

Efficient Spraying Apparatus Required*

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FRUIT growers are waking up to the fact that we need more efficient apparatus if we are to do our best work in spraying. Power sprayers are in use in a great many Nova Scotia orchards, and it is a great pity that some of these are not of the best type. A power sprayer should be able to force not less than one hundred and fifty gallons of spray through two lines of hose, with moderately coarse nozzles, in from twenty-five to thirty minutes in order that thorough and the most economical work may be done. One or two points outside of the sprayer might be discussed briefly with profit.

BAMBOOS

Any one visiting orchards in the Annapolis Valley is at once impressed with the enormous per cent. of scabbed fruit on the tops of our large and even moderate-sized trees. The reason for this is obvious when we look closely at the spraying apparatus used in the general orchard. Very few towers are used on outfits, and dependence for reaching the tops of the trees is placed entirely in the rod used. These rods are with few exceptions too short for the purpose. Long rods are not purchased by the wholesalers as they claim there is no sale for them.

No one can reach the tops of trees twenty-five feet in height with a pole ten feet long. This fact was brought strongly to my notice while thinning in the orchard of E. I. Loomer on July 22nd. Mr. Loomer, who is a thorough sprayer and gets results much above the average, was spraying. After the tree which I was thinning had been sprayed, I took the trouble of investigating the thoroughness of the work done. The lower part of the tree was drenched, but on examining the upper portion I found the leaves absolutely dry and without a sign of any spray. The rods used were ten feet long, while the tree was some twenty-three feet high, and though the spray seemed to be reaching its destination, the top of the tree, it failed to do so.

At the time of thinning even a careful observer from the ground would fail to detect scabbed fruit, but a high per cent. of spotted fruit, mostly from the top of the tree, was harvested. This state of things is not the exception, but the rule. One way of remedying this evil is to purchase longer bamboos or to get a tower arrangement so that we are sure that we reach the top of the trees from every side.

NOZZLES

In order to do thorough work and drive spray through dense foliage, it

seems necessary to have a spray of some coarseness. If too coarse, however, it does not spread, is wasteful, and there is great danger of skipping. It is therefore, advisable to use a whirlpool type of nozzle, with moderately coarse discs.

TANK FILLING

The cost of spraying depends to quite an extent on the time required to fill the tank. The first thing required for quick filling is an abundant water supply, and the second an outlet pipe or hose so that the water may be had quickly.

Mr. S. B. Chute, of Berwick, has an ideal plant, with four inch outlet for re-filling and a two hundred gallon spray tank that can be easily filled in three minutes. This means that the sprayer is working practically all the time, and this means reduced cost in spraying. Often where water in any quantity is obtainable the outfit is kept waiting for fifteen to twenty-five minutes to refill on account of too small an outlet. The cost of installing a lead sufficient to do the work in one-fifth of the time is not great and the money lost by not doing so is at times hard to estimate.

An old-fashioned dash churn is cheap and very effective for creaming arsenate of lead.

COST OF SPRAYING

The cost of spraying an acre of orchard will depend on the efficiency of equipment on the number of trees per acre and on the size of the trees. Roughly the cost of spraying an acre of forty medium-sized trees, taking eight gallons

per tree for each application, would be as follows:

The cost will embrace the cost of three hundred and twenty gallons of lime-sulphur testing 1.0085 specific gravity, using five pounds of Sherwin Williams lead to one hundred gallons of spray.

The cost of application will allow forty cents an hour for sprayer and gasoline, operating nozzles. The following figures would result:

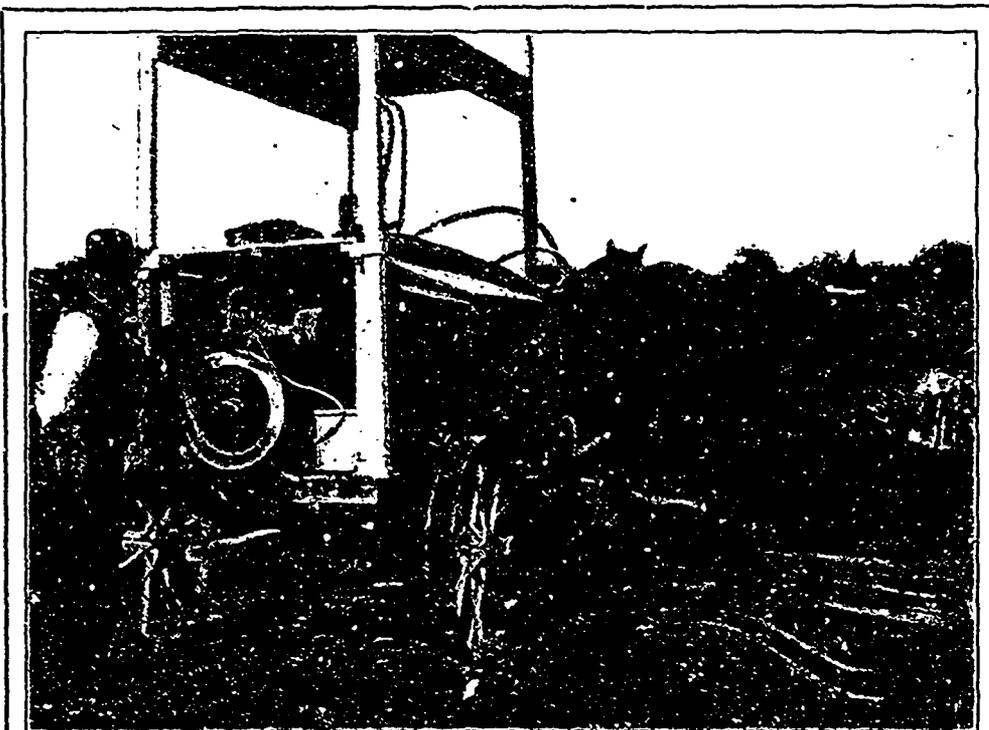
Lime-Sulphur 9.7 gals. at 17½c per gal.	\$1.70
Arsenate of lead, 16 lbs. at 10c.	1.60
Power outfit, 3 hrs., at \$1 per hr.	3.00

Total \$6.30

Each application per acre thus costs the grower either under or over this amount, according to whether his trees take under or over eight gallons per tree, according to whether he has more or less than forty trees to an acre, and according to whether his equipment will put on more or less than approximately one hundred gallons an hour or one thousand gallons a day.

This is, of course, a rough estimate. It is given only for the information of those having limited or no experience in spraying.

White grubs do a great deal of damage to strawberries. They are difficult to handle when they once get into the soil. It is wise to plant in soil that has not been in sod very long. The grub requires two years in the soil, and the second year it does the damage.—W. J. Kerr, Ottawa, Ont.



Filling the Tank with the Tank Filler

This is done by using the pressure from the spray hose. Orchard of Harris and Pearce, New Berlin, Ont.

*Extract from an address delivered at the last annual convention of the Nova Scotia Fruit Growers' Association.