SECOND SCIENTIFIC CONFERENCE CONVENED IN KIEV ON ISSUES OF HYGIENE, TOXICOLOGY OF PESTICIDES AND CLINICAL STUDY OF POISONINGS

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[Following is a translation of an article by Ye. I. Spynu (Kiev), published in the Russian-language periodical Gigiyena Truda i Professional'nyye Zabolevaniya (Industrial Hygiene and Occupational Illnesses) 7(5) 1963, pages 58-59. Translation performed by Sp/6 Charles T. Ostertag Jr.]

On 17-19 October 1962 the Second All-Union Conference on Hygiene, Toxicology, and the Clinical Aspects of Poisoning by Pesticides was held in Kiev. It was convened by the Committee for the Study and Regulation of Poisonous Chemicals, Main State Sanitary Inspectorate of the USSR Ministry of Public Health and the Kiev Institute of Industrial Hygiene and Occupational Illnesses.

A characteristic peculiarity of investigations in the stated field is the complexity of work by the representatives of hygienic science, chemistry, and agriculture which was reflected in the composition of the participants at the conference and in the themes of the reports.

The conference was participated in by 247 scientific and practical workers: Toxicologists, industrial hygienists, nutritionists, representatives of communal hygiene, pharmacologists, synthetic chemists and analytical chemists, entomologists, agronomists, doctors from rural medical points and medical-sanitary units, workers from plant protection stations and enterprises for the production of pesticides and representatives from the republic ministries of public health and agriculture.

The chairman of the Committee for the Study and Regulation on Poisonous Chemicals of the USSR Ministry of Public Health, L. V. Medved', presented the results of scientific investigations on the hygiene and toxicology of pesticides for the period from 1957 through 1962 following the convening of the 1st Conference, and projected the missions of research in this area. Under study at the present time are all the new pesticides, the production of which will be initiated during the current seven year plan. Materials obtained by a unified method of research permit the elucidation of a number of topical problems of practice and create a theoretical basis for the study on the dependence of the toxicity of preparations on their chemical structure in order to arm chemists with knowledge concerning the purposeful synthesis of pesticides of selective action. Investigations on the hygienic normalization of pesticides has widened. At the present time the permissable concentrations in the air of 33 pesticides have been corroborated; the cadres for investigations

in the area of the toxicology and hygiene of pesticides have been prepared. The scope of practical activity by sanitary organizations on the problems of prophylaxis of intoxications by pesticides has grown considerably. The speaker emphasized the necessity of intensifying work on the prophylaxis of possible harmful aftereffects caused by contact of personnel working with pesticides, the prevention of contamination of food products and also the air, soil, and sources of drinking water supply for populated points. It is necessary to expand the investigations on the development of methods of early diagnosis of intoxications and effective measures for their therapy. An important place should be occupied by problems of the toxicological evaluation of the combined effects of various poisonous chemicals and also the united action of pesticides and various factors of the medium. It is necessary to study the carcinogenic and mutagenic properties of pesticides.

In V. P. Vasil'yev's report (Kiev) data was presented concerning the successes of the chemical method of combating plant pests and the perspectives of introducing into the agricultural economy of new chemical means for the protection of plants.

Ye. I. Lyublina and A. A. Golubev (Leningrad) in their report generalized on the investigations for calculating the permissable concentrations of chemical substances in the air.

The report of L. I. Medved' and Yu. S. Kagan (Kiev) was related to several problems on the toxicology of pesticides. The authors consider as promising the development of research on the comparative biochemistry of warm-blooded animals and insects, and the search for specific metabolites and their antimetabolites. Yu. I. Kundiyev (Kiev) presented materials characterizing the absorption of organophosphorus insecticides which are mildly toxic for warm-blooded animals. G. Kh. Shakhbazyan notes as one of the achievements the ban on using a number of highly toxic poisonous chemicals in agriculture, and also the active, complex work of medical personnel, chemists, and entomologists in the search for pesticides with a selective effect.

In the report by Ye. I. Spynu (Kiev) new materials are presented concerning the influence of organic chloride pesticides on several aspects of neuro-endocrine control. An original hypothesis about the chain aspects of the development of intoxication by organic chloride pesticides was proposed by M. A. Klisenko (Kiev). Ye. N. Burkatsek reported on the toxidynamics of dinitrophenol pesticides. In Ye. I. Makovskaya's report (Kiev) facts are generalized about the pathological anatomy of intoxications by pesticides. M. K. Vinokurovaya and Ye. S. Kharitonovaya (Saratov), N. I. Smetaninyy, A. G. Plakhovaya, and coauthors (Taxhkent), S. G. Gevorkyan (Yerevan), N. V. Khomich and S. Yu. Buslovich (Minsk) presented materials concerning the toxicity of individual herbicides and defoliants. K. S. Shadurskiy stressed that in recent years the theoretical level of the investigations being carried out on the toxicology of pesticides has grown considerably.

Reports were heard on problems of industrial hygiene and the state of health of workers engaged in the production of organophosphorous insecticides (V. N. Trefilov, E. M. Bongard et al., Gor'kiy), organic chloride pesticides of diene synthesis (Z. V. Babayan, P. I. Kalyaganov), insecticides in Uzbekistan (Kh. Z. Lyubetskiy and others, Tashkent) and Tadzhikistan (A. Yakubov, Dushanbe), and of the hygienic evaluation of sprayers used in the vineyard industry (Prof. A. F. Stoyanovskiy et al., Odessa).

One session of the conference was devoted to nutrition and comminal hygiene and also the clinical aspects and therapy of poisonings by pesticides. The report of B. A. Krivoglaz (Kiev) was devoted to the clinical characteristics of chronic intoxications by pesticides. S. I. Ashbel' (Gor'kiy) in his report presented important materials about remote aftereffects of chronic intoxications by organic compounds of mercury.

A number of urgent problems raised at the conference caused lively discussion. Entering into the discussions, M. G. Shevchenko, representative of the USSR Ministry of Public Health, and P. A. Korolev, representing the State Commission for Poisonous Chemicals, noted the active work of the Committee for the Regulation of Poisonous Chemicals.

In the final decisions adopted by the conference, the necessity was noted for more thorough theoretical investigations on the problems of pesticide toxicology, developing micromethods for their analysis in the air and in food products, and the importance of strengthening the sanitary supervision of the control of storage, transportation and application of poisonous chemicals in the agricultural economy.