

THE CONTROL OF THE BUD-MOTHS.

SPRAYING EXPERIMENTS.

Our experimental work on bud-moth control in Nova Scotia was commenced in the orchard of Mr. R. S. Eaton of Kentville, N.S., in 1912. A ten acre orchard of Wagner apples, planted 8 feet 2 inches each way was selected. This was divided into 12 plots, three of which were used as checks, the remainder being sprayed at different dates to determine the sprays which were most effective. A combined spray of lead arsenate, 5 pounds to 100 imperial gallons, and lime sulphur 1 to 40 was used, the spray being applied with a hand pump.

At that time it was open question as to whether the spray applied when the buds were opening and showing green at the tips, was the best spray in bud-moth control. The experiment was carried on for two years. The following table gives the results obtained:—



Fig. 9.—Buds from Ribston apple tree, 100 per cent infested by larvae of the Eye-spotted bud-moth, and the blossoms borne on a similar twig from the same tree. (Original.)

Spray A. in table No. 1 means the one applied just when the tips of the buds were showing green.

Spray B. about three days before the blossoms.

Spray C. immediately after the blossoms, and spray D. two weeks later than spray C.

These results shown in Table No. 1 indicate that while thorough spraying as in plot No. 4 was preventing the increase of the insects in an infestation which was rapidly becoming more intense, there was still plenty of room for improvement in methods of controlling bud-moths. The hand outfit with low pressure was not giving the results that many growers were getting with power outfits.

The life-history of the bud-moths was studied at this time, and it was found that a period of 10 days elapsed in 1912, and 11 days in 1913, between the time the first larva left its winter quarters to bore into the bud, until the last one emerged from winter quarters. This, and the results from Plot 1 to 2, showed the futility of depending on our early spray to control bud-moth.

In 1914, the drive nozzle which throws the spray for a long distance at high velocity, was used for the first time in the Annapolis Valley by Mr. Fred Johnson of Bridgetown. The coarse driving spray produced by this nozzle appeared to be especially adapted to bud-moth control, and in 1915, an orchard very heavily infested