilizer Experiments.	
25	Testing Fertilizers with Rape	5
	Miscellaneous Experiments.	
29	Testing three grain mixtures for Grain production	3
30	Testing three grain mixtures for Fodder production	3

The size of each plot is to be two rods long by one rod wide.

Any person in Ontario may choose any ONE of the experiments for 1919 and apply for the same. The material will be furnished in the order in which the applications are received, while the supply lasts. Each applican should make a second choice, as the material for the experiment selected as first choice might be exhausted before his application is received. All material will be furnished free of charge to each applicant, and the produce will, of course, become the property of the person who conducts the experiment. Each person applying for an experiment should write his name and address very carefully, and should give the name of the County in which he lives.

Address PROF. C. A. ZAVITZ, Director Field Husbandry Branch, Ontario Agricultural College, Guelph, Ont.

Poultry

April is an ideal month for hatching goose eggs. Duck raisers take advantage of this month to get out their future breeding stock. April ducks gain better development, and start to lay earlier than those hatched later.

The nights are cool, but the days are glorious with sunshine, and are so invigorating. It is just the kind of weather that stimulates the attendant, filling him full of enthusiasm, especially as he sees that new life has been put in his stock. Everybody seems happy. April is not only an excellent hatching month, but it is an ideal growing month. One can just see the little ones growing; and this exhilarating weather will be with us for two more months—April and May.

More real progress can be made through selection and breeding than through feeding. The best of food and care will not make a good layer out of a bird with big thick pelvic bones, any more than heavy feeding will make a draft horse out of a racer.

Select birds with thin pelvic bones and with plenty of space between the rear of the breastbone and the two pelvic bones. Male birds should be selected the same way, always being careful that only the most vigorous and healthy specimens are used in the breeding yards.

The Dairy

That it pays to have drinking cups in the stanchions for dairy cows is no longer a question for argument. It has been proved beyond a doubt.

How do they pay? In three ways: 1. They save time and labor in watering cows. 2. They save fuel, because they do away with the necessity of a tank heater. 3. They increase the yield of milk from the cows using them.

A very careful estimate states that drinking cups will save, on the average, three minutes a cow a day in caring for cows. This means ten hours of labor a cow during a 200-day milking season. This amounts to about $2.50.

The average amount of fuel saved through not having to use a tank heater has been estimated at fifty cents a cow a winter.

The average increase in milk yield is estimated at two pounds a cow a day, or 400 pounds for a 200-day milking period. At $3 a hundred, this means $12.

Thus, the saving in labor and fuel and the increase in milk yield amounts to $15 a cow a winter. Drinking cups cost less than $5 a cow.

If you can't buy a herd buy a heifer.

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.

The Clinical Thermometer.

A thermometer registers temperature, based upon the principle that variations in temperature will cause a given substance to expand and contract with approximate regularity. Mercury is commonly used to measure temperature but so also are metallic springs or strips of sensitive metal, or fluids which are sensitive to air pressure. A clinical thermometer registers changes in temperature in the animal body. In human beings the normal is 98.4 degrees F. Such a thermometer is usually a glass tube, four or five inches long, perforated from end to end, with its lower end dilated to a bulb and containing mercury, a thread of which ascends the perforated space as the temperature is recorded. The thinner the bulb the more sensitive will it be to heat and the quicker the mercury will expand. A scale at the side of the tube usually graded from 95 degrees to 110 degrees F. records the temperature. A lens front on the thermometer magnifies the thread of mercury and facilitates reading it. In European countries the Celsius or centigrade scale has a freezing point at zero and a boiling point at 100. The Reaumur scale has freezing at zero and boiling at 80. A thermometer must be sensitive and accurate, and such an instrument standardized and tested, which will register temperature in one minute or less is purchasable almost anywhere. Observation of the body temperature is about as ancient in its origin as any observation we know of. The earliest observers said there was fever or disease when the skin felt hot and this early became a point of importance in diagnosis and treatment. It is not accurate as a record of the heat of the interior of the body and of the blood. The importance of frequent records of body temperature has been recognized about one hundred years and suitable instruments have been devised for obtaining them. A thermometer must be absolutely clean as well as accurate. It is a good plan to dip the bulb in a solution of bone acid and wipe it carefully before using it. When the thermometer is applied the tip must look upward not downward for an accurate record and it may be placed in the armpit, the mouth or the rectum. The last of these is far the most reliable in determining the body temperature but is often inconvenient, particularly in children. The mouth is next in importance for this purpose, the bulb being placed under the tongue. After the thermometer has been removed and read, the thread of mercury should be shaken down and the instrument always disinfected and dried before being put away. The danger of breaking the thin bulb must always be considered in introducing the instrument especially in the rectum and it must not be inserted forcibly, an antiseptic lubricant on the bulb may facilitate its introduction. If the thermometer is carried too far within the rectum contraction of the sphincter may draw it entirely within the organ. There is nothing serious about this but it may require skilled help to remove it without breaking. The temperature of the body is usually lowest from 7 to 9 a.m., and highest from 5 to 7 p.m. It is increased by exercise, digestion, prolonged heat, excitement, etc., and diminished by pain, haemorrhage, fright hysteria and various emotions. Children have sudden changes in temperature after sweating, convulsions, or the influence of infectious germs. A good thing to have in every household, especially where there are children, is a reliable thermometer, and equally is it desirable to know how to use it.

Questions and Answers.

Subscriber—1—What can be done for swollen glands resulting from a blow received six months ago?

2—Do such gands ever disappear without treatment?

3—Do they often develop into tumors and can they be effectively treated by the X-ray?

Answer—1—I do not imagine that the trouble you refer to, is swelling of the glands—if it is due to a blow; it is possibly an effusion of blood, which has formed a tumor, which, in all probability, will disappear in time.

2—Swollen glands of some varieties do absorb and disappear, but in the majority of cases they require suitable attention in order to get rid of them.

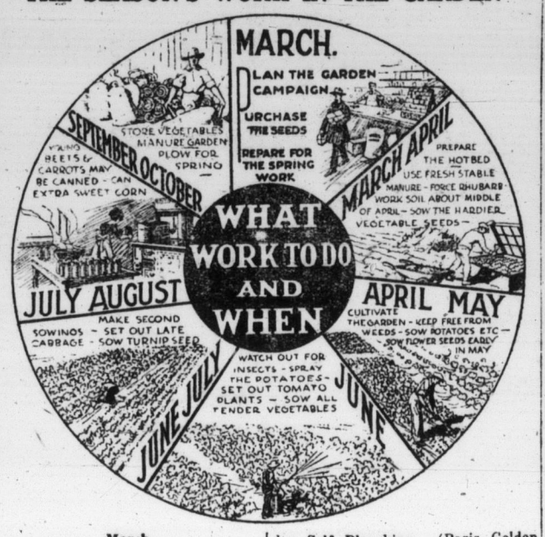
3—The condition which you speak of is a tumor, and, in some cases, I should suppose an X-ray treatment might be helpful.

Mrs. M. F.—My little girl, aged 2 years, has fifteen white warts on her chin and they are multiplying and getting larger. What can be done to remove them?

Answer—I am afraid your diagnosis of the condition is not correct; for warts are, to say the least, very—some of those rural cemeteries If I were you I would have the child examined by a skilled dermatologist and he can tell you what may be best in the way of treatment.

One of our neighbors used 300 pounds of sixteen per cent. acid phosphate when sowing wheat and got good results from it. One-half of the field yielded thirty-one bushels an acre, the other half, with the same wheat variety and soil, yielded forty-seven bushels an acre. The only reason for this was that he had hauled and spread thinly during the previous winter the manure from his horse stable, top-dressing the wheat evenly in connection with the acid fertilizer.—G. B

THE SEASON'S WORK IN THE GARDEN



March.

Plan the garden campaign.
Purchase the seeds.
Prepare for the spring work.

March, April.

If you have one, prepare the hotbed or cold frame for use. Fresh stable manure will be necessary for the hotbed. This should be turned several times before it is put into the hotbed.

Force rhubarb and raise early lettuce and radish.

By the middle of April the soil will be ready to work.

Rake over the garden and sow the hardier vegetable seeds, such as carrots, beets, peas, parsnips, radish, onions, white turnips, spinach and Swiss Chard.

April, May.

The regular work of cultivating the garden will commence this month. It should be kept neat and free from weeds.

Plant potatoes and sow the remainder of the vegetable seeds, including string beans and sweet corn.

Sow flower seeds early in May.

June.

Continue to keep the garden well cultivated and free from weeds. Watch out for insects and spray the potatoes as soon as they are a few inches above the ground.

Set out the tomato, pepper and egg plants about the first week of June, and sow seed of all the tender vegetables, such as citron, cucumber, pumpkin, melon, etc.

June, July.

Make second sowings, for succession crops, of such vegetables as beets, peas, radish and corn.

Set out plants of late cabbage.

Sow turnip seed.

July, August.

The canning season commences in July.

Young beets and carrots may be canned with success and are of a better flavor than the fully matured roots.

Can the extra sweet corn.

September, October.

Many of the vegetables will have to be stored during these two months. The garden also may be manured as soon as the crops are harvested, and plowed for the following spring.

What Seeds to Sow and How.

Beans—Sow the seed two inches deep in rows 18 inches apart. Varieties recommended: Stringless Green Pod, Early Red Valentine, Round Pod Kidney Wax, Wardwell's Kidney Wax.

Beets—Sow seed about 1 inch deep in rows 15 inches apart. Varieties recommended: Detroit Dark Red, Early Model and Crosby Egyptian.

Cabbage—Set plants 18 inches apart in the row, with rows 2 feet apart. Varieties recommended: Early Jersey Wakefield and Copenhagen Market (early), Succession (medium), Danish Ballhead and Drumhead Savoy (late), and Red Dutch (red).

Cauliflower—Set plants 18 inches apart in the row, with rows 2 feet apart. Varieties recommended: Early Snowball and Early Dwarf Erfurt.

Carrots—Sow seed about ½ inch deep in rows about 15 inches apart. Varieties recommended: Chantenay, Danvers Half Long and Early Scarlet Horn.

Celery—The seed should be sown early in the house and the plants pricked out in late May at about 5 inches apart, with the rows 2 feet apart. Varieties recommended: Golden Self Blanching (Paris Golden Yellow) early; Winter Queen, Evans Triumph and Perfection Heartwell, late.

Corn—Sow seed about 2 inches deep in hills 2 feet apart, with rows 3 feet apart. Varieties recommended: Early Malcolm, Golden Bantam and Country Gentleman.

Cucumber—Sow seed about 2 inches deep in hills 18 inches apart, with rows 4 feet apart. Varieties recommended: White Spine and Chicago Pickling.

Lettuce—Sow seed about ¼ inch deep in rows 15 inches apart. Varieties recommended. Grand Rapids, Black-seeded Simpson, Crisp as Ice.

Melons—Sow seed about 2 inches deep in hills 12 inches apart, with rows 6 feet apart. Varieties recommended: Long Island Beauty, Hackensack, Montreal Market and Emerald Gem.

Onion—Sow seed about ½ inch deep in rows about 15 inches apart. Varieties recommended: Yellow Globe Danvers, Early Red Wethersfield, Prize Taker.

Parsnip—Sow seed about 1 inch deep in rows 18 inches apart. Varieties recommended: Hollow Crown and Intermediate.

Peas—Sow seed about 2 inches deep in rows 18 inches apart. Varieties recommended: Gradus, American Wonder, Gregory Surprise, McLean Advancer, and many others.

Potatoes—Plant sets 3 inches deep about 12 inches apart in the row, with 2½ feet between the rows. Varieties recommended: Irish Cobbler (early) and Green Mountain (late).

Radish—Sow seed about ½ inch deep in rows 12 inches apart. Varieties recommended: Scarlet White-Tipped Turnip and White Icicle.

Spinach—Sow seed about ½ inch deep in rows 15 inches apart. Varieties recommended: Victoria, Thick-leaved.

Salsify—Sow seed about 1 inch deep in rows 15 inches apart. Varieties recommended: Long White, Sandwich Islands.

Squash—Sow seed about 1 inch deep in hills 3 to 4 feet apart, with rows about 6 feet apart. Varieties recommended: Long White Bush, Summer Crookneck, Delicious, Hubbard.

Tomatoes—Set out plants 2 feet apart in rows 2 feet apart. Varieties recommended: Alacrity, Sparks Earliana, Bonny Best, Chalk's Early Jewel, Livingston Globe.

Swede Turnip—Sow seed ½ inch deep in rows 2 feet apart. Variety recommended: Champion Purple Top.

The following publications may be had free upon application to the Publications Branch of the Department of Agriculture, Ottawa:

Vegetable Gardening at Home and on Vacant Lots. Circular No. 14.

Notes on the Cultivation of Some Staple Vegetables. Special Circular No. 4.

How to Make and Use Hotbeds and Cold Frames. Exhibition Circular No. 16.

Asparagus, Celery and Onion Culture. Pamphlet No. 5.

Cabbage and Cauliflower Culture. Pamphlet No. 11.

Tomato Culture. Pamphlet No. 10.

The Potato in Canada. Bulletin No. 90.

Common Garden Insects and Their Control. Circular No. 9.

The Manuring of Market Garden Crops. Bulletin No. 32.

Soil Fertility, Its Economic Maintenance and Increase. Bulletin No. 27.

One Farm Wood-Pile.

"Say, mother, I'll be glad when I get that wood-pile into the woodshed. Then I'll be all through with it, won't I, mother?"

"No, John. You know I shall want you to carry out the ashes after the wood is burned up," cheerfully replied mother.

"But then I'll be through with it, mother?"

"Oh, no, I believe not, for you will then scatter the ashes on the cornfield, and father will plow them under in the spring. Then you will help him plant the corn, you now. The corn will grow, eating the ashes and earth about it, and by and by you will also eat sweet corn."

"Oh, we'll sort of eat the wood ourselves, and that will surely be the end of this old wood-pile."

"Not quite," said mother. "You know there will be cobs left, and stalks of corn. We may feed them to the pigs, or to the cows, and that will give us meat or milk."

"Well, I never knew there was so much to a wood-pile before," said John, as he busied himself carrying in wood.

If you are invited out to dinner and take a small child with you, be sure to spread a paper on the floor under the child's chair. This will catch the particles of food which the average child is sure to drop, and your hostess will appreciate your thoughtfulness.

THE NEGLECTED RURAL CEMETERY

How forlorn and dreary they look some of those rural cemeteries which hold our dead! Now and then one sees a rural graveyard receiving as good care as city cemeteries get, where care is provided for every lot that is sold; but for the most part the country cemetery is a sad commentary on the regard with which we hold our dead.

There is, of course, a reason for this lack of attention, and the reason is one which makes the solution of the problem all the more difficult. The relatives of those buried in these isolated spots die or remove to other localities. There in no fund provided for the taking care of the cemetery. No one has the time or inclination to do work of this kind, especially if there is little or no pay in sight. Consequently the weeds creep in, the briers thrive and the stones in time topple over from sheer neglect.

This problem has in some cases been solved by establishing a fund for keeping the cemetery in good condition. There are always well-to-do relatives of those buried in such a place. If the relatives are approached, they will gladly make a contribution to such a fund or will agree to give a few dollars a year, not especially because of the graves they are interested in, but to keep the entire place in more presentable condition. Simply keeping the grass and weeds out, and preventing brambles and briers from getting a foothold, make a cemetery look better and remove much of the appearance of neglect. It is also necessary to keep sunken places filled and grassed over.

To this end some one must learn the whereabouts of relatives of those buried in the cemetery. That means quite a bit of correspondence. It has been found that an appeal for aid has little weight with any but near relatives.

Parents will contribute if their children are buried there; children will give if father or mother sleeps there under the sod. Brothers and sisters will usually do what circumstances will permit. Aside from these the call is not likely to meet with much response. However, there are usually enough near relatives with which to make a start, and there are many among the living who expect to find a resting place in the cemetery, who are glad to help put the grounds in better shape. The chief thing is to find an interested person who will undertake to find the relatives living in other localities. The work can be organized and carried on under the direction of township officers. This plan has been found to work well in many localities.

Wood Ashes to Fertilizer.

For two or three years hundreds of thousands of people who have hitherto used coal for all fuel purposes will, in part at least, use wood. Many factories will make it their chief dependence, and a considerable number of shops that get their power from waterfalls will use wood for heating. The situation is not without its advantages, for, unlike coal, wood as fuel furnishes a valuable by-product for the farmer. On account of the difficulty of getting potash, fertilizers are at present extremely high in price. But wood ashes contain a large amount of potash, and, except that they lack nitrogen, they furnish a complete fertilizer. The lime in them sweetens the soil so that nitrogen-storing plants, such as beans, peas and clover, can grow on their roots the nitrogen-fixing bacteria that cannot live in sour soil. Thus, in a secondary way, wood ashes are a complete fertilizer for such plants. They also increase the growth of cabbages, carrots and corn. But it is not advisable to mix them with barnyard manure.

The advice has often been given not to use wood ashes on potato land. The reason is that such use of them is likely to cause scab. The advice is good if the crop is intended for the market; but if the potatoes are to be raised for home use, a liberal application of wood ashes will increase the crop without doing any harm, for scab is only skin-deep, and does not affect the flavor. Besides, rolling the seed potatoes in sulphur virtually eliminates the likelihood of scab. Putting the ashes on the soil the year before or scattering them on the snow in winter is another way of reducing the likelihood that they will cause scab. With ashes at twenty-five dollars to thirty dollars a ton for fertilizer, the man who burns wood has a possible rebate on his firewood bill that is not to be despised.

Use the Fanning-Mill.

In many parts of the country there has been a tendency to let the fanning-mill rest and rust and gather dust, and to pay for cleaning the grain and sell the uncleaned wheat, oats or barley for a low price.

The present high price of grain should bring many a neglected fanning-mill into profitable use. Incidentally, farmers will have profitable work for stormy days, and much cheap feed for chickens, pigs and other animals. Several people can profitably buy a fanning-mill to clean seed grain. Clean seed means bigger, cleaner yields.

"Humor dwells with sanity and common sense and truth."—Bishop Brewster.