

\$56.75 worth of No. 1 fruit, \$31.50 worth of seconds, and \$6.97 of thirds, or a total of \$95.22 per acre. The same unsprayed would give : No. 1 fruit \$26.75 worth, \$37. worth of seconds, and \$13.64 worth of thirds, or a total of \$77.40, leaving a balance of \$17.82 in favour of the sprayed per acre. This is also supposing that all the seconds and thirds could be disposed of, which is very problematical. The cost of spraying an acre of apple trees five times with dilute Bordeaux mixture need not exceed \$6.00 and may be under \$5.00 ; there should be a net profit of \$10.00 on the basis of equal yields and improved quality. But as a result of these experiments, and looking now at spraying as affecting the yield, we find that the sprayed trees gave 74.14 per cent. of the total yield. This return, added to the improved quality of the fruit, gives a difference in the net receipts of \$51.53 in favour of the sprayed acre. I do not think this side of the argument need be pushed further, though it would probably prove interesting to know the effect of this on the crop of the province. Each grower will find it to his interest, however, to make a calculation for his own satisfaction on this basis.

#### EQUIPMENTS FOR SPRAYING.

Where the area to be sprayed exceeds 15 acres, it will probably pay to buy a horse power pump. These are now made by several firms dealing in force pumps. One which I have used with satisfaction at Ottawa during the past season was purchased from the Field Force Pump Co., of Lockport, N.Y.

Where a barrel pump is used,—and I may say that one of these will answer the requirements of all having 15 acres or less to spray—a strong force pump should be secured. The valves and inside working parts should be of brass, the metal chambers and all castings strong and heavy, and the packing of the most durable character. Nothing is more annoying, and nothing acts more as a deterrent to the introduction of the practice of spraying, than the “break-downs” which occur with irritating frequency at the beginning of the work each year. This matter has been represented so strongly to Canadian firms that I believe satisfactory pumps will be forthcoming next season. I have used with good results pumps manufactured by the Toronto Pump Co., and the Goold, Shapley, Muir Co., of Brantford, Ont., although the first “Ideal” pumps manufactured by the latter firm showed defect under strong pressure ; these, I believe, have been remedied. Each pump should be supplied with two lines of hose, the lengths proportionate to the heights of the trees, each fitted with a stop-cock will always be appreciated. The nozzles which gave greatest satisfaction were the “Vermorel” and the “McGowen” ; the latter is most economical of fluid, and should be used exclusively when the trees are small, or upon the lower branches. The McGowen is a valuable instrument for carrying the liquid to the upper branches with a minimum degree of waste. A bamboo pole, through which a light brass tube may be inserted, is an improvement over an ordinary pole for the purpose of elevating the nozzle. I wish to impress upon fruit growers the desirability of beginning the season's work with apparatus fully equipped and in good working order, as the ease with which the applications are made influences to a large extent the thoroughness of the work, and upon the thoroughness will depend in a large measure the success attending the undertaking.

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