



Methods of Plant Protection

B.Sc.II Plant Protection

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CLASSIFICATION OF INSECTICIDES

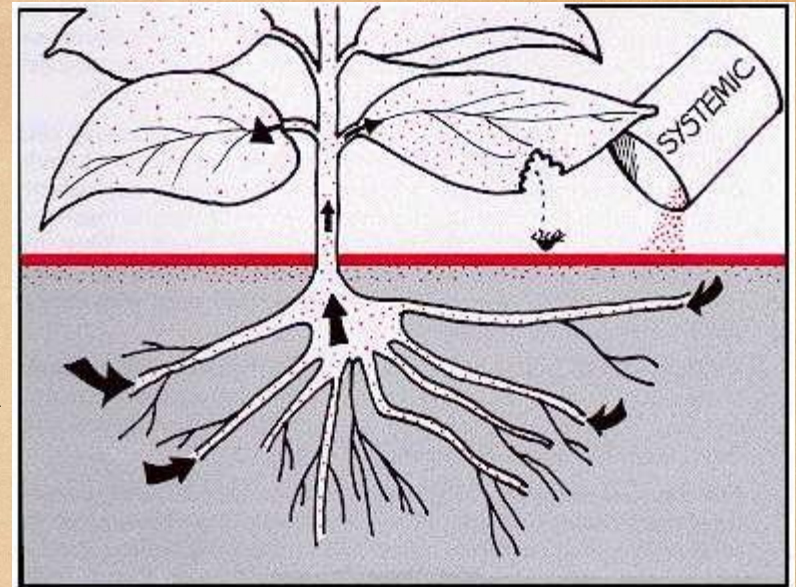
- **Mode of Entry :**

Contact Poison - BHC, DDT

Stomach Poison - Endosulphon,

Monocrotophos

Systemic insecticide – Phosphamidon



- **Mode of Action :**

Respiratory System - Rotenone, Cyanides

Nervous System – DDT, Nicotine, Pyrethroids

Chemical Nature

- **Inorganic Insecticides** : Calcium arsenate
Bordeaux Mixture
- **Organic Insecticide** :
Chlorinated hydrocarbons - DDT, BHC
Organophosphates - Parathion, Endothion
Carbamates - Carbaryl, Carbofuron
Synthetic pyrethroids



**Organophosphate
Pesticides (OP)**

**Carbamate
Pesticides (CP)**

**Types of
Chemical
Pesticides**

**Organochlorine
Insecticides (OI)**

**Pyrethroid
Pesticides (PP)**

TYPES OF PESTICIDES

- **Insecticides** : BHC (Gammexane), Endosulfon (Thiodan), Thimet (Phorate)
- **Bactericide** : Streptomycin, Tetracyclines
- **Acaricides** : Dicofol (Karathane), Aramite (Aracide)
- **Rhodenticide** : Zinc Phosphide, Warfarin (Ratafin)
- **Nematicide** : Nemagon, Oxamyl (Vydate)
- **Molluscicides** : Metaldehyde (Meta),
 - Copper sulphate



LEGAL METHODS OF PLANT PROTECTION

- Plant Quarantine : Insect and Pest Act – 1914.
- Quarantine Certificate : Director of Plant protection, Ministry of Agriculture, Government of India.
- Quarantine Stations:
 - a) Air Ports - Calcutta, Bombay, Madras, Cochin
 - b) Sea Ports - Visakhapatnam, Bhavnagar, Bombay
 - c) Land Frontiers - Amritsar, West Bengal
 - d) Railway Stations – Amritsar, Attari

CROP RESISTANCE

- Resistant is the genetic ability of plants to develop obstacles.
- Two types of Resistance: a) Structural obstacles
 - b) Biochemical obstacles
- Methods : Hybridization,
Tissue culture – Meristem tip
- propogation, Anther culture, Protoplast Fusion
- Wheat : C 250, C228 – Resistant to yellow rust
- Gram : G-24, G-17- Resistant to Wilt

BIOLOGICAL METHODS OF PLANT PROTECTION

- Fungi: *Trichoderma*, *Metarhizium*, *Verticillium*
- Bacteria: *Pseudomonas*, *Bacillus*
- Insect: *Crysopyrilla*

- **Thank You**