

AGRICULTURE

'Cides Can Harm Man

THE CASE of the airplane pilot who survived a crash uninjured, walked away from his downed plane and was dead within five hours is not a mystery.

The crash killed him—he was flying an agricultural aircraft containing 100 gallons of deadly parathion, a pesticide. The lid of the pesticide tank opened when the plane crashed and the pilot's clothes were soaked with the liquid "bug killer."

Although it is not always so easy to identify a pesticide as the killer, the National Office of Vital Statistics has collected some mortality figures. Including those accidental poisonings where the cause of death may be due to pesticide poisoning, there were 61 fatalities in 1957. This is probably a conservative figure. The number seems to vary slightly from year to year, Miss Lillian Guralnick of the vital statistics office said.

Among the hundreds of chemicals being used now as pesticides and insecticides, it is the group known as organic phosphates that cause the most harm. Parathion, TEPP, demeton and phosdrin are the most poisonous. It takes only a few drops of the concentrated material to kill a man. Furthermore, these pesticides are easily absorbed by the body through the skin: contaminated clothing, and breathing dust or sprays are all known ways that the poison gains entrance to the body.

An effective antidote is available. How-

ever, prompt action is needed. Persons who use these organic phosphate compounds should be extremely careful in applying them and in caring for their protective equipment such as respirators, work clothing and masks.

Soap and water destroys the chemicals rapidly and thorough washing is an effective protection.

Symptoms of poisoning include disturbed vision, extra fluid in the mouth, nose and lungs, marked increase in sweating and pinpoint-sized pupils. The services of a physician should be obtained.

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PHARMACOLOGY

Data Suggest Some Drugs Cause Permanent Upset

SOME "WONDER" drugs may cause permanent harmful effects long after patients have stopped taking them.

A study of the after-effects of some drugs on rats resulted in a plea to drug companies by a psychobiologist. Test the long-range effects of drugs upon animals and their possible connection with humans, he urges.

To his knowledge, drug companies test the side-effects of drugs at the time of their use, but do not test the effects of drugs when they are no longer needed, Dr. Curt P. Richter told SCIENCE SERVICE. Dr. Richter

of the Henry Phipps Psychiatric Clinic at Johns Hopkins Hospital, Baltimore, reports the results of his rat experiments in the *Proceedings of the National Academy of Sciences* (July).

An antibiotic, antithyroids, a pain killer, an adrenal hormone and a female hormone were tested on rats.

Results ranged from an interrupted reproduction cycle to just plain inactivity. These reactions depended upon the drug each rat received. Not all rats exhibited these after-effects, he points out.

Yet these tests demonstrate that prolonged administration of several commonly used drugs and hormones are capable of producing lasting changes such as abnormal food and water intake. One rat that received sulfamerazine, for example, was fine during the period when the drug was taken daily.

When the drug was discontinued, however, the animal's daily food intake began to fluctuate as did his activity. Sometimes the rat ate nothing and did nothing. At other times he ate large portions of food and ran around a drum, increasing his activity, at a furious pace.

A total of 57 rats were observed in this study. Although this is not a large number, and although not all of the rats showed changes, the fact remains that these effects never occur in normal animals, Dr. Richter stresses. That these effects do come out is important, he explains.

These are the kinds of permanent after-effects that the drug companies should watch, he concludes.

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PUBLIC HEALTH

Twice as Many Americans Have Health Insurance

TWICE AS many Americans have become covered by health insurance since 1948.

Likewise, the amount of benefits paid also increased, five times the amount paid through health insurance since 1948.

More than 61,000,000 Americans were covered by some form of health insurance in 1948. Within ten years, 123,000,000 persons were protected against the costs of medical and hospital care, the Health Insurance Institute in New York reported.

Benefits paid out in 1948 totaled \$772,000,000. By 1958 that figure had risen 500%, to \$4.7 billion.

The extent to which the health care costs of the nation are being increasingly met through health insurance is shown by the fact that from 1952 to 1957 the nation's medical bill climbed by more than 50%, and health insurance benefits designed specifically for hospital and medical services increased 118%, the Institute said.

In 1948, benefits from health insurance paid 27% of the total costs of hospital services and six percent of the total costs of physicians' services in the U. S. In 1958, however, health insurance paid 60% of these hospital care costs and more than 30% of the physicians' costs.

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COLLAPSIBLE DAM—An inflatable dam, designed to be collapsed when flood danger arises, stretches 150 feet across the Los Angeles River. Manufactured by The Firestone Tire & Rubber Company, it is made of nylon coated with neoprene. It is inflated by pumping water into it. Eight feet in diameter, the giant bag holds 50,000 gallons of water when filled to capacity. It can be collapsed in ten minutes.