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THE METHODS OF CO-OPERATIVE SPRAYING

The Value of Spraying, When and How to Spray, and the Good Results That Have Followed Co-operative Efforts in the Matter of Assisting the Distribution of Spraying. By W. D. A. Ross, Chatham, Ont.

The value of co-operative spraying depends upon circumstances. If there are not too many farmers, and these live close together, spray co-operatively, and use a power machine. In our own experience, where we have long distances between orchards, we find that much time is lost in moving; time of men that are more expensive than ordinary farm help. It thus costs us more than it ordinarily would. When we first broach-

ed the subject of spraying, very few of the members of our co-operative Apple Growers' Association would undertake it. Co-operative spraying seemed the only way to induce them to try it, so the Association undertook to take care of the spraying of their orchards. We argued that the spraying would pay for itself by the increased value of the output. Now that the pioneer work in this respect has been done, both for fungous diseases and scale, and since the number of those asking for spraying is constantly increasing, our spraying outfits are taxed to their limit.

FEW MEMBERS BETTER THAN MANY.

It would be better to divide up the work and the growers themselves in groups of five to ten each. In this way it could be done much more cheaply and at just the proper time. This is especially true in spraying for scale as the best job can be done on a windy day by spraying one side, then finishing when the wind drives the spray to every part of the tree and keeps it off the operator. The spraying for codling moth requires to be done while the blossom end of the apple is in position to receive it shortly after the blossom drops and this condition lasts only for a short time.

HOW TO SPRAY.

To be effective, spraying must be thoroughly done. One can easily see why this should be so. If only a part of each tree is done and the balance untouched, it is only a matter of a short time before the trouble, whether insect or fungus, will spread from the unsprayed parts to the rest of the tree. One who does the work indifferently is apt to get poor results and to proclaim loudly

that spraying is a failure. Where the work is carefully done, good results are certain.

A VALUABLE EXPERIENCE.

I have in mind one of our most careful and thorough members, who had a lot of Fall Pippin Apple trees which bore regularly a crop of large fruit, but useless for shipping on account of scab and this is an apple that is seldom without scab in this district unless sprayed. When we first



SPRAYING A PLUM ORCHARD ON THE FARM OF MR. STURCH, WENTWORTH COUNTY

Well cared for orchards, such as the one above, generally pay well for the attention they receive. Notice the fine spray thrown by the nozzle. A misty spray reaches all parts of the tree and gives the best results. Power sprayers are becoming popular and may be secured by farmers on the co-operative plan and with but little individual expense.

used our power outfits, he had these sprayed thoroughly, except one side of a few trees in a corner that could not be reached. In the fall he hauled to our warehouse for packing the finest lot of this variety I had ever seen. They were all good sized and not more than two or three scab spots could be found in a bushel of them. On the other hand, the unsprayed parts of trees had not an apple free of scab. The results were even more marked in the following two seasons.

Full results can hardly be obtained in the first season. Each succeeding season should show an improvement. This is the experience of all who have practised spraying regularly. We have been using the Bordeaux mixture at a strength of four

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The Importance of Good Action and What it Means

The importance of good true action in all classes of horses is becoming appreciated by horsemen more and more. An animal should be so constructed that his limbs and muscles work together easily, smoothly and to the best advantage. Such a horse can accomplish as much or more and, with far less expenditure of energy and effort, than another horse in which motor power levers and fulcrum do not work together so advantageously. This integrity of all working parts gives the result which the horseman looks for, that is, good action. The horse possessed of good action has, to an extreme degree, the capacity of applying the power of his muscles to good advantage, of performing work with the smallest expenditure of energy, and, through this of continuing that work.

The horse which steps away at a free and easy looking gait accomplishes his work with less labor to his muscles than one whose gait is of a jerky, energetic appearance, or one that has the awkward waddling stride not seen so often now as formerly. The horse which rolls in his walk does so because the energy of his muscles is applied to a limb which the joints throw too far from under the centre of the horse's weight, thus pitching the whole body slightly to one side. This in turn requires the exertion of another set of muscles to compensate by a strong steady pull which is necessary to "balance" him again. This looks very awkward. It makes the horse "go hard" on himself.

All this means a waste of power. Not only this, but the horse which travels wide behind,

usually walks with his hocks wide apart, and pointing slightly outward at the cap. This throws the point at which the force is applied a trifle to the outside of the line of resistance, a line which would run from the centre of the toe at the ground, to a point considerably inside of the hock that is not well set under the horse. This means that the lines of power and of resistance are not nearly parallel, a fact which can be ascertained by observing the tendency of the foot to turn on the ground when the horse throws himself against the collar, causing still further waste of energy.

The horse which carries its hocks closely together, with the rear points a trifle turned in, rather than outward, is more likely to carry his