PESTICIDES

Regulating a monster

Even if DDT were banned all over the world today, it could be too late to avert cataclysmic effects upon the living world. There are already 700 million pounds of DDT in the atmosphere; fish float belly-up in the reeking waters of the Great Lakes, and each person carries within his body a share of the poison.

Conservationists have long sought action against DDT and other persistent pesticides. And last week, Secretary Robert H. Finch of the Department of Health, Education and Welfare, in the wake of moves to ban DDT in several states and foreign countries, announced the appointment of a Secretary's Commission on Pesticides and their Relationship to Environmental Health. The Federal commission will study the evidence of the "degradability and persistence, and the adequacy of our knowledge of their chronic and acute effects upon human health," and make its recommendations by Nov. 1.

The President's Scientific Advisory Committee in 1963 recommended that, "The accretion of residues in the environment be controlled by orderly reductions in the use of pesticides, and the wide scale use of persistent pesticides be restricted." The Secretary said that now, some six years later, "we are still too far from the goal proposed by PSAC."

The newly appointed commission will be composed of experts from the public and private sectors of the nation and will be headed by Dr. Emil Mrak, retiring chancellor of the University of California at Davis.

Since its introduction in World War II as a pesticide suitable for large-scale use, debate over its unrestricted use has produced little insight into what harm it works on human health directly or through contamination of the environment. Reports have been dramatically conflicting, ranging from experiments in which human volunteers were fed DDT 200 times the amount ingested in the average American's diet, with no apparent ill effects, to recent studies showing insidious metabolic disturbances affecting enzyme synthesis, endocrinologic functions and neurologic disorders suggestive of a basis for mental disease.

The first action against the pesticide came in Australia, where several states banned it, and international residue standards are in the offing (SN: 10/5, p. 337). The principal focus of concern in the United States has centered on the Great Lakes, where the build-up is considered a serious hotspot by conservationists and commercial fishermen. In March, the Food and Drug Administration seized 28,000 pounds of market-bound Lake Michigan coho salmon which had a DDT concentration range of 12 to 19 parts per million.

There had been no official standard set for permissible DDT residues in fish, though tolerances exist for other foods. The Food and Drug Administration had not considered fish a problem.

Governors of the five Great Lake states met last week in Chicago and asked the Secretary to withhold setting standards until further investigation for which they have asked Federal funds.

But in the wake of the coho find and Finch's concern, FDA set a limit of 5 parts per million for fish, to take effect immediately.

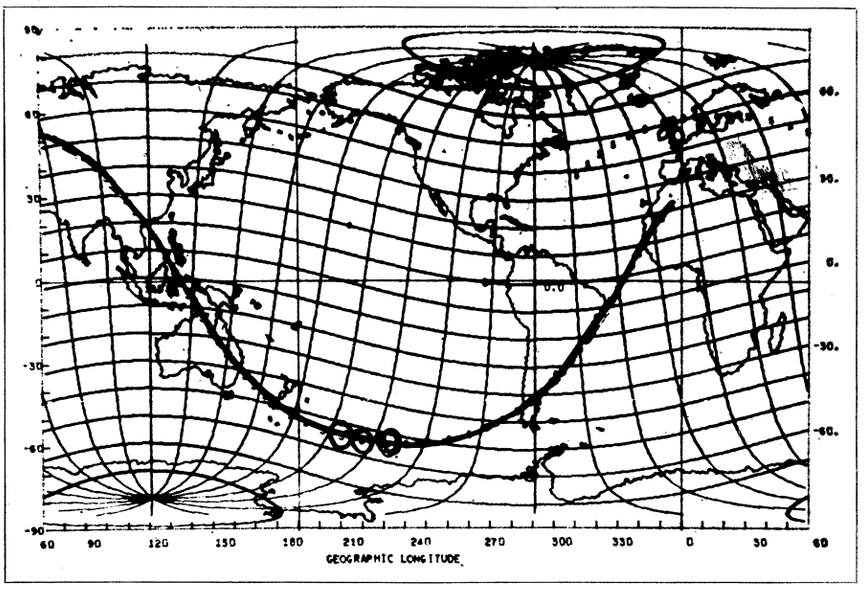
In other areas of the country DDT has been subjected to restrictions or restrictions are contemplated. Arizona has declared a one-year moratorium; Illinois, Wisconsin, Montana and Connecticut are considering various types of restrictions; in Pennsylvania, a state commission has recommended banning DDT use. Permits and controlled registration of persistent pesticides are required in California, Florida, Oregon and Washington.

Sweden has recently imposed a two-year ban on DDT use following an international conference in Stockholm which represents the most comprehensive study to date on the hazards represented in the present levels of pesticides in humans, wildlife and the general environment. Carefully documented evidence gathered over a period of years was presented showing the global distribution of persistent pesticides, its presence in increasing amounts in plants, wildlife, all major bodies of water, the atmosphere and human beings and data proving toxic effects in animals.

At least three members of Congress were less than enthusiastic about the Secretary's commission; they believe the case against DDT has already been made. Nevertheless, their position is one of extreme interest in the study as it unfolds between now and November, for they each have bills before Congress calling for the banning of DDT. They are Sen. Gaylord Nelson (D-Wis.), Rep. Joseph Karth (D-Minn.), and Rep. Bertram Podell (D-N.Y.).

RAE REPORTS

Earth's broadcasting atmosphere



Radio emissions from discrete regions in the path of the Explorer satellite.

Earth's outer atmosphere sends bursts of radiation into interplanetary space, very similar to those emitted by Jupiter. The source of this radio energy at low frequencies is equally mysterious for both planets. Jupiter and earth are the only planets known to have magnetic fields and radiation belts.

The sporadic radiation at frequencies ranging from 700 kilohertz to nine megahertz has so far been detected only when the Radio Astronomy Explorer satellite is over southern geomagnetic latitudes on the night side of earth.

This was one of the first results from the National Aeronautics and Space Administration's RAE, reported to the International Union of Radio Science meeting in Washington, D.C., last week. Dr. Robert G. Stone, project scientist from Goddard Space Flight Center, said the "same processes that account for the Jovian radio noise may also be active in the earth's magnetosphere."