

## Safe Use of Insecticides

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### INTRODUCTION

Insecticides are toxic to insects as well as plants and all other type of animals including man if they are not used carefully, they may cause acute or chronic adverse effects on plants, cattle, beneficial fauna and even human beings.

### Selection of insecticides

Originally, insecticides are manufactured in technical grade i.e. in pure form and formulated mixing with solvent, carriers etc. for users. The selection of insecticides and their formulations for proper use is an important criteria in safety. Following points should be keep in mind while using insecticides or their formulations:-

- The very first important step in safety of insecticides is to identify the pest to be controlled.
- Use only the recommended insecticides and recommended dose.
- Purchase only needed quantity of insecticides.
- Label and leaflet information
- The information given on the label and leaflet is based on scientific data. The colours and the words written on the triangle have significant signals.

### Colour of the triangle on the label and its significance

Particulars	Extremely toxic	Highly toxic	Moderately toxic	Slightly toxic
Colour of the lower triangle	Red	Yellow	Blue	Green
Single word in upper triangle	Poison	Poison	Danger	Caution

On leaflets other details regarding concentration/doses against pests on different crops are also written. The details of precautions in safe use of insecticides including antidotes for counter effect of poisoning given in the leaflet or on the label should be read out carefully and follow. Be sure that the label of the container is intact and having the desired informations.

### **Transportation of insecticides**

- All insecticides containers should be tightly closed. Don't open ruptured bags and containers.
- Hazardous insecticides must be conspicuous marked on the bags and the containers.
- Open type of vehicles for transportation should be preferred.
- Storage of insecticides
- Insecticides should be stirred in their original containers and keep their labels intact.
- Never store insecticides in living room or kitchen insecticides are also not be stored near food, feed, seed, medicines or water.
- The area selected for insecticide storage should be dry, ventilated and away from sunlight and fire.
- The storage room if possible should be pucca so that in case of spillage floor can be washed with water.
- Storage rooms, cupboards or cabinets should be properly closed.
- Store insecticides separately from other groups of pesticides particularly weedicides.
- While entering the insecticide storage room, open doors and windows and wait for atleast 30 minutes to enter.

### **Precautions during preparation and application**

- Read carefully the directions given on labels of package of containers.
- Make sure the equipments used in plant protection are perfect in working and calibrate it.
- Only recommended dose of insecticides should be used.
- Never apply insecticides without bearing protective clothing.
- Before insecticides application edible plant parts and fruits should be plucked out.
- For mixing of insecticides, use separate containers like drums or buckets etc. such containers should not be used for other purposes. Don't stir or mix the fluid with naked hands. Instead, long handled wooden rod may be used.
- To minimize the drift, spraying should be done on a calm day.
- Always apply insecticides in the direction of flow of wind. Never apply against the winds.
- Never blow the clogged nozzle and other parts of the sprayer but use wire for this purpose.
- Avoid damage to beneficial and pollinating insects.

### **Precautions after application**

- Excess insecticide should not be left in equipment. Pour it on barren land or border.
- After use wash the sprayer with water repeatedly by at least 3 times.
- Observe precisely the waiting periods after application.
- Empty containers and packets of insecticides should be disposed off. Don't use these for any other purpose.