beetles until the foliage is noticed partly eaten. This is too late. By the time the poison takes effect the vines are badly injured and the future crop much lessened.

Potato growers should not wait until the vines are injured, but should be on the lookout for the young "bugs," and as soon as they appear an application of some good insecticide should be made. As the eggs are not all laid at the same time, the larvæ do not hatch all at the same time, and it is usually necessary to spray several times before they are all killed. As it is important to kill the beetles as soon as possible, an insecticide which will act quickly is desirable, and also one that will adhere to the foliage. Paris green and arsenate of lead are two of the best poisons to use. Paris green should be applied in the proportion of 8 ounces or more Paris green to 40 gallons of water, with about 4 ounces of lime to neutralize the effect of free arsenic on the foliage. Four ounces of Paris green to 40 gallons of water will kill the insects, but does not act as quickly as eight ounces. If applied dry, a good proportion is 1 pound Paris green to 50 pounds slaked lime, land plaster or any perfectly dry powder. The dry mixture should be applied when the vines are wet, so that it will adhere better. There are strong advocates for both the wet and the dry mixtures. Wet mixtures may be put on at any time when the weather is fine, but if the best results are to be obtained dry mixtures should be applied only when the dew is on the foliage. If the dry mixture is put on when the foliage is moist it will adhere better than the wet mixture and will also be more evenly distributed. Arsenate of lead paste used in the proportion of two to three pounds to forty gallons of water, or powdered arsenate of lead at the rate of 1 to 1½ pounds adheres better to the foliage than Paris green, and is a good poison to use. It does not appear to kill quite so rapidly as Paris green, and a mixture is recommended of 8 ounces Paris green and 1½ pounds of paste arsenate of lead to 40 gallons of water. "Bug Death" dry and also in the proportion of 1 pound to 2 gallons of water, has been found a good insecticide, but is more expensive than Paris green.

The cucumber flea-beetle frequently does much harm to the potato crop, and being so small, is often not seen, but the results of its depredations will be found in the many small holes which may be noticed in the leaves and in the lessening of the crop on this account. Spraying with Bordeaux mixture and arsenate of lead will control this.

It is found that the parts of the leaves which are injured by the flea-beetle make suitable lodging places and points for germination of the spores of the early, and possibly, late blight. We believe that keeping vines covered with Bordeaux mixture and Paris green is the best preventative in this case.

THE EARLY BLIGHT OR LEAF SPOT DISEASE AND THE LATE BLIGHT OR ROT.

Although much of the premature killing of potato vines is due to the early blight, which is frequently mistaken for the late blight, the latter is by far the more serious disease, as it spreads with much greater rapidity and in addition to the killing of the tops causes the rotting of the tubers.

The late blight usually appears between the middle of July and the first of August, though sometimes earlier or later, depending on the season and part of Canada. The strong and disagreeable odour from a potato field where the late blight is at work is familiar to all, and although it is too late to get the best results after the disease has begun to spread rapidly, it may sometimes be checked by thorough spraying at that time. The loss from blight is usually greatest from the main crop or late varieties, as the early potatoes are usually well advanced before the conditions are the most favourable for the rapid development of the disease. The weather which appears to favour the spread of the late blight, is what is usually known as "muggy," or close days with much moisture in the air. With these conditions myriads of spores germinate, and the disease spreads through the tissues of the leaves and destroys them with great rapidity. The object of spraying is to protect the leaves with the Bordeaux mixture so that if the spores germinate they are killed by it.