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SOME OF THE BENEFITS FROM SPRAYING WITH ARSENATES IN THE APPLE ORCHARDS OF NOVA SCOTIA.*

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During the seasons of 1912 and 1913 an experiment was conducted by the local laboratory of the Entomological Branch to determine the extent of benefit from each of the four sprays then applied to the orchards of the Annapolis Valley in controlling the three most important groups of biting insects, namely, the Bud-moths, the Fruit Worms and the Codling Moth.

The orchard under experiment was six to seven years old, standard trees forty feet apart, with Wagner fillers eight feet two inches apart, and when taken was moderately infested with Bud-moths, heavily infested with Fruit Worms and moderately infested with Codling Moth. The results throughout were taken on Wagners. Ten acres of orchard were used, divided into plots of 10-12 acres each.

The composition of the spray used was commercial lime and sulphur, one to thirty-five, and Swift's acid paste lead arsenate, five pounds to one hundred gallons; it was applied with a hand pump. The first application was made when the buds were bursting, as soon as the first Bud-moth started eating its way into the bud, to be referred to as spray 1. The second was applied from two to three days before the blossoms opened, to be referred to as spray 2. The third was applied immediately after the blossoms fell, to be referred to as spray 3, and the fourth was applied two weeks later, to be referred to as spray 4.

The infestation of Bud-moths in the buds in the unsprayed checks at the end of the experiment was 59.56 per 100 buds, while

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