

GARDEN AND ORCHARD.

What it Costs to Spray.

The accompanying engraving [made from a photograph of an Early Harvest apple tree in the orchard of Mr. W. H. Heard, near St. Thomas, Ont.; taken on July 25th] represents in contrast the effects of spraying and not spraying. The tree divides into two main branches from the trunk, and being at the end of the row and on a sidehill, one-half was not accessible to the sprayer. The other half was carefully sprayed throughout the season with the rest of the orchard, as indicated in the tabulated statement carefully kept by Mr. Heard and published herewith. All parts of the tree showed an equal profusion of bloom in spring and set about an equal amount of fruit; but, as the illustration shows, the sprayed fruit was large, free from spot, and the foliage had a much healthier appearance; the unsprayed fruit was small, misshapen, and badly spotted. On the unsprayed portion not one apple could be found free from spot; but in a count of 200 on the other side there were 180 perfectly clean. Though not so apparent, owing to their small size and scabiness, there were just about as many apples on the former side as on the latter, the limbs of which, we might say, were bent down far below the other with the weight of fruit. The growth of new wood on the sprayed portion was about five or six inches, while on the unsprayed about one inch. Mr. R. Stephens (whose orchard, near London, has been visited this season as a branch spray station by the Provincial Govt. traveling sprayer), looking over Mr. Heard's trees two days after the Early Harvest tree referred to was photographed, said had he not actually seen the tree he could not have credited the reality of the photograph. We have never come across a more graphic illustration of the benefits of spraying. As per request, Mr. Heard has furnished us with the details of his summer's experience in spraying, showing date of applications, quantities of materials used, and the cost. In spraying, one man, one boy, and one horse did the labor, of which, also, an accurate account has been kept, and his record is the most complete as to detail and most careful that we have yet seen. Of the trees, 275 were about 18 years old, and the balance about 20 years. The total cost for this large orchard for the season was \$45.76, or an average of 11.43 cents per tree. The copper sulphate is valued at 6 cents per lb.; lime, 1 cent per lb.; and the Paris green, 1 cent per oz. The man's labor was estimated at ten cents per hour and the boy's at five cents. The cost was lower than in some cases reported, the item of labor being reduced through the use of three-nozzle spraying motor cluster on the end of the bamboo ex-

tension rod. Our readers would do well to study carefully this statement, preserving it for reference. In a future issue Mr. Heard promises to give us the final result of spraying his orchard, and if the rest of the trees give a product showing anything like the improvement secured on the sprayed section of the tree photographed, the \$45 invested should return a gilt-edged dividend, and at this writing we might say the orchard gives every indication of so doing.

Notes on the Apple Crop of 1896.

BY E. D. SMITH, WENTWORTH CO., ONT.

As the apple crop of Ontario, Nova Scotia, New York, and all the Northern and Northeastern States runs from heavy to very heavy, and as these are the three great apple-producing areas, it seems likely that very low prices are sure to be realized. When it is remembered that these areas will, in all probability, have from six to ten million barrels for export, and that England, the only great importer, never took from all America over 1,500,000 barrels, it will be seen at once that the expectation of low prices is no wail of a pessimist nor based on a desire to "bear" the market. It is well to know these facts and to be prepared to face them. If freight rates to Great Britain fell in proportion to prices of farm products generally, or if they fell in proportion as the quantity to go forward increased, then, with low prices for apples here, we might expect Great Britain to consume very much larger quantities than usual, more

Unfortunately, however, freights advance as crops increase, and we are sure to pay higher freights on our apples than when the crop is a light one. When the crop is light our freights are reduced to encourage shipments; when crops are heavy freights are advanced, as the steamer owners know they will get all they can possibly carry even at the greatly advanced rates, so we must give up the idea of coaxing the consumers in the "tight little island" to use more fruit than usual on the ground of very low prices, for we cannot lay them down very much cheaper, even if we get only sixty cents per barrel on the ground for our apples, than when we get one dollar other years, the fall in the price of the fruit being made up by the rise in freight rates. What, under the circumstances, then, is the best thing to do? That is the important question. In the first place, nothing should be sent forward but the very best of the fruit. It will certainly never pay to send forward any apples, this year of all others, that are blemished in any way.

Evaporate the Surplus.—Enormous quantities of apples are evaporated in the United States, and I believe very much more of it could be done here profitably. Two or three farmers with large orchards should combine and erect a good evaporator and put up all cull apples of their own at least.

Markets.—I would strongly advise those inexperienced in shipping to sell at home, if possible, especially this year; but if no reasonable offers are made for your apples, then if packed as I shall indicate they should carry to England without any loss. Montreal is the best port to ship from, by all odds, until navigation closes on the St. Lawrence. I believe there is a splendid opening for any one possessing large means to run cold storage steamers with apples to South American ports. Rio Janeiro and Buenos Ayres would take a great many thousand barrels if they got there in the month of November, before their strawberries were ripe. Also Australia would take large quantities if freight rates were reasonable, but the voyage across the tropics is too much without cold storage, although experimental shipments sold at a small profit last season, in spite of the large loss from rot. I believe, also, some of the Continental nations of Europe would use in the winter and spring our hard, long-keeping apples, which are of a quality much superior to theirs. In a season like this we should explore all available fields. It might be—I know not—that our apples would sell well in Japan, China or India. Has it ever been tried? We have plenty to spare this year. Why should not the Government make a trial shipment to test the matter? Sure it is, Great Britain cannot eat them all, and if we fully explore other markets this year when we have plenty of fine, cheap apples to use, we will know a little better what to do when the next big crop comes. [NOTE.—Manitoba, the Northwest, and British Columbia should take a considerable share of the Eastern surplus.—Ed.]

Picking.—As many, doubtless, this year will be handling their own apples, it may be well to mention some points as to picking. But first a word as to picking. Apples may be very much damaged by careless picking. I have seen hundreds of barrels so damaged that a prudent packer would not put them in his No. 1 stock by pickers dropping the apples into the picking-baskets instead of laying them in, or by pouring them out roughly upon the pile. Picking-baskets should be lined with canvas and every apple laid into the basket and not dropped into it even six inches; and when poured out of the basket they should be poured out carefully, as the slightest bruise injures the appearance and hurts the sale. Apples should be picked as soon as the apple parts from the stem on being turned upwards. They are oftener injured by leaving them on the trees too long than the reverse. Speaking of the three leading varieties, Greenings are ready first, Baldwins a week or ten days later, and Northern Spy last. Spys may generally be left on the trees to their betterment, until danger of freezing—they get more color, which is exceedingly important in an apple.

Another important matter is the best thing to do with the apples after picking. In some parts it is customary to haul them to the barn, cellar or shed when picking; here they are usually placed in



APPLE TREE—ONE SIDE SPRAYED, THE OTHER NOT.

COST OF SPRAYING 400 TREES, SIX TIMES, DURING 1896, BY W. H. HEARD, AT ST. THOMAS, ONT.

Date of Spraying.	Barrels used.	Gallons used.	Composition of Mixture.			Cost of each Spray ing, with out labor.	Labor per hr Boy, 5c; Man, 10c.	Horse, per hr. 5c.	Total Cost.	Cost pr. barrel.		Cost per Tree.	
			Copper sulphate.	Lime.	Paris green.					Includ ing labor.	With out labor.	Includ ing labor.	With out labor.
			Lbs.	Lbs.	Ozs.								
April 18-20.....	7	350	none	28	42		15 h.	15 h.	\$3 56	51c.	08c.	.89c.	.14c.
Cost.....		1c. pr. g.		14c.	42c.	\$0 56	\$2 25	\$0 75					
May 1-2.....	9	450	36	33	54	2 88	20	20	6 88	76c.	32c.	1.72c.	.72c.
Cost.....		1.3c.	\$ 2 16	18c.	54c.		3 00	1 00					
May 14-16.....	10	500	40	40	40	3 00	26	26	8 20	82c.	30c.	2.05c.	.75c.
Cost.....		1.64c.	2 40	20c.	40c.		3 90	1 30					
May 30-June 2.....	11	550	44	44	44	3 30	25	25	8 30	75c.	30c.	2.07c.	.83c.
Cost.....		1.5c.	2 64	22c.	44c.		3 75	1 25					
June 12-14.....	11	550	44	44	44	3 30	30	30	9 30	84c.	30c.	2.32c.	.82c.
Cost.....		1.69c.	2 64	22c.	44c.		4 50	1 50					
June 29-July 1.....	11	550	55	44	none	3 52	30	30	9 52	86c.	32c.	2.38c.	.88c.
Cost.....		1.73c.	3 30	22c.			4 50	1 50					
Total.....	59	2950	219	236	221	\$16 56	146 h.	146 h.	\$45 76			11.43c.	4.14c.
Total cost.....			\$13 14	\$1 18	\$2 24		\$21 90	\$7 30					
Average.....		1.48c.	\$2 63	39c.	45c.	\$2 76	\$3 65	\$1 21	\$7 63	75.97c.	27c.	1.905c.	.69c.