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DEPARTMENT OF THE INTERIOR

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FISH AND WILDLIFE SERVICE

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INTERIOR ENDORSES ENLARGED RESEARCH PROGRAM ON EFFECTS OF PESTICIDES ON WILDLIFE

The Department of the Interior today announced endorsement of legislation which it said will greatly increase the scope and value of the research now being conducted to determine the effect of pesticides upon fish and wildlife resources.

Investigations which have been made under existing legislation clearly indicate a problem of much greater magnitude than originally contemplated and show that the existing authorization is inadequate, the Department report stated.

In letters to Chairman Warren S. Magnuson of the Senate Committee of Interstate and Foreign Commerce and to Chairman Herbert C. Bonner of the House Committee on Merchant Marine and Fisheries, Assistant Secretary Ross L. Leffler, cited some of the known harmful effects of current practices in the use of pesticides on wildlife and on fresh water and salt water fish. Four major objectives of the research program listed in the report are:

(1) To determine the acute and chronic toxicities of some 200 basic pesticidal chemicals on the market, plus the many which are in various stages of development;

(2) To conduct chemical analyses of plant and animal tissue to determine the presence of pesticide residues, to develop diagnostic procedures for determining suspected poisonings, and to measure the degree and duration of toxic conditions in fish and wildlife habitats;

(3) To carry out field appraisals of immediate and long-range effects of pest control operations upon fish and wildlife populations;

(4) To facilitate the compilation and dissemination of findings from research studies so that chemists, entomologists and others may apply such knowledge in the development of new pest control materials, formulations and techniques of application to minimize hazards to desirable forms of animal life.

The Assistant Secretary for Fish and Wildlife pointed out that while in 1940 the wholesale value of the pesticides then being used in this country was $40 million, this had jumped to $290 million in 1956. By 1975, it is estimated that the wholesale value of such materials will approach the billion dollar mark. One-sixth of all the croplands and millions of acres of forests, rangelands and marshlands, are treated annually with these chemicals. Most of these areas are important wildlife and fish habitat.

Some of the chemicals persist in the soil for periods of three to five years or longer. Certain food chain organisms, such as earthworms, living in treated soil or waters, tend to concentrate the poison in their body tissue. Hence, birds like the woodcock or robin, as well as aquatic creatures--fishes, crabs, shrimp and oysters--are affected when they feed upon contaminated organisms.

Studies made to date have shown that DDT may kill fish and other aquatic life when applied at dosage rates in excess of one-quarter pound per acre; two pounds per acre will kill birds; five pounds will cause heavy mortality among mammals. Other insecticides such as heptachlor, dieldrin, aldrin and endrin, have acute toxicity ranges of 15 to 200 times that of DDT.

Pheasants, quail, and other species exposed to sublethal amounts of some pesticides in food materials, suffer delayed chronic effects in the form of reduced reproductive capacity and survival of young. Persistent high levels of DDT have been found in the bodies of fishes months after temporary concentrations in the stream environment had dissipated. Bird numbers in several of the areas treated with heptachlor for imported fire ant control, have been found to be reduced 75 to 85 percent. Populations of quail, wild turkey, and rabbits also, were decimated on some of the areas. In other parts of the country, particularly the Midwest, local populations of robins and other insectivorous songbirds have been depleted as a result of measures carried out for mosquito and Dutch elm disease control.

Considerable aerial spraying is carried out over salt water marshes, particularly in the East, and control chemicals applied to land areas adjacent to inshore water, reach important fish-producing water by drainage. There is thus need to determine the effects of pesticides on inshore aquatic life--fish, shrimp, and shellfish--which live in these waters as adults and on these species for which the marshes and estuaries are essential nursery grounds. Menhaden, shad, striped bass, croakers, and weak fish are reared in these areas during their early stages. Shrimp, crabs, oysters, and clams which support major commercial fisheries, spend a part or all of their lives in inshore environments.

Findings from limited studies carried out at the Galveston Laboratory show that lindane, an insecticide employed for the control of mosquitoes, is very toxic to shrimp. A total kill of laboratory test animals resulted within 24 hours after exposure to concentrations of the chemical as low as five parts per billion. Other findings reveal that crabs may be killed by eating fish flesh containing low levels of malathion.

The proposed legislation, H. R. 5813 (S. 1575), would raise the authorization from $280,000 to $2,565,000 a year. The Assistant Secretary stated that while the present appropriation authorization was inadequate, no specific authorization should be listed in the Act. He recommended that the research program be permitted to expand on a logical and scientific basis and that funds be requested from Congress as required by circumstances and in accordance with established budgetary procedures.

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