

varieties to such an extent as to scarcely repay picking. The work of the insects was, for the three years in which we had it under observation, so severe that most of the blossoms would be stung to death before forming fruit. In most cases these trees would blossom heavily, but any fruit that was able to set would soon be punctured by the bug and either drop to the ground or develop into a gnarled or twisted apple. The damage to the smaller twigs was also very apparent, a great deal of the fruiting wood being severely damaged by repeated punctures and covered with scars resulting therefrom. Much of the young growth had been killed outright. The past was now becoming similarly injurious in the Golden Russet orchard and, while the damage to the twigs had not here reached such a state as in the older trees, the crop was gradually and steadily being destroyed. Finally, the bug was rapidly gaining a foothold in the remaining part of the orchard, though the infestation was far from being as severe as in the rest.

The whole orchard, with the exception of the smallest part mentioned above, which was sprayed by the owner, was treated for Green Apple Bug, nicotine sulphate (blackleaf 40), 1 pint to 100 gals. being used. In the spray immediately before the blossoms opened, this was combined with lime sulphur and arsenate of lime. In the after-blossom spray, the fungicide was sodium sulphide ("soluble sulphur") and the arsenical poison was omitted. All our attention was concentrated on spraying for the bug, and when weather conditions were such that injury from the application of the fungicide seemed likely, it was omitted from the spray. A "Friend" spray gun was used throughout the work, as this instrument proved more effective than the ordinary nozzles.

On the Golden Russet orchard and on the Gravensteins in the large orchard, the spray was applied under ideal conditions and resulted in the practical elimination of the bug. A few might still be found in the tops of the trees, but their number was insignificant and they were able to accomplish little damage. In the remainder of the old trees, trouble with the outfit resulted in considerable delays, and most of this block failed to receive the first and most important spray, so that it was only with great difficulty and by