

also. I would estimate that a heavy load of D.D.T. in the body might take longer than a year to disappear from the body.

Mr. ENNS: We heard from a previous witness that in areas where malaria is being controlled the operators who are applying D.D.T. over such areas of the world under WHO would have something up to 200 parts per million of D.D.T. in their food and they have been left without any ill effects. They were considered to be in good health. You have stated in your general report that we have not that much to fear from some of these residues which we absorb. Do you feel there is sufficient knowledge at this time to know how long we can continue tolerating these?

Mr. COON: No. I made the point in my comments earlier that this is one of the unknowns. It is not known how long a man can tolerate, say, 200 parts per million of D.D.T. in his fat throughout a lifetime. We do have other observations in addition to the one you mentioned. Dr. Hayes, in his writings, brings up some of these figures, namely that D.D.T. formulators frequently have as much as 600 parts per million in their fat and they have done this for as long as five years or so without any evidence of deleterious effects. Experimental work on monkeys have shown that monkeys fed 200 parts per million D.D.T. in their diet for  $7\frac{1}{2}$  years showed no deleterious effects.

Now, it is pretty well agreed by toxicologists that man is probably quite a bit more sensitive than a number of experimental animals, although how much more sensitive on this long term basis we cannot answer.

Mr. ENNS: For example, how long does it take before D.D.T. deteriorates in the soil or, if it is sprayed, how long does it stay there? Does it ever disintegrate or deteriorate?

Mr. COON: The evidence supports the fact that a certain amount of D.D.T. will remain as D.D.T. under normal weather conditions for years. Now, this is another unknown; I do not think it can be said just how long a given molecule of D.D.T. might remain in that form under the normal variety of weather conditions we get in this region.

Mr. ENNS: If rain washes these substances into the soil and it is drained to a stream will this happen year after year if there is no further spraying, or is it possible that it will be lodged?

Mr. COON: It might be all leached out in a given area. A certain amount would certainly seep down deep into the soil, where it might lodge and remain there; whereas the rest could very well be washed into the streams and, eventually, a given area of soil could be clear of D.D.T. Again, I am speaking here in an attempt just to be logical. The experimental and analytical work that has been done will not give us clear answers to all those questions.

The CHAIRMAN: Mr. Rynard, have you a question?

Mr. RYNARD: Mr. Chairman, I would like to ask Dr. Coon, this question. In view of what has been said and in view of the inherent danger in spraying and operating along the lines of what has been expressed here this morning I am wondering if he would think that the operators doing this work should be licensed in order that we may know what they are doing right across the country.

Mr. COON: Well, it would be my opinion—and I would like you to take a look at that word “witness”; I am not an expert witness along these lines and I am not here to testify on laws relating to pesticides—there should be more regulations concerning the use of pesticides. I believe I did mention in my comment here labelling as well as further restrictions concerning the availability of pesticides.