following year. When spraying crops with an arsenical mixture for the destruction of blister beetles, it is important that the mixture be applied immediately their presence is detected, on account of the voracious habits of these insects. Paris green, the insecticide which has been mostly used, can be appled either as a spray, using one ounce to every ten gallons of water, to which has been added an equal quantity of freshly-slaked lime, or as a dry application mixed with from 10 to 20 parts of flour, land plaster or slaked lime. Plants with such coarse foliage as the potato will stand double the above strengths of Paris green. In some outbreaks it may be necessary to repeat the application, as the beetles which are killed are soon replaced by others.

Blister beetles are very easily disturbed, and for this reason a remedy which has often been very successfully employed is for two or three boys, or more if necessary, to walk through an infested field and wave from side to side boughs of spruce, or other branches. Such an operation will drive the beetles ahead of them, and when the insects come to the edge of the crop they will disperse, and seldom return. This method has given excellent results in outbreaks of the Western Blister beetle. This latter species is particularly ravenous, and is capable of destroying a crop in a very short time, even in a day, according to some reports. In such instances, of course, spraying would be of little avail. In the United States the beetles are often driven in the above manner into a windrow of hay or straw, which is immediately set on fire, and thousands of the insects are thus destroyed.

In gardens, many of these beetles may be killed by beating them from the plants into pans containing water with a little coal oil on the surface. If any of the species which feed on the blossoms of fruit or other trees should occur in injurious numbers, many, no doubt, could be jarred from the trees into an inverted umbrella or other contrivance, and then put into a vessel containing coal oil and water.

On account of the good habits of the larvæ of blister beetles in feeding upon the eggs of grasshoppers, it is often undesirable to destroy them, but, of course, when they occur in destructive numbers it is well that one of the above measures be taken as soon as possible for the protection of the crop.

*The Criddle mixture is made by mixing one pound of Paris green with five ordinary pailfuls of horse droppings, which have been moistened with about half a pailful of water in which two pounds of salt has been dissolved. It is simply scattered among the crop which is being attacked, or along the edge of a crop towards which the young grasshoppers are working.

Potato Bug Destroyer in Nova Scotia.

Editor "The Farmer's Advocate":

My son, a few days ago, saw a small light brown beetle, square shouldered and about as wide as, but rather shorter than, the adult potato bug, with its proboscis sticking into a young potato bug, and when touched it walked off with the bug. The color does not tally with that of the one found by Peter McArthur, but otherwise they appear to be similar, and the great thing is each had its proboscis into a potato bug when found.

"What are we going to do about it?" How can we keep the bugs in check without also destroying the beetle until the latter becomes numerous enough to control the pests?

Halifax Co., N.S. J. TURNER.

A Friend of Fruit Growers.

Editor "The Farmer's Advocate":

I have been a constant reader of "The Farmer's Advocate" for about ten years. I am a farmer's son. I would just like to express my ideas about the little red fox in your valuable paper. I don't think he gets credit for all that he should by most farmers, who look upon him as the worst enemy they have. I don't say he won't take a chicken or a duck once in a while, but I will say the harm he does in this way is not to be compared with the good he does by killing black mice and cotton-tail rabbits, which get to be a complete nuisance to fruit-growers in this part of the country, their ravages being very noticeable during last winter. A neighbor of mine had a whole orchard of young trees completely spoiled by cotton-tail rabbits, and many others had several trees injured or killed. Now, in conclusion, I would like to say that I know it to be a fact that the fox will destroy more mice and rabbits than any other animal living. I think, also, it is to the farmer's interest to give him a chance to live, and not kill him at every opportunity. The Government, in my opinion, should protect them from April 1st to Dec. 1st.

A CONSTANT READER.

Controlling Black-rot of Apples.

The black-rot canker is a well known disease of trees in many parts of Canada. The fungus causes the bark attacked to become roughened and blackened and dead areas appear in it. A single canker often causes the death of all portions of the limb or limbs above the infected area, and dependent upon the limb for food. Remedies have been recommended as follows:—Cutting off or digging out and burning badly diseased branches of trees and the prompt removal of rot-affected apples as they fall; cutting out all small to medium-sized cankers on the trunks, followed by disinfection of the wound; keeping the bark whole by preventing sunscald and injuries of all kinds; keeping the trees healthy, vigorous and clean by cultivation, care and spraying; and in some cases re-heading old trees where the upper branches are diseased and the trunk and main branches in good condition.

That the disease can be controlled has been proven by experiments carried on by the Ontario Agricultural College in an orchard near London, Ontario, where a large number of trees were treated for the disease. These trees were badly damaged, and all showed extensive cankers on the trunks and lower limbs. The cankers were carefully cut out, disinfected with corrosive sublimate (1 in 1000) and painted over. Lead paint free from turpentine was first used, but this was found to crack and check, and thus did not afford complete protection, so a second coating of tar was given. The coal tar was found to give better protection in not cracking or blistering, and no injurious effect was noticed from its use. The cutting out of the cankers was supplemented by lime-sulphur sprayings for the control of apple scale. Nearly all the trees treated showed rapid recovery in one year, and no new cankers could be found on any of the trees in the orchard. It is, therefore, quite safe to state that if the orchard is properly sprayed with lime-sulphur for apple scab the black-rot can be controlled by carefully cutting out the cankers on the diseased trees, disinfecting with corrosive sublimate (1 to 1000) and painting over the wounds with coal tar.

The Niagara Fruit Belt.
Looking from "The Mountain" northward to Lake Ontario.

Thinning Peaches.

F. M. Clement, B. S. A., now District Representative of the Department of Agriculture for Elgin County, Ontario, made extensive investigations into the peach industry of the Niagara District during his final year as a student at the Ontario Agricultural College. From these investigations he gives the following on thinning the crop:

"As yet, very few farmers have the courage to thin the fruit. They cannot bear to see large quantities of fruit pulled off and thrown onto the ground, and consequently, as yet, few of the growers are thinning systematically. A large number practice it a little, but it cannot be said that it is a regular feature of orchard practice; but, to my mind, it is just as important as cultivation and manuring, because we lose the value of the past labor by not continuing the good work a little longer, and removing some of the fruit that is tending to break down the tree. In a thinning experiment conducted in the orchard of Mr. Haynes, of St. Catharines, the trees thinned from three to five inches produced 550 pounds of fruit, while those that were unthinned produced 555 pounds; but in the latter case there were six thousand peaches, and in the former only a little over three thousand; or, in other words, the peaches were almost twice the size. From the trees that were thinned from five to seven inches we obtained 446 pounds of fruit, but they were all exceptionally large and of an excellent quality. No safe distance to thin can be recommended, but in no case should two peaches be allowed to touch each other, unless they are on opposite sides of a fairly large twig. They color and mature much better if they do not touch each other at all. A man must use his own judgment, and if in doubt whether the fruit should be taken off or not, take it off, because in nearly every case when the trees appear with only half a crop in the early season, when large and more developed have all that they can bear."

Celery Blight.

Celery, especially during early summer, when the weather is hot and dry, and the growth is somewhat retarded, is very subject to a blight or leaf-spot. This disease develops more rapidly during sultry nights, when the air is filled with moisture. When the disease first makes its appearance a grayish spot is noticed on the leaves, which in a day or two changes to a brownish color, with a burnt appearance. If the weather continues sultry, and conditions are favorable to the development of the disease, it will gradually spread to all portions of the plant, and the stem will droop, and the plant appear to be scalded. New leaves will continue to be thrown up by the heart of the plant, but when once badly infested, it never has strength enough left to sufficiently overcome the disease to produce a marketable crop.

The proper time to do the spraying for this blight is before it makes its appearance, but if caught in time it may be checked even after first noticed, by spraying with Bordeau mixture. Spraying should commence when the plants are in the seed-bed, and should be continued until the weather becomes cool in the late summer or early fall, when the plants are growing thrifty. The main thing is to keep the plants growing well throughout the summer, as it is the weaker, sickly, slow-growing ones which first show the attack of the disease, and from which it spreads throughout the patch. Spraying precautions should always be taken, as prevention is better than cure with this, as well as all other diseases of plants and animals.