

QUESTION:

What are the Pesticides? Explain their different types ; why persistent pesticides are more lethal for mankind? ✓

ANSWER:

I. PESTICIDES:

DEFINITION:

✓ A pesticide is any substance or mixture of substance intended for preventing, destroying or repelling or mitigating any pest. A Pest can be ✓ defined as any organism that causes an economic losses to mankind. These includes insects, weeds, rodents and worms etc.

PURPOSE OF PESTICIDES:

✓ They are widely used in agriculture for the following purpose:

- i- To increase crop yield and quality
- ✓ ii- To reduce post-harvest losses
- iii- To ensure food security

II. TYPES OF PESTICIDES BASED ON THEIR CLASSIFICATION:

1. FUNGICIDES:

These kill fungi including moulds, blights and rusts etc.

2. FUMIGANTS:

These produce gas and vapours intended for preventing soil and buildings from pests.

3. HERBICIDES:

These kill weeds or other unwanted plants that grow.

4. INSECTICIDES:

These kill insects and other arthropods.

5. MITICIDES:

These kill mites that feed on animal and plants.

6. MOLLUSCIDES:

These kill snail and slugs.

7. NEMATOCIDES:

These kill nematodes (worm-like organism) that feed on plants and animals.

8. REPELLENTS:

These repel pests such as insects for example Mosquitoes.

9. RODENTICIDES:

These control mites or other Rodents.

10. ARCHAICIDE:

These control spiders:

B. TYPES OF PESTICIDES BASED ON CHEMICAL NATURE:

Traditional Types

ORGANIC
PESTICIDES

INORGANIC
PESTICIDES

SYNTHETIC
ORGANICS

NATURAL
ORGANICS

I ORGANIC PESTICIDES:

Organic Pesticides are based on chemicals having carbon as their basis of molecular structure. They are complex in nature as compared to the inorganic Pesticides. They do not easily dissolve in water.

Division:

Organic Pesticides can be sub-divided into two additional groups i.e. Synthetic Organics and Natural

Organics.

A SYNTHETIC ORGANICS:

Synthetic Organics are produced artificially by synthesis. This group comprises of most modern pesticides which includes DDT, Phy. Permethrin, $\alpha,4$ -Dglyphosphate etc.

B NATURAL ORGANICS:

The Natural Organic Pesticides are derived from naturally occurring sources such as Plants. Examples include Rotenone and Pyrethrum.

II INORGANIC PESTICIDES:

Inorganic Pesticides are simpler compounds and are environmentally stable. They have crystalline salt-like appearance and are readily soluble in water such as lime and Sulphur.

C TYPES OF PESTICIDES BASED ON MODE OF ENTRY:

1. STOMACH POISONS:

Insecticides enters through Pest through the mouth and acts in the stomach.

2. CONTACT POISON:

Insecticides enters into the body through the integument of the Body or through respiratory system through spiracles.

3. FUNGICIDANT POISON:

These are volatile poisons and it enters the blood through respiratory system.

III. PERSISTENT PESTICIDES ARE MORE LETHAL FOR MANKIND:

REASON:

Persistent Pesticides are considered more lethal for mankind because they do not break down easily in the environment and remain active for a long time. Unlike non-persistent pesticides, they accumulate in soil, water and living organisms through a process called bioaccumulation, these chemicals build up in human and animal tissues, and through biomagnification their concentration increases at each level of the food chain. As a result, even small amount can cause long-term harmful effects such as Cancer, damage to the nervous system, hormonal imbalance and reproductive disorders. Since they contaminate crops, drinking water and livestock, humans are continuously exposed to them. which makes persistent pesticides

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dangerous for human health and environment.