

Mr. COON: I certainly would agree that everything possible should be done to label these dangerous substances in such a way as to convince the user that it is a hazardous substance and to convince him of the desirability of following the instructions to the last detail.

Mr. NESBITT: It has been mentioned several times at other meetings as well as this one that perhaps operators or persons who make their living by commercial spraying should be required to have some form of licence. I think perhaps the word "licensing" often implies a mere payment of fees, so to speak, and a mere registration. But, from the experience which you have gained in your country and from what you know do you think it might be advisable if these operators were also required to take some sort of course in the use of these substances and to pass at least some sort of examination before they could require a licence?

Mr. COON: I think it would be highly desirable that there should be some licensing examination, yes.

Mr. ROXBURGH: Earlier in your report you mentioned that a great deal was known about the effect of these pesticides on food and the food tolerants in each case, and so on. However, you made a statement that there were other chemicals which possibly were just as poisonous and about which we know very little; what are these chemicals and what did you have in mind when you made that remark?

Mr. COON: Well, just those that we know something about; there are as many as 80. This implies that there must be others that we do not know anything about. Those we do know about include such things as the goitre producing substances that are commonly present in cabbage and other leafy vegetables; the cyanide producing glycosides that are present in quite a number of vegetables, lima beans being one, and in the seeds of peaches, apricots, apples and many other fruits. There is oxalic acid in spinach and rhubarb. It is present in a quantity that would never be considered, say, as an additive to a food. Oxalic acid is quite a toxic material and, as I say, it is present in spinach at such a level that if people ate spinach three times a day it would be deleterious.

Mr. ROXBURGH: We had better not tell the spinach people that. If I might say so, we have been giving our poor old friend, D.D.T., an awful going over here, and yet we have an insecticide known as lead arsenate, which is one of the old standbys. The question has been asked how long D.D.T. will remain in the soil. Could you advise how lead arsenate compares in toxicity with D.D.T. as it affects the human being, which is what we are interested in, as well as animal life.

Mr. COON: I would consider lead arsenate and any of the other arsenical preparations—and of course there are quite a few of them used as pesticides—of much greater importance toxicologically than D.D.T., certainly, as far as the human being is concerned. There are still many more poison cases arising out of the arsenicals than out of D.D.T., and I believe one could say that there are many more poison cases arising out of the arsenicals than all the chlorinated hydrocarbons combined.

Mr. ROXBURGH: Then, as compared with D.D.T., what effect will it then have on the soil and, as a result, on the future population?

Mr. COON: Well, I would say if D.D.T. had not been developed to stimulate the development of many other chlorinated hydrocarbons then the arsenicals undoubtedly would have continued to be used to a much greater extent and it would give more trouble as a result of that than we now have.

Mr. ROXBURGH: Is not one of the great causes of cancer, lead?

Mr. COON: Lead?