

**Government General Degree College, Chapra**

**Department of Chemistry**

**Project Name:-** Problems of heavy use of pesticides in agricultural

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## Problems of heavy use of pesticides in agriculture:—

### ▣ Pesticides:—

- A substance used for destroying of pests (insects or other organisms) harmful to cultivated plants or animals.
- A Pesticide is any substance or mixture of substance specifically intended to prevent or repel or destroy or lessen the effect of a pest.

### ● Air pollution by pesticide:—

- Pesticides can spread by volatilize and may be blown by winds into nearby areas.
- Following factors affect to the spreading of pesticide in the air.
  - Weather conditions at the time of application.
  - Temperature.
  - relative humidity.
- Ground spraying produces less spread than aerial spraying.

### ● Water pollution by Pesticide:—

- There are four major routes through which pesticides reach the water.
  - ① Contaminate water when they spraying.  
Ex. Rice cultivation.

② it may percolate, or leach, through the soil

③ it may be carried to the water as runoff.

④ Carried to water by eroding soil.

• After contaminate the water it makes lot of problem.

① Application of herbicides to bodies of water can cause fish kills.

② Reduce the quality of drinking water.

③ Reduce the amount of water available for cultivation.

④ Altering the physical characteristics of water bodies.

• Insecticides are typically more toxic to aquatic life than herbicides and fungicides.

• Soil pollution by pesticide:-

• The use of pesticides decreases the general biodiversity in the soil.

• Also affect to the soil micro-organisms and decrease the soil fertility.

• Effect on growth of the plants.

• Residual effect of the pesticide in the soil.

• Enter to the food chain and bio magnification.

## • Biomagnification:-

- If any individual continuously eat contaminated food, it will accumulate in the body.
- All individuals are part of food chain as a result, toxins stored in the fats and oils pass one trophic level to next trophic level.
- The higher up the food chain more concentrate the pesticide called biomagnification.

## • Pesticide poisoning:-

- Short-term exposure to high levels of pesticides can result in harm to organs and even death.
- Long-term exposure to lower levels of pesticides can cause cancer.
- Children are at a greater risk than adults.

## • Health effects of pesticides:-

### • Acute effects:-

① Acute health problems may occur in workers that handle pesticide, such as abdominal pain, dizziness, headaches, nausea, vomiting, as well as skin and eye problems.

② Pyrethroids, insecticides commonly used in common bug killers, can cause a potentially deadly condition if breathed in.

### • Long term effects:-

- ① Cancer
- ② Neurological effects.

- ③ Reproductive, effective effects.
- ④ Fertility effects.

### VA conclusion :-

- In modern agriculture use of pesticides is a must, but proper and efficient use has to be done.
- To save current and also future generation, ecology; judicious use of chemical is recommended.
- Alternative strategies - Bio-pesticides, IPM.