

the pesticides. And yet we are under fire. We use many, many other things that do not require the proof of efficacy and safety that is needed in the pesticide field. You can go and buy a car, get a driver's licence, and nobody worries you. They test you once, and that is it. But with pesticides we are continually working.

This current year, 1963, we have spent literally \$250,000, on malathion yet it is now 12 years old. We are continually spending money and investigating further and further the effects of toxicity, and we inform all the governments and we work with them. If there is any question that they wish to have answered, we will try to deal with it.

Mr. ENNS: As we hear more and more intelligible witnesses such as yourself we become more convinced that the alarm "bell" sent out by Rachel Carson should not have been printed, or should not have received such wide circulation. Do you believe there has been an unreal alarm started by Miss Carson's book?

Mr. COOPER: It was unreal; however I would not say it was all bad. I think that one thing from our standpoint is beneficial, and I believe your government has helped. We are bringing out facts of which small groups of the public were not aware. They just did not know what went on day by day, and the steps that were being carried out to protect them. We are not saying that there were not mistakes made, and that we will make mistakes in the future quite possibly, but we are moving closer and closer to the place where it will be impossible to make mistakes through the incorrect use, or the correct use of compounds because we did not have sufficient information. This particular product, malathion, is perhaps one of the best documented compounds that we have today. I think everybody has worked on it from the standpoint of the scientist and the medical profession, and we are compiling a tremendous reservoir of information.

I can think of no other product that we use in everyday life where this type of information has been required.

Mr. WILLOUGHBY: I notice this pamphlet which I have here now, and it is very interesting, about malathion. I presume there must be some research work going into the effect of mass spraying as in the forest industry and other large industries, where there is a large amount of spraying, and the effect of it on wildlife and fish.

Mr. COOPER: Yes, sir, we are very interested in these things. Malathion has been very well checked through. It was not used in large scale forest spraying for the spruce bud worm control, because of the toxicity to fish. It went so far and was stopped. But we do know that malathion has had beneficial effects through mass spraying of such animals as deer, where it will control parasites on the deer, and also help many skin diseases, such as the mange which we had found in certain over-populated deer areas. We have also found that in the use of malathion it will help to increase the bird population through control vectors as in the case of the red-winged blackbird.

Mr. WHITE-STEVENS: Yes, and I might add that Hunt and Keith who belong to the wildlife service working out of Davis, California, made a careful study of the effect of malathion on bird life incident upon control of the red bell pine in this manner in the Yosemite forest of California. They took four areas which were sprayed and four which were not and carried on a check of them. They made bird counts immediately before spraying, 96 hours after, one month later, and finally one year later. When the results were carefully analyzed and interpreted, there was no significance whatsoever in the bird count at any time. In fact there was a slight numerical reduction in the bird count immediately following the spraying, about a month later, because some