

NCI STUDY FINDS INCREASED CANCER AMONG PESTICIDE APPLICATORS IN FLORIDA

An epidemiological study of 4,411 pesticide applicators in Florida found increased incidence and risk of certain cancer types among the applicators, the National Cancer Institute (NCI) has noted in response to questions from the House Agriculture Committee's Subcommittee on Department Operations, Research and Foreign Agriculture (See separate story). On this study, NCI told the Subcommittee:

"A cohort mortality study of 4,411 pesticide applicators licensed by the state of Florida in 1965. Members of this cohort applied pesticides to control termites, other household insects, rodents, fungi, and weeds, and may have handled a variety of different chemicals. In this recently completed study, the risk of lung cancer rose with the number of years a persons was licensed to apply pesticides and reached nearly three-fold among those licensed 20 or more years, suggesting that exposure to pesticides may contribute to the excess. The risk of leukemia also was slightly elevated. Although only four deaths from leukemia occurred, three were of acute myeloid type and one was classified as acute unspecified. No deaths were from chronic lymphatic leukemia, a common adult form."

The NCI noted other ongoing epidemiological studies examining the cancer experience of people exposed to pesticides, including: A study of California applicators similar to the above Fla. study; a comparison of the mortality experience of 10,000 aerial applicators and 10,000 pilots not engaged in applying pesticides; and:

"Two grants concerning cancer incidence in farm populations. One study is a case-control study to investigate various factors (including pesticides) in the rural and agricultural environment that may contribute to the observed high leukemia rates observed in rural Iowa. The other study utilizes a cohort approach, investigating cancer incidence rates and mortality rates by cause in farmers in New York State. This study is seeking to ascertain any relationship between particular exposures and cancer site with the aim of identifying dose-response relationships."

NCI told the Subcommittee in response to written questions that "Epidemiologic studies will play an important role in assessing cancer risks associated with pesticide exposures. They do possess certain weaknesses, including the lengthy latent period associated with most cancers, a limited capacity to detect low levels of risk, and an inability to study persons with single exposures." The NCI continued:

"Strengths of epidemiologic methods, however, complement weaknesses of the experimental approach. Epidemiologic investigations allow a direct measurement of disease risk in human populations, thereby eliminating the problem of extrapolating from one species to another. Epidemiology also deals with 'real' human exposures. Although interpretation of results from the single exposure approach of experimental science is less ambiguous than commonly faced in epidemiology, it is not representative of the human experience where multiple and complex exposures are the rule.

"Finally, a lengthy latent period does not necessarily prohibit epidemiology from providing valuable information for regulatory needs, since risk evaluation by regulatory agencies often involves chemicals with

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lengthy histories of use (e.g., formaldehyde, benzene and herbicides). For newly introduced pesticides and other chemicals, experimental approaches using laboratory animals and in vitro tests are obviously needed to predict carcinogenicity, but research is underway to determine whether epidemiologic studies of exposed populations may be combined with certain laboratory probes to identify early biological responses or preclinical indicators of cancer development."

The National Toxicology Program (NTP), responding to a written question from the Subcommittee, noted that the following four pesticides were about to be tested by NTP: atrazine, ordram, 2,3,4,6-tetrachlorophenol and Roundup.

NTP, answering the Subcommittee's questions on test costs, said in part, "Current estimates for the chronic carcinogenicity or chronic toxicity study, including all analyses, costs approximately \$690 thousand (exclusive of the inhalation route). When tested by the inhalation route, an additional \$200 thousand to \$300 thousand would be required."

NTP said it could but would not want to test pesticides for manufacturers at their expense. NTP stated that its mission does not "include carrying out tests aimed principally at either support or denial of registration or licensing of chemicals."

The Office of Science and Technology, also answering written questions from the Subcommittee, noted that cancer policy being prepared by the Office would be published in the Federal Register for comment (See story, Page 3).

FDA, replying to a question on the use of mutagenicity data, told the Subcommittee in part that such data "is used to help us be reasonably certain that the substance is not also capable of inducing cancer (at low doses) by a genotoxic mechanism. The absence of positive mutagenicity data by itself is not viewed by the FDA as a sufficient basis for classifying a carcinogen as a nongenotoxic agent."

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● OPP BUDGET FOCUS OF FIFRA HEARING STATEMENTS FROM EPA, AUDUBON SOCIETY

The statements on FIFRA reauthorization from EPA and the National Audubon Society (NAS) focused on the budget for OPP, EPA finding it adequate, NAS otherwise.

Edwin L. Johnson, Director, OPP, told the House Agriculture Committee's Subcommittee on Department Operations, Research and Foreign Agriculture that the Administration did not want any FIFRA amendments but rather simply a reauthorization for two years, and five years for the FIFRA Scientific Advisory Panel (SAP).

Maureen Hinkle, NAS, testifying today, April 6, in the Subcommittee's FIFRA reauthorization hearings, supported the coalition's FIFRA amendments (See separate story).

The OPP Director said an Administration bill setting out the simple reauthorization request would be filed soon. The Subcommittee plans to introduce a bill shortly after the hearings (See separate stories).

Johnson's prepared statement repeatedly emphasized the adequacy of the budget for pesticide regulation (See separate story).

"Given the need for continuing fiscal restraint and the realities of finite budgets, the pesticide regulatory program has established priorities and planned activities carefully, ensuring that the agency's health and safety responsibilities in pesticide regulation will be met," according to Johnson's testimony.