

and Washington, places like Wenatchee and Yakima where they use a great amount of organophosphorus compounds, or places like Cleveland, Mississippi in the middle of the corn and rice growing areas of the south where they use a great amount of D.D.T. and of the cyclodiene insecticides which we mentioned, and to see whether the public-health statistics show any significant difference from anywhere else where they do not use insecticides. This was done by the U.S. Public Health Service in both places over a period of five years about five years ago, and they were unable to find any item of public-health statistics which showed that there was any significant difference in any disease.

With respect to the cyclodiene insecticides, of which dieldrin is an example, also aldrin and so on, they have been valuable for particular things, as for example, to control grasshopper outbreaks cheaply. These compounds have given no indication of any symptomatic poisoning of humans through the contamination of food, but naturally our government has set regulations, which they arrived at more or less by educated guess and which are laid down and corrected with such an incredible margin of safety that in the case of dieldrin on milk and on products fed to dairy cattle the tolerance limit for these compounds has been set at zero. Really, I suppose any person will tell you that it would be impossible to get in fact a zero tolerance when cattle are raised in an area where grasshoppers are controlled with these compounds. The fact that these compounds on the prairies now have had to be banned by a single province is simply in order to meet a standard which has been set by our own very conservative federal government; that is the essential reason why. Of course, in the case of cyclodiene compounds, I cannot state the same promising and reassuring things that I have been able to state with respect to D.D.T. In fact, really not enough work has been done on chronic poisoning with cyclodiene insecticides of which dieldrin, aldrin, heptachlor, etc. are examples, but it is being done and the reports are coming down shortly to the body which I presume is the best to report to, that is the body of the United Nations which is WHO. From these, levels will be established for what is called the acceptable daily intake; that is the maximum amount of that compound which you may take in per day and with which you will be all right with a margin of safety as far as international expertise can deduce. These figures will then be applied to the various items of diet forming particular diets of different countries, and thus tolerance limits can be properly set. Indeed, the U.S. President's advisory committee also singled out this group of compounds (the cyclodiene insecticides) as those for which the tolerance limits should be examined.

Mr. Chairman, this is just an introductory statement. As a private citizen and as one who has studied insecticides for many years, and written text books on them, it has been my impression that government regulation of these insecticides as it stands has been remarkably satisfactory and extremely conservative. There should be constant examination, as against the possibility of revision, compound by compound—not in generality, but compound by compound because that is what we are dealing with. This should be made easy for government officers. One way of making things easy, of course, is to provide the sinews of operating, which is in fact money, in order that the contamination levels of food stuffs can be constantly and quantitatively measured.

En passant I should say that in the United States this examination has shown that the percentage of crops coming to market over tolerance limits is extremely low; and that, by and large, farmers have themselves ensured that on the average they are about 60 per cent below tolerance limits.

Further, I should say it is curious that I have heard the criticism that reference to United Nations organizations such as WHO and FAO simply refers us to the same old people; in other words, the people we know in our own