

Mr. S. D. WILLARD (Geneva, N.Y.)—Speaking from my own experience, I do not believe that spraying with arsenites is of equal force, or value, in the case of all varieties of fruit. I think I can hardly afford to raise apples, or pears, without spraying with some arsenites against both the codling moth and the curculio. I believe the Bartlett pear is very much protected from the insects that prey upon it by the use of arsenites. Two years ago I shipped some Bartlett pears to Philadelphia, which were kept there in a cool house and sold in the month of November. Not one of them showed any sign of the curculio, or the codling moth, whereas, prior to the time we began that protective process, fully one third of our Bartletts and Duchesses were unfit to ship, or to do anything with, and it became a question in my mind whether I would not abandon the culture; but, since using Paris green in this way, I have found it to be a wonderful protection, and I would not be without it. On the other hand, my experience of the use of arsenites on stone fruits has been such as to determine me never again to repeat it, and I believe that has been the experience of everyone else who resides in my section, I was induced to use them by the advice of a gentleman who now denounces the system, Professor Cook; if he had not suggested them as an effective and perfectly safe remedy, I do not think I would have undertaken the experiment, which has cost me a couple of thousand dollars. Plum trees are so delicate and sensitive that these arsenites will denude them of all their foliage, and the end may be the loss of a good many trees. I used London purple on a large plum orchard and nearly killed it, and at a time when it was yielding a crop of fruit which would in all human probability have brought me \$1,500 or \$1,600. At the same time we had another orchard which we found it impossible to reach, and which we were compelled to protect by our former system of jarring the trees. That orchard was not injured at all. Now, as to the expense of jarring, it is an inexpensive process compared with the returns you get from the trees. It costs only twenty-five cents to jar a tree, and you have no idea of the rapidity with which a gang of men will go through an orchard. Sometimes we have completed the work in two weeks, and sometimes in three week, depending on the weather. Of the two arsenites, I would prefer Paris green to London purple, but too much care cannot be used with either of them, especially on stone fruits.

The PRESIDENT.—Did you use Paris green in your experiments?

Mr. WILLARD.—Not on the plums. There is greater variation in London purple than in Paris green. But it is quite certain that there is great danger to the foliage of plum trees from the use of these arsenites.

Mr. PATTISON.—One or two points I omitted to mention when I spoke before. I have sprayed plums for five years, entirely with Paris green; I never tried London purple. In spraying plums, you should never apply the Paris green as strong as in the case of apples. Another point that must be attended to is this: each solution should be made weaker than the previous one, for no matter how you may stir the barrel, the mixture is getting stronger all the time. It must be remembered too, that rain does not wash off the Paris green, or only to a slight degree; and I believe many people have injured their plum trees by unnecessarily spraying them after a shower of rain. At most I think two sprayings would be enough. I have sprayed plums for five years, and have never lost a tree. I recommend it for plums, pears, apples and also cherries. The trouble is that most people who spray use too strong a solution, especially at the beginning. The quantities commonly recommended are too strong. I use two ounces of Paris green to a forty gallon barrel for plums. For apples I use about three ounces. These are quite strong enough; in fact, I am not sure that they might not, with advantage, be reduced.

The hour for adjournment having arrived, the discussion was postponed.