

of firsts only 76 per cent., which was from the six sprayings; while the average of the whole, the two, the four and the six sprayings, is 61.3 per cent. The difference between this and 91 per cent., as graded by the buyer, indicates the high standard of Mr. Lodeman's grading.

The small size of many of the farm orchards and the multiplicity of varieties of which most of these is composed, together with the pressure of other farm work in spring, may make the spraying of orchards seem an added burden too great to be taken up for the amount of gain. This, however, might be overcome by a number of farmers that live contiguous to each other combining for this purpose, uniting in the purchase of the requisite outfit, and engaging a competent person to prepare the material, do the spraying, and care for the machinery. The amount of liquid required to efficiently spray an orchard of large apple trees will average about four gallons per tree; less will not be sufficient to cover all parts of the tree properly, if more is used the excess will fall to the ground. Two men, one to drive and do the spraying, the other to work the pump, can thoroughly spray at least one hundred such trees in a day.

Again, most farmers wait for a buyer to come and take the fruit at such price as he may think best to offer. This man expects to make a profit sufficient to pay for his time and expenses; the wholesale dealer to whom he ships must have his commission, and if sent to Great Britain the consignee there has his commission. Why not unite also in shipping the fruit direct to the market and thereby save to the producer the profits of at least the travelling buyer?

In closing this paper the writer desires to impress upon the farmers the importance, nay, the absolute necessity of spraying their apple orchards every spring. The apple-scab and the codling worm have been allowed to go unchecked so long that there is not an orchard in the country that is not suffering from the injuries inflicted by these pests. While we were ignorant of the means of preventing these injuries there was no help for it, but now there is no excuse for us if we allow these to continue. It is not only that the apple-scab fungus spoils the apples, but by its great injury to the leaves weakens the trees, so that the fruit which escapes being scabby, does not attain its full size. Nor is the codling worm the only insect injurious to the orchard that the spraying kills. The tussock moth, the yellow-necked and red-humped caterpillars, the canker-worms, the leaf-roller, the leaf-folder, the leaf-crumpler, the very small but very injurious eye-spotted bud-moth, the Palmer-worm, and others that might be named, are usually on hand to add their quota of harm. If we are to secure first-class prices for our apples, we must grow first-class fruit, and there is nothing more certain than the fact that we cannot gather first-class fruit if we do not spray our apple orchards every season.