



PERSISTENT

THEM?

WHY

AVOID

PESTICIDES

PERSISTENT PESTICIDES

DO NOT USE

| | |
|----------|----------------------------|
| DDT | CHLORDANE |
| DIELDRIN | HEPTACHLOR |
| ALDRIN | BHC (Benzene Hexachloride) |
| ENDRIN | TOXAPHENE |
| LINDANE | MIREX |

The persistent pesticides are the chlorinated hydrocarbons. They do not break down into less harmful materials for many years.

Persistent pesticides cannot be used safely. They cling to plants, dust particles or living organisms until eaten or absorbed by living things.

They are carried by wind and water, encircling the globe much like radioactive fall-out, and coming down in rain, snow, and dust.

They are not very soluble in water, but dissolve readily in the fatty tissues of all living things.

Small creatures are eaten in great quantities by larger creatures, which in turn are eaten by creatures still larger than they.

At each level of this "food chain" persistent materials are concentrated.

Such pesticides as Dieldrin, Aldrin, and Endrin are far more toxic than DDT.

ECOLOGICAL EFFECTS

"Nature abhors a vacuum." Examples of this are:

- 1) Some insects develop resistance to persistent pesticides. When other less resistant types are eliminated, the resistant insects thrive in the unnatural void, creating a need for ever more powerful chemical treatment.
- 2) Persistent pesticides have decimated populations of insect-eating song birds in many parts of the country. Seed-eating grackles, starlings, sparrows, and red-winged blackbirds have filled the void.
- 3) DDT reduces photosynthesis in algae. Scientists are concerned that selective poisoning of certain kinds of algae may result in excessive growth of undesirable kinds.

"Algae blooms" in Lake Erie have been both symptom and cause of the lake's decay.

Periodic oceanic "blooms" are known to contaminate vast quantities of fish, which provide underdeveloped nations with an important source of protein.

Persistent pesticides simplify the environment, making it unstable. Unlike the elimination of species in the slow process of evolution (over thousands or millions of years), our "fragile web of life" is rapidly becoming disrupted by drastic declines of important species.

EFFECTS ON MAN AND WILDLIFE

All creatures are contaminated with persistent pesticides, even oceanic birds that never approach land except to nest, and penguins and seals living thousands of miles from pesticide sources.

Eagles, osprey, and other birds are laying fewer eggs each year. Often the eggs have such thin shells, they break before they can hatch.

All persistent pesticides are nerve poisons. The large number of air crashes by crop dusters has been attributed to the effect of pesticides on the reflexes of the pilots.

Although people have eaten DDT with no apparent ill effects, research with laboratory animals suggests the possibility of serious effects from long-term exposure.

According to FDA standards, Americans are "unfit to eat". We now average 12 parts per million DDT.

Babies are born with DDT residues in their bodies. Nursing babies get more Dieldrin and five times the amount of DDT than the FDA allows in cow's milk.

DDT and other persistent pesticides have been shown to cause cancer, birth deformities, and mutations in laboratory animals.

Man and other predators do not have the capacity to become resistant to persistent pesticides. At present the sublethal effects, rather than direct kills, are of greatest concern to scientists.

ALTERNATIVE METHODS OF PEST CONTROL

Some scientists justify the use of persistent pesticides for underground termite control and for malaria control in countries that can't afford more expensive means of control. Other scientists note and fear the "ecological boomerangs" in those countries.

Alternative methods of control are already available for virtually all other pest problems.

Some of the alternative, shorter-lived chemicals, such as parathion, are already widely used by farmers. Parathion is extremely hazardous, however, and must be used with great caution.

Scientists are working hard to develop biological methods of control. They are experimenting with parasitic wasps for control of the cereal leaf beetle and alfalfa weevil, common Michigan pests; and already have had major successes fighting Japanese beetles with milky spore disease (*Bacillus Papillias* Dutky). These are but a few of many current projects.

Research for biological control of pests is complicated, and funds are very difficult to obtain.

LESS PERSISTENT PESTICIDES

RECOMMENDED ONLY IN EXTREME EMERGENCIES

METHOXYCHLOR
CARBARYL (SEVIN)
PHOSDRIN
DIAZINON (harmful to birds)
MALATHION
CAPTAN
FOLPET FUNGICIDES
DIMETHOATE
PYRETHRUM
NON-CHEMICAL POWDERS, such as:
DRI-DIE
DRIONE, or diatomaceous earth

Less-persistent pesticides usually break down into less harmful substances within a year. Some, such as Diazinon, however, break down into substances which continue to affect soil organisms and therefore cannot be considered harmless.

Because most are designed to kill a variety of insects, these, like the chlorinated hydrocarbons, eliminate beneficial insects and create a need for continued chemical control.

No-pest strips and flea collars for pets which contain DDVP (Vapona) should be used only in well-ventilated areas - never near food, (in groceries, restaurants, or the kitchen) and never in rooms occupied for long periods of time (bedrooms, family room).

Although Pyrethrum is considered to be one of the safest insecticides, aerosol sprays containing Pyrethrins often contain additives which can be health hazards. Avoid inhalation of aerosols, and use sparingly.

Scientists representing chemical and agriculture interests view efforts to ban persistent pesticides as a threat to production and use of all pesticides. They try to confuse the issue by pointing the finger at other pollutants such as mercury, lead, or PCB's. However, scientists using sophisticated laboratory procedures are able to distinguish between persistent pesticides and these other pollutants, and have proved in the laboratory the facts stated in this pamphlet.

EAC'S WORK ON PERSISTENT PESTICIDES

The Environmental Action Council supports legislation to eliminate the use of persistent pesticides.

We initiated court action in Washington (joined by national organizations) to ban DDT. Important legal precedents and action have resulted, and we hope that continued pressure will lead to the almost-total ban of this pesticide.

We continue to alert our members to pertinent legislation so that they can let their feelings be known to their legislators.

WHAT CAN YOU DO?

- * Study the problem
- * Join the Council
- * Send for our companion brochure,
A SAFER APPROACH TO PEST CONTROL
- * Send for wallet-size pesticide card

* Write to Wm D Ruckelshaus, II29 20th Street,
N.W. Washington, DC 20036

The Environmental Protection Agency and its director, Wm D Ruckelshaus have inherited the responsibilities of pesticide regulation from US Depart. of Agriculture, Interior Depart., and HEW. Mr. Ruckelshaus has announced the cancellations of registrations for all uses of DDT, Dieldren, Aldrin, and Mirex. At the same time, he has initiated a comprehensive review of the remaining chlorinated hydrocarbons (Benzene Hexachloride, Lindane, Chlordane, Heptachlor, Toxaphene, and Endrin) as well as all products containing mercury, lead, and arsenic (persistent materials also used in pesticides).

Pesticide industry lobbyists have been historically persuasive in their efforts with representatives of government. Witness Mr. Ruckelshaus's decision to review these pesticides again...in spite of the fact that reports from four successive government advisory committees have all recommended the phasing out of the chlorinated hydrocarbons. Mr. Ruckelshaus has specifically asked for letters from concerned citizens, scientists, industry, and others. Perhaps a massive letter-writing campaign from informed citizens might convince him of citizen determination to an environment free from contamination from such pesticides.

* Write your legislator

Legislation that would control the sale and use of persistent pesticides has been introduced in the state legislature. Write to your Senator and Representatives expressing your concern over the use of these products and asking them to support strong control measures.

* Help to educate others

RESOURCE MATERIAL

Organochlorine Pesticides in the Environment
(Special scientific report. Wildlife No. 119.)
for sale by the Superintendent of Documents,
U.S. Government Printing Office, Washington,
D.C. 20402 - 40¢

Presidents Science Advisory Report on Pesticides
1963 - 45¢ Write Supt of Documents, U.S. Gov't
Printing Office, Washington, D.C.

Report of the Secretary's Commission on Pesticides
and Their Relationship to Environmental Health.
U.S. Dept of H.E.W. Dec. 1969. \$3.00. Write
Supt of Documents, U.S. Gov't Printing Office,
Washington, D.C.

If you haven't already read Silent Spring by
Rachel Carson and Since Silent Spring by Frank
Graham, they make excellent background reading for
general information to get you started.

The Web of Life by John Storer is an easily read,
informative book on basic ecology that illustrates
the complexity of the ecological system and points
out some of the effects of man's tampering.

*Additional copies of this brochure are available
from the West Michigan Environmental Action
Council.*

WEST MICHIGAN

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