

The competition for the prize for horticultural societies was between Niagara Township Society and that of Belleville. The latter showed about five times as many varieties of apples as the other, but lacked in plums, peaches and grapes, though well up in pears. The Niagara exhibit made a grand display, was very tastefully arranged and showed the great capabilities of that section in producing fine specimens of the tender fruits, and they were awarded first prize by the judges. But although the display was very attractive, yet on close inspection it was found to be made up of comparatively few varieties, which were duplicated all over the table, some of them seven or eight times. It reminded one of the Wisconsin exhibit of apples at the Pan-American, which were gorgeous to look at as to color and size, and covered quite a large space, but only consisted of about a half dozen varieties. But in this case we are not going to question the decision of the judges, for the exhibits, although duplicated over and over again, were yet of such high excellence they were no doubt entitled to the red ticket.

The lessons to be learned from the fruit exhibit are, first: The great capabilities of the Province of Ontario as a fruit-producing country, such as was never dreamed of in early days. Yea, we have a goodly heritage. The prize lists of our fairs need revision so far as fruit is concerned. We should not continue to encourage, by offering prizes, the growing of varieties that have no commercial value. This applies to all our fruits. Dessert and cooking quality, and, above all, home and foreign market value, should be recognized in the prize list.

The Experimental Stations exhibit contained a great number of useless varieties—cumberers of the ground. This exhibit should be made more useful and of more educational value. All varieties are exhibited together, properly labeled with the names of the varieties, but nothing to show which are recommended and which are discarded. This will, no doubt, be remedied in the future.

But, altogether, the fruit exhibit is an inspiring sight. It makes one feel proud of our country that can produce such a display, and not only in fruit, but in all other products, and, in the words of the poet (Scott), we feel proud to say, "This is my own, my native land."

October Work in the Garden.

October is the time of harvest in the garden, as the remainder of the crops and all the hardier vegetables must be gathered in before the heavy frosts which usually occur towards the last of the month in this locality. The garden crops that are tenderest, such as squash, pumpkins and cucumbers, should be first seen to, as one night's frost will often ruin them. The fruit should be cut from the vine, leaving several inches of stem attached, and stored in a dry loft or room until winter sets in, when they can be put in a cellar or other frost-proof place for further keeping. Tomatoes had better be picked on the approach of heavy frost, but if a warm cellar is convenient, a number of the best vines can be pulled up by the roots, tomatoes and all, and hung up where they will continue to ripen for some time. Beans and peas, if dry, can be pulled and threshed out for winter with two sticks if the plot is small, while the unmaturing ones can be shelled and used green or pickled for winter. The stalks of corn still containing green ears can be cut and stacked in a barn or shed, where, if the air can circulate through them, they will keep in good condition for some time. Several of the ripest and best filled ears can be put aside for seed, as corn does not deteriorate so rapidly when grown from home-saved seed as some things do, unless the seed saved was from poor stock. There is no difference to speak of in the way of harvesting the root crop, such as carrots, parsnips and beets, except that parsnips can be left until later, or if some protection is given until the following spring. Except in the case of the long varieties of carrots and parsnips, the roots can be pulled, topped, and after standing for a while to dry off, taken to the cellar or pit for winter preservation. A four-pronged digging fork is the best thing for taking up carrots and parsnips, and if carefully used no damage to the roots will result. I have found cutting off the tops with a sharp knife while they are in the ground and before digging a good plan, but one way is about as good as another, so the owner can suit himself. To keep for winter use without wilting I find a sprinkling of dry sand or soil throughout the barrel or heap absolutely necessary, although in a warm, moist cellar sprouting and rotting should be guarded against. Onions should be well ripened by the last of the month, and as soon as the tops dwindle away and fall over can be pulled and put in small windrows. After a few days' exposure to the air and several stirrings or turnings with a wooden fork or rake, they can be gathered up and stored in as dry a place as possible. Any that are quite green, or necky, had best be kept separate and used first, as when put with the others they are apt to induce rot. I generally leave the tops, if dry, on those I intend keeping, and some seasons there is little or no top, having all been absorbed by the onion, but such seasons are exceptional down here by the sea. Celery can be taken up by the roots, ground and all, and placed in a dark, frost-proof cellar, where it will continue to blanch, and if the temperature is even can be kept till well on in the spring in the case of the red sorts, the other varieties, with few exceptions, not being in good condition after Christmas.

Halifax Co., N. S.

EDGAR MACKINLAY.

The Potato Blight.

BY PROF. W. LOCHHEAD, ONTARIO AGRICULTURAL COLLEGE.

The blight which attacked the leaves and stalks of potatoes during the latter half of August was felt over the larger part of Ontario. It is rather early to give an estimate of the damage done, for in many cases the tubers are still healthy and moderately large, while in other cases many have begun to rot. For some years the blight has not been severe. This year, however, was an abnormal one as far as the weather is concerned, and the moisture conditions were favorable for the development of the fungus which caused the blight. During July and August there was much rain, with intervening spells of warm, not to say hot, weather. As the fungus grows most rapidly in a temperature of about 70° F. when the air is humid, it will be readily seen that it was possible for the disease to make a very rapid headway this season.

There is scarcely a year when there is not a little blight present, but with its remarkable powers of reproduction, the fungus may spread with amazing rapidity when the conditions are favorable.

The fungus blight is an internal parasite, hence spraying with Bordeaux is of little avail in preventing injury after the plant becomes infected. Spraying is valuable, however, in preventing the spread of the disease to unaffected plants, and should not be neglected. Observations show that fully 99 per cent. of our potato growers take no precaution whatever to ward off fungous diseases from their crops. Paris green is used everywhere to kill the beetle, but Bordeaux mixture is seldom or never applied to prevent blight. A spray composed of a mixture of Paris green and Bordeaux would ward off both the beetle and the blight. The fruit-grower has learned by experience the value of this mixture in combating the codling moth and the scab. Some years the scab is not serious, but the fruit-grower always takes the precaution to spray his trees thoroughly, for he cannot forecast the season, with any degree of accuracy. "Fore-spraying is fore-armed" is his motto, and it ought also to be the motto of the potato-grower.

For the best method of preparing and applying the combination, Bordeaux and Paris green, consult Spray Calendar, Bulletin No. 122, published by the Department of Agriculture, Toronto. For potatoes, however, use 8 ozs. Paris green instead of 4 ozs. to the barrel. Spraying should be done all through July and August.

[Note.—See also "Farmer's Advocate" for March 15th, 1902, page 216.—Editor.]

The potato blight first shows itself as small, brownish blotches on the leaves. These rapidly enlarge, so that in a few days the entire field becomes blackened. During the early stages a delicate, white, felt-like covering may be seen at the margin of the brown areas on the under side of the leaf. This is composed of an immense number of branching threads bearing spores. These spores are rapidly dislodged from the threads and are carried away by the wind to the surfaces of other leaves, where they germinate at once and send germ-tubes into the leaf. Once within the leaf they grow rapidly by feeding on the juices, and soon set up the diseased condition known as blight. If, however, the leaves are covered with the Bordeaux the spores which alight on them are killed and infection prevented.

The way the tubers become affected is not so clear, but it is probable that the spores on falling to the ground are often washed by rains through the soil to the tubers, into which they force an entrance and set up conditions which give rise to the rot. In some plantations this year only the uppermost tubers are rotten. This would seem to favor the idea that the rot was produced by spores washed down by rains.

As the winter spore of this fungus is not known, it is supposed by many authorities that the fungus winters over as a thread in diseased tubers, and that after planting the tubers the following season the threads grow into the new shoots and into the new leaves. If this is the case it becomes important to plant "seed" potatoes from localities where the blight was absent the previous season.

Some authorities are of the opinion that the fungus winters over as a thick-walled spore in the tissues of the dead leaves and stalks. This supposition is a quite probable one, for many closely-related blights winter over in this way, and their winter spores are not difficult to find. But the potato blight winter spore has, as yet, not been found, hence the various suppositions as to the method the fungus adopts to survive the winter. If the blight has a winter spore, then all the dead stalks and rotten tubers should be burned. They should never be thrown on the manure heap, for with the application of this manure to potato ground the following year many spores will be distributed and ready to infect the new plants. At this juncture it would be advisable to remove the dead stalks from the ground before digging up the tubers, for it may prevent further infection of the tuber and subsequent rotting.

Book for Carpenters.

Having seen in "Farmer's Advocate," some time ago, about a book on "Framing," which would be appreciated by carpenters in framing hip and valley roofs, kindly let me know where I could obtain a copy?

SIMEON MCPHEE.

Simcoe Co.

Ans.—Order through this office. Price, 75 cents.

APIARY.

The Toronto Industrial Honey Exhibit, 1902.

On entering the honey building at the Industrial Exhibition at Toronto, last month, one was struck with the possibilities of the place and the meager way in which they had been realized. Around the walls were ranged four exhibits of very creditable honey, such honey as that with which our neighbors across the line failed to compete at the Pan-American. But the displays, though tastefully arranged, were small, and the most conspicuous part of the room, the center, was used for storing honey, filling cans, etc.

Beekeepers cannot complain about the building assigned them this year, as it is well located, and certainly contained sufficient space. It must be that the inducements offered in the way of prizes are not sufficiently remunerative to attract exhibitors. The advantage gained by individuals advertising honey in this way is slight compared with the expense of exhibiting. There is no doubt the honey exhibits at Toronto and elsewhere have done and are doing a great good in bringing this food more prominently before the public; but the point is this: The average beekeeper does not need to exhibit in order to market his honey, and exhibiting will not increase his price more than enough to balance the expense. How, then, can the honey building be filled? is a question worthy of consideration.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.

2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest, or which appear to be asked out of mere curiosity.

3rd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.

4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

LYMPHANGITIS AND BONE SPAVIN.

1. I have a horse now. He had lymphangitis. He showed symptoms of pain by pawing with the front foot. The swelling went into his body before it stopped. The swelling is all gone now, excepting in his leg below the hock of his hind leg. When he is pasturing right along the swelling is only in the fetlock joint.

2. I have another one that had a bone spavin and it was killed. The horse was worked rather soon, and the lump came back, and I got a liniment that took the lameness away in four days; and we lost the recipe, and as it was not lame we did not use the liniment long, so the lump is one inch wide by two deep, and one inch thick; that is, from the surface to the proper place of the leg. It is very lame till it is working about five minutes, and then you can hardly notice the horse limp. By the way it acts it seems to me if I had a good liniment that it would be a good thing. I tried Fleming's Spavin Cure, but it is no better than when I started.

Ans.—1. Your horse's leg is likely to be permanently thickened, as one case of lymphangitis very frequently leaves them that way. Get potassium nitrate 4 ounces, resin 4 ounces, pulverize and mix thoroughly. Give dessert-spoonful four times a week.

2. It is absolutely necessary to rest your horse, and you had better have him fired by a vet. and blistered 24 hours after firing, and repeat blister every four or five weeks until better. The blister is composed of biniodide of mercury, $\frac{1}{2}$ dram; cantharides, $\frac{1}{2}$ dram; lard, 6 drams.

TUMOR OR RUPTURE IN COLT.

I have a two-year-old colt that has a lump half as big as a man's head. On his side below the short ribs and on his belly is swollen about two inches thick. The lump is on his right side, and has been there nearly a month, and is hard and not very sore. The colt feeds well and drinks and runs around, but has failed since the lump came on. The veins are swollen along the side from the lungs to the fore leg. Would you kindly tell me what is the trouble and what to do with it?

Ans.—Your colt has either a tumor or rupture, and will likely have to be operated on, so you had better consult a local V. S., or you may try blistering. Get 3 drams of hydrarg binoid, 3 drams of potassium iodide, 6 ounces of water. Apply once a day for 3 days, which will blister the place. After healing repeat.

LAMINITIS.

My 8-year-old mare when carrying first foal, 1900, contracted founder; removed partly, but after foaling this season became crippled again. What treatment would you recommend for her, as she is valuable and I am anxious for a complete cure?

Middlesex Co., Ont.

HORSEMAN.

Ans.—Your mare will probably never go sound, as she has been suffering from laminitis. You will have to keep her feet soaked well with water or poultice with bran. After poulticing 3 or 4 days apply a blister composed of biniodide of mercury 1 dram, cantharides 1 dram, to 12 drams of lard, around the top of the hoofs. Repeat blister after healing.