li (Fig. 57). I but it is quite description of



olum, to attack watching the te pear tree the ome five specimature, but in ruit enemy was ghs. In many s gathering in large proporower branches. ngs or knobs ed the mark of their deformed he young fruit,

The egg depples were by a number of g crop by the ecure a crop of sily seen that

e divided into st class may be best remedy at at this method ensive grounds d recommends earance. Rea very effecof Ontario, at rith three trees iber number of r. Willard, of ce shaking the 3. They have rn doors but to be shaken. say if it were d up and the hen it falls on the muslin. This is better than the old plan of striking on the trunk. It has to be done every day, and it would be as well twice a day. Mr. Cobleigh finds it takes two hours and a half to shake 1,600 trees. Abundant evidence is forthcoming to establish the effi-

ciency of this remedy.

Another method suggested is to plant the trees in swine or chicken yards, a plan which has also been highly recommended. At the meeting of the Fruit Growers' Association already referred to, Mr. James Dougall, of Windsor, said, "I find that a hen and her chickens cooped under the trees, devour a great many curculios, and secure me a crop of plums." We would, however, rather allow the fowls free roving over the fruit yard at will. The Hon. Mr. Vidal, of Sarnia, said that "Mr. Baubee made a hen-yard around his plum trees, and had no more trouble with the curculio." Mr. Barry says "planting the plum orchard adjoining the hog-pen is probably the easiest and best way of securing a crop of plums." Mr. J. J. Thomas in his admirable work, The American Fruit Culturist, page 155, says, "experience has thoroughly established the efficiency of this method" (the confinement of swine among the trees of the plum orchard), and adds, "geese and hens are to a limited extent useful in repelling or destroying the curculio." Again the late Dr. Kirtland, of Cleveland, Ohio, says, "This insect in one season destroyed every plum on my farm, excepting the crop of one tree in my swine lot; that tree is bending under its load of fruit." Here we have excellent evidence of the efficiency of this remedy; we would say, plant your plum trees together in a lot by themselves, and securely fence them, then as they begin to bear fruit, keep a sufficient number of hogs or fowls in the yard during the curculio season. Some cultivators are in favour of keeping hogs thus confined in the orchard during the whole of the summer season, as it is thought they greatly benefit the soil by their constant rooting and stirring of it. These two are doubtless the most valuable and efficient remedies known.

Careful picking up of the fallen fruit should, in every case, be attended to where hogs or fowls have no access, and this before the larvæ of the curculio have had time to escape into the ground. After being gathered they should be burnt or other-

wise boiled or steamed and given as food to swine.

The second class of remedies are those which merely deter the insect from attacking the fruit. Planting the plum trees on hard, clay soil has been recommended as a preventative measure. Mr. Downing says, "we have never known an instance of the curculio being troublesome in a heavy soil." This statement has been confirmed by observation in my own neighbourhood, where I have noticed that on heavy clay soils a crop of plums can usually be secured, and there are hundreds of acres of just such soil where I believe that thousands of bushels of fine fruit might be annually produced.

It has also been recommended to plant plum trees close beside water-courses to prevent the attacks of curculio, and there are many who have faith in it; we have seen trees so planted perfectly loaded with fine fruit, although there was no water flowing at the time. There are some, however, who deny the efficacy of this measure. J. J. Thomas says "it was formerly supposed that the instinct of this insect would prevent it from depositing eggs on branches hanging over water, but recent experiments prove that it pos-

sesses no such sagacity."

Covering the ground under the tree with lime, plaster, ashes or salt have been used to prevent the attacks of curculio, and in many cases with apparent success. Very recently Mr. M. Watson, of Thedford, told me of a friend of his who had tried plaster; he covered the ground under the tree with it and saved his crop of plums. There is also evidence that salt is useful when properly used. Mr. Downing refers to instances where it has been used with complete success; he says, "the best method of applying salt for the plum weevil is to strew it pretty thickly over the surface when the punctured plums commence to drop." The use of lime is advocated in a similar manner; some also are in favour of ashes.

Employing offensive odours in the form of smoke from oil or tar has also been well spoken of, but these measures are of very doubtful efficacy, and if the insects were thus driven from one part of the fruit crop they would usually take to another.

Making the ground hard and difficult to penetrate under the trees by plastering with mortar or paving with stones or shells are measures which have been advocated. Mr.