

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. Stamped and addressed envelopes are 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.

BEAN DISEASES.

In many sections of the Dominion bush beans are now recognized as a profitable special crop, and the acreage has been greatly increased during the last few years. Approximately 100,000 acres are planted yielding considerably over one million bushels. Destructive diseases have accompanied this increase in cultivation and unless the farmer takes precaution to eliminate disease the crop will not continue to be as popular or profitable as it should. It is safe to say that probably 25% of the crop is frequently lost through the attacks of one or more diseases which might be largely prevented by planting disease free seed. The more important diseases are, as follows:

Anthracnose is probably most destructive in the Maritime Provinces and Quebec and some years in Ontario. It is caused by a seed-borne fungus which attacks stem, leaves, pods and seed, producing dark brown to almost black sunken spots on the stem and pods and a blackening of the veins in the leaves. When severe the plants may be completely defoliated or even completely destroyed leaving skips in the row.

Bacterial Blight is a serious problem to the bean growers of Ontario and to a lesser extent elsewhere. The bacteria or germs causing this disease are seed-borne and attack the stem, leaves, pods and seed, producing on the seed light yellow blotches sometimes involving the whole seed. Infected leaves develop small irregular water soaked areas, which later turn brown and fall out. The spots on the stem and pods are of a raised, water soaked appearance with a yellow to reddish brown color, usually smaller and not so dark as Anthracnose spots.

Rust and root rots of beans occur less frequently, but nevertheless are capable of causing serious loss. In many cases these may also be carried on the seed.

Mosaic: This is a new disease which was reported as common in Southern Ontario last year. The leaves on infected plants develop a peculiar mottled appearance. Diseased plants produce a few small pods as compared to healthy plants. Little is known concerning it. Its nature would indicate that seed from affected plants would probably produce a diseased crop therefore the use of such seed should be avoided.

Control Measures.

Plant only disease free seed on soil which has not lately been planted to beans. This can be best accomplished by selecting, at the time of harvesting, disease free pods from vigorous high yielding plants. These selected pods should then be immersed for not more than 3 minutes in disinfecting solution, allowed to dry off and stored in a clean muslin bag or other disease free container.

The seed from these pods should be used the following spring to plant a bean seed plot. While this is not sufficient to ensure the obtaining of disease free stock the first year, it will if practised regularly reduce disease to a minimum, and thus largely remove the cause for poor yields.

Where pod selection has not been previously practised the first start should be made by securing seed from a field relatively free from disease. This stock should be very carefully hand-selected, removing all spotted or even slightly discolored seed. After this has been done the seed may be immersed in solution of copper sulphate 1:100 for 3 minutes or in a formalin solution 1:500 for 5 minutes, allowed to dry and planted.

Beneficial results might also be obtained by pulling out and destroying diseased plants as they appear from time to time during the growing season.

So far spraying beans has not proven a commercial success but probably

might be used to some extent in helping to prevent the spread of disease in seed plots.

Cultivating, hoeing or picking beans while the foliage is wet should be avoided as the disease is readily carried from diseased to healthy plants under such conditions.

Winter Work For The Beekeeper.

Now that the most active part of the year is over and the bees are safely packed away in their winter quarters, the beekeeper should turn his attention to the preparation for next season's activities. As the honey-gathering season is comparatively short and things move very rapidly during that time, success depends mainly upon having everything in readiness before it is actually needed. Much of this work can be done during the winter months.

One of the most valuable assets of the beekeeper is a good supply of empty combs at the commencement of the season and great care should be taken to preserve them during the winter months from the ravages of mice and wax moth. A good method is to place the combs in supers and to tie the supers up one above another with a sheet of paper between each and a hive cover on top of the tier, this will prevent the mice from getting at them. The combs should be stored in a dry cold place. Exposure to zero weather will destroy the larvae of the wax moth. Fumigation with carbon bisulphide will also destroy them but care must be exercised in handling this material as it is highly inflammable.

All supplies should be thoroughly gone over and put into working shape. If any new supplies are required, order them as early as possible and get them made up before spring. By sending early orders, you not only benefit yourself but you are aiding the manufacturer to fill all orders in time. It is not advisable to put foundation in the frames till spring as it becomes very brittle in the cold weather and there is danger of breaking it in handling. If you have any old broken combs, cappings, etc., now is a good time to get them rendered, using a wax press for this purpose and to have the resulting wax made into foundation.

Protect your bees from mice by having the entrances to the winter case or hive covered with a screen too small for mice to get through, but large enough to allow the bees to pass through freely. The entrances of the hives in the cellar can also be closed by this screening. The temperature of the cellar should be kept at about 45 degrees F. The cellar should be dark and well insulated against changes in temperature.

If the bees were placed in winter quarters rather light in stores, it may become necessary to feed them before bringing them out in spring. For this purpose, candy made as follows is recommended: Stir 6 pounds white granulated sugar into one quart of boiling water. When the sugar is thoroughly dissolved, add 1/4 teaspoonful tartaric acid and boil at a temperature of 240 degrees F. over a hot fire for 3 to 4 minutes without stirring. Allow the mixture to cool to 130 degrees F. and then still stir it to begin to thicken. Then pour quickly into moulds, making cakes about one inch in thickness. When cool, these cakes can be placed on the top of the frames above the cluster.

Cold Weather Motoring.

We have found that our car can be used to advantage during the winter even when there is considerable snow on the ground. We use four chains on the wheels when the ice and snow make skidding dangerous and have had no trouble in travelling over the frozen roads. After a heavy snow when the teams have broken a track we find that riding over the snow is often smoother than during the summer. The snow packs firmly into the wheels of the car.

To prevent the radiator from freezing, even when there is considerable snow on the ground. We use four chains on the wheels when the ice and snow make skidding dangerous and have had no trouble in travelling over the frozen roads. After a heavy snow when the teams have broken a track we find that riding over the snow is often smoother than during the summer. The snow packs firmly into the wheels of the car.

When travelling on drifted roads it pays to have a scoop shovel in the back of the car during the winter for a trip that would otherwise prove impossible. —R. G. K.

Sheep Notes

Many sheep lose their wool, especially toward spring, from other causes than the effects of scab. In fact, if scab is present the animals are just as liable to lose their wool at one time of the year as at another. Because sheep begin to rub and bite and pull off wool, is no evidence that they are bothered with scab, as they will do that if irritated with ticks or anything else. But in order to find out what is the matter it is well to make an examination at once.

It may be well to give some of the symptoms, appearance and effect of scab. However, the man who has once seen its effects and has noticed it particularly, will never mistake scab for anything else or anything else for it. The scab insect works between the inner and outer skin. Starting at some point, usually in the flank, the insects work outward from a common center and as they thrive and multiply they keep spreading, and some will get to other portions of the body and start a new colony, as it were. Their work causes a yellow matter to form in these spots and this in turn will form into a scab. Of course, such a scab irritates the animal and it will rub and pull at its wool and whatever scab has formed there will come off with the wool. Even if they did not pull or rub the scabs off, they would fall off in time. Sheep are sometimes afflicted with similar scabs from other causes. For this reason, it is best to procure a strong magnifying glass, when it can be readily determined whether the trouble is genuine scab or not.

Sheep scab is not a very hard disease to eradicate, as is usually supposed by those persons who have no experience with it. A couple of good dippings with a dip will cure the disease if the dip is properly applied. However, some precaution is necessary to keep the animals from becoming infected again from old scabs and wool that may have been rubbed off. In warm weather the scab insects that have been rubbed off with the scabs and wool will survive for a considerable period of time and if they come in contact with sheep they are very likely to infect them again. It is very easy to pick out a sheep that has once had scab, for where the scabs have been, there will be a yellow growth, no matter how well the scabs were cured.

Given two cows of equal dairy capacity, one conditioned as she should be, and the other rather thin in flesh, and the one in the best condition will make the best record every year. Not only this, but condition enables many breeders to break a milk and butter-fat record with a cow that conditioned no better than those which she exceeds. Feeding for milk and butter-fat records is one of the places where brains and experience are indispensable. The feeder must not neglect a single factor in his work; instead of all can he afford to begin a feeding test without having his cows in as good condition as his competitors, for some of the best records have been made by animals in the best condition it is possible to get them.

A Creeping Blanket

A creeping blanket can be made a veritable fairyland to a young adventurer on his knees if the adjustable cover is of basket-weaved canvas embroidered in delicate colors with cross-stitch animals and flowers parading around the border.

WHAT SHALL I GIVE MY BOY?

By Edgar L. Vincent

This is a question asked by every father who has boys coming along toward manhood. "What shall I give my boy that will better fit him for the life he is facing?" And two or three things come first to the mind of the world.

One is that they ought to be placed at the command of their boys as much of material goods as possible, reasoning that without these he will begin his career handicapped. If the father can give every boy a piece of land, it is usually held that he has given them a "good start" in the world. And then, most fathers like to feel that their son stands well in the community for the sake of their children. The man that is looked up to, so these men think, on account of the money he has accumulated or the success he has had in his business, does much toward insuring a good future for his boys.

These are both all right enough in their place, as far as they go, but they do not go far enough. Money may be the worst thing in the world for a boy to inherit. No man can pass his good name on to a son that does not appreciate integrity to the fullest possible extent. That is, a man is what he possesses himself of real worth. The money or the farm or the good standing in society count only as adjuncts to the success of the son. What can a farmer do, then, that will work into the very warp and woof of the boy's life and start him on the road to manhood, and make him the best possible citizen?

One thing to begin with, every father may give his son. That is, a chance to know all he himself knows about farming. It is a great thing in these days to be a good farmer. No longer is it safe to say, if it ever was, "He does not like anything else, so we will make a farmer of him." To be a good farmer, the boy ought to have just as much ability as if he were to be a doctor or a lawyer. It ought to be the pride of every farmer to find out all he can about the soil of his farm, how best to get the most out of it and to let his boy have this information at first hand. He can not get from a book or from the lips of any teacher in a school room, apart from the farm, the actual, first-hand knowledge that will enable him to take a farm and operate it successfully. The farm, under the teaching of the father, is the best place in the world to learn farming. Books and schools will supplement the home training, but that is all. They cannot take the place of it.

And then, the farmer may give his boy all he knows about the care and keeping of stock. To do this to the best possible advantage, he should study horses and cattle himself. Every farmer must, of a necessity, be something of a veterinarian. He must understand the stock he handles well enough to feed them to the best advantage, he must have a fair knowledge of the effects of certain simple remedies and be ready to apply them when needed. These things he ought

to be as natural for a sheep to shed its wool when warm weather comes as for a horse to shed his hair, although man has removed that tendency almost entirely. But if sheep are not kept in a condition of continual thrift, the wool not being properly supplied with nourishment stops growing. This breaks in the wool may be only eight, or so pronounced as to almost part the fleece in places or possibly all over the animal. When the animals begin to get more nourishment the wool will again start to grow, but the old and the new growths are so slightly connected that the old is easily rubbed off or even will sometimes drop off.

Overheating in any way will also cause wool to come off. For instance, if sheep get too much corn, especially if they have had none before, it will cause a fever which will cause the animals to lose their wool. Sheep will of course, pull and rub the wool off in spots if afflicted with ticks or lice, but this only affects the bunches pulled or rubbed off and does not loosen the rest of the fleece. Where wool is shed from any cause except scab it will grow out again, but in the case of scab it never does.

The Dairy

Given two cows of equal dairy capacity, one conditioned as she should be, and the other rather thin in flesh, and the one in the best condition will make the best record every year. Not only this, but condition enables many breeders to break a milk and butter-fat record with a cow that conditioned no better than those which she exceeds. Feeding for milk and butter-fat records is one of the places where brains and experience are indispensable. The feeder must not neglect a single factor in his work; instead of all can he afford to begin a feeding test without having his cows in as good condition as his competitors, for some of the best records have been made by animals in the best condition it is possible to get them.

A Creeping Blanket

A creeping blanket can be made a veritable fairyland to a young adventurer on his knees if the adjustable cover is of basket-weaved canvas embroidered in delicate colors with cross-stitch animals and flowers parading around the border.

\$1,000.00 CASH PRIZE COMPETITION

FOR MAKERS OF BEST MAPLE SYRUP AND SUGAR

Open to all users of our well known

Champion Evaporator

We have decided to repeat, on a larger scale, our very popular Prize Competition 1912 which interested so many Maple Syrup and Sugar makers. We offer Cash Prizes to the value of \$1,000.00, \$500.00 or \$250.00 for Syrup and \$400.00 for Sugar—Prizes in both classes awarded according to points scored, which are determined by color and flavor. Constant cash entries in either the Syrup or Sugar competition, or both. Full particulars to be had by writing for our special "Prize Competition Circular."

COMPETITION CLOSING APRIL 30TH, 1913

The "Champion" Evaporator is the only machine capable of making the best syrup, owners of groves not possessing one should get busy and order one right away. By so doing you will have a chance of winning a substantial prize thus reducing cost of the machine.

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

58 WELLINGTON ST. MONTREAL

Write at once and get fully posted on this unparalleled Maple Syrup and Sugar Competition.

THE GRIMM MANUFACTURING COMPANY

THE COMMUNITY FAIR

The community fair is a miniature county fair conducted by people of a community to promote social and economic life. It arouses interest and pride in local achievement by affording an opportunity for the exhibition of the best products of the community, fosters the spirit of co-operation by bringing the people together in friendly rivalry, and affords an opportunity for wholesome community recreation.

These fairs are known in different localities as community fairs, district fairs, township fairs, school fairs, and farmers' club fairs. The fall festivals, harvest home festivals, and farm, home, and school festivals, which are held in certain localities, are adaptations of the same general idea.

The community, township, or district fair makes its appeal directly to all members of the community, while the fair conducted by the farmers' club appeals especially to the members of the organization concerned. The school fair in its simplest form is an exhibition of the work done and the products grown by its school children. From the school fair, with its community-wide interest, it is an easy step to include the products of the older girls and boys who are not in school, and ultimately the products and work of all the members of the community.

The first step toward holding a community fair is to get together the leaders of the different organizations in the community for the purpose of considering whether or not it is advisable to hold a community fair. It is well to present at this meeting a general outline of the method of procedure for the conduct of the fair. If the plan is approved by this group, a community meeting is called, at which full explanation is made of the nature and purposes of a community fair and the methods of conducting it. This meeting should be well advertised by posters, newspaper notices, and post cards addressed to each family calling attention to the place and date and emphasizing the importance of the meeting.

The fair should be well advertised and effort should be made to secure exhibits of exceptional quality. For premiums ribbons are usually awarded, rather than cash payments. In securing the exhibits the main purpose should be to secure exhibits from as many persons as possible. As most of the preparation for the fair is made by volunteer workers, the small amount of money required for incidental expenses can be raised by subscription or by the sale of advertising space in the catalogue or on the program. There should be no entry fees or admission charge.

The management of county fairs are beginning to realize the value of the community exhibit as a factor in making the county fair serve its purpose as an agricultural exhibition. Liberal premiums have been offered for these community exhibits, either in cash or in such form as to be of community use, as, for example, reference books on agricultural subjects to be kept in the community library, a watering trough conveniently located, or a drinking fountain.

An interesting county fair, recently held, was made up of seventy-two community exhibits. There were no races or side-shows. The ten thousand people in attendance spent their time for two days in visiting and inspecting the exhibits and in wholesome recreation under the supervision of an expert, recreational director from a neighboring city. Each community had its booths and the several communities vied with each other in making attractive exhibits of the products of the farm, home, and school.

There is no reason why farmers should allow their crops to be destroyed by grasshoppers, as, by the use of Paris green bran-mash composed of grasshoppers can be effectively controlled.

The following formula for poisoned bran-mash is highly recommended, and has given excellent results wherever it has been used:

Paris green, 3 pounds; bran, fifty pounds; syrup (cheap grade), one gallon; water, five gallons; lemons, ten. Mix thoroughly the bran and Paris green while dry; dissolve the syrup in the water, squeeze the lemons into this and finely chop the peel and pulp and add them also; then pour this mixture into the bran and Paris green and stir so as to dampen the mash thoroughly. Then sow broadcast as thinly as possible where the hoppers are abundant, especially along ditch banks and above the borders of the field. The above amount will usually