

EVIDENCE

FRIDAY, November 8, 1963.

The CHAIRMAN: We will now come to order. We have a quorum present, and as our witness this morning we have Professor Brown, head of the zoology department of the University of Western Ontario. Dr. Brown kindly forwarded some reprints of articles that he has written in the recent past, and we have all probably had a chance to look at them. We will ask Dr. Brown if he would like to make any opening statement.

Dr. A. W. A. BROWN (*Professor and Head, Department of Zoology, University of Western Ontario*): Mr. Chairman, I became interested in insecticides after the war and have been engaged in Canada in the development of fairly large-scale control activities with insecticides against mosquitoes and black flies in the north, and in the beginnings of the spruce budworm campaign. Subsequently I have worked with the World Health Organization in various parts of the world in disease control activities using insecticides to control the insects which carry disease.

At the end of the war it seemed at last that we had what might be called true insecticides; that is compounds which killed insects but not man and animals. Before the war we had general poisons such as the arsenicals, the fluorine compounds and hydrogen cyanide, as well as nicotine—all general poisons. However, after the war we had the synthetic organic insecticides of which D.D.T. is the best and prime example. It has been calculated that in the years between its very first appearance in 1942 in Europe and the year 1952, already D.D.T. had saved at least 5 million lives and had prevented at least 100 million illnesses. Indeed, the lack of practical toxicity in man of D.D.T. is truly remarkable.

An article in the British Medical Journal of 1963 has stated that there has still to be proven a case of a single fatality owing to D.D.T. alone. In fatal accidents, most of which concerned children, the solvent which carried the D.D.T. alone was sufficient to have caused the fatal accident. At the present moment D.D.T. is being applied to the dwellings of 500 million people, which is a fantastically large proportion of humanity. In the global malaria eradication campaign, one-third of which has already been completed, the success against a disease which causes two and a half million deaths a year in the world is primarily owing to the cheapness of an attack with D.D.T.,—an insecticide, drug or whatever you want to call it. Indeed, among the 130,000 spray men who are applying it, and under close medical supervision, because WHO is in this, there have been no symptoms of poisoning with D.D.T.

Then the other synthetic insecticides to appear were dieldrin, aldrin, chlordane, heptachlor, endrin and toxaphene, a family of compounds which may be generically called the cyclodiene insecticides. These are peculiarly fitted to kill insects which are normally hard to kill, such things as grasshoppers and locusts, wireworms and a whole variety of beetles. Then, subsequent to that, of course, have appeared what are known as the organophosphorus compounds, of which the first to be practically used was parathion. When the word "deadly" is applied to insecticides, this is the modern insecticide to which the appellation applies correctly, but the implication of course is the opposite as well. Parathion is used by people who are, we trust, in full knowledge of