

# REGULATIONS GUIDING THE USE OF PESTICIDES

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# OUTLINE OF PRESENTATION

- Definition of pesticide
- Institutional and legal framework for sound pesticide management
- Selection/Choosing of pesticide
- Applying Pesticides Safely
- Safety in the pesticide use cycle



# Definition of pesticide

- Chemical used to kill, control or manage insects, mites, weeds, fungal and bacterial diseases.
- Act 490 defines pesticide broadly as any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating, any pest as well as any substance a growth regulatory, defoliant, desiccant or wood preservative



# Institutional and legal framework for responsible pesticide use

- International conventions and agreements signed and ratified by government eg
- Rotterdam Convention on PIC,
- Stockholm Convention on POP's
- Basel Convention
- FAO Code of Conduct, etc



# Importance of responsible use

Protect human health and builds consumer confidence in agricultural and food products

Protection of agricultural production systems and people/industries that depend on them.

Protection of the environment (beneficial organisms)



# Importance of responsible use

## Cont'd

- Open up trade opportunities by demonstrating that agricultural and food exports are safe.
- Effective utilization of available resources through adherence to recommendations
- Pesticides industry is alerted on roles and responsibilities.



# Selection of pesticide for use on field crops production

- Important Questions to ask during selection of pesticides are:
  - Is it effective?
  - Is it registered in Ghana?
  - What is the approval status in export country?



# Factors to consider when choosing a product

## ■ **Efficacy:**

■ The more toxic the AI is to the pest, the smaller the active ingredient needed

## ■ **Legality/compliance:**

■ Product should be registered for use

■ If for export, should be allowed practically achievable levels on the product.





# Characteristics for choosing a product

## Cont'd

### ■ **Safety:**

■ Ideally of low toxicity to mammals, birds, fish etc.

### ■ **Specificity**

■ Toxic to the pests but not other type of arthropods

### ■ **Persistence**

■ The longer product is biologically active in the field, the more effective it is and can kill pest later if they emerge



# Characteristics for choosing a product

## Cont'd

- may however have serious effect on other organism i.e. environmental impact, problem of wanting to harvest before the PHI
- **Speed of action**
- The faster the product works, the less crop damage will be caused
- **Resistance status**
- Some pests develop resistance quickly so to prevent this happening, it is important to rotate among a range of appropriate pesticides.



# Characteristics for choosing a product

## Cont'd

### ■ **Availability**

■ Pesticides must be available in suitable formulations at short notice when needed.

### ■ **Cost**

■ Pesticides are one of the most expensive elements in many intensive production systems, so cheaper products will greatly reduce control cost.



# Understanding dosage instructions

- Apply correct dose (correct amount of active ingredient for a particular area of crop).
- Correct dose is usually recommended on the label.
- Under dosing might not kill the pest



# Understanding dosage instructions

## Cont'd

- Overdosing will be an unnecessary cost and lead to high residue problems in the produce
- build up of pest resistance
- Unnecessarily large impact on natural enemies of the crop



# Safety in the pesticide use cycle

 The pesticide use cycle has several aspects:

1. Selection and purchase
2. Transport to the farm storage location
3. Pesticide storage – important consideration for both safety and continued efficacy



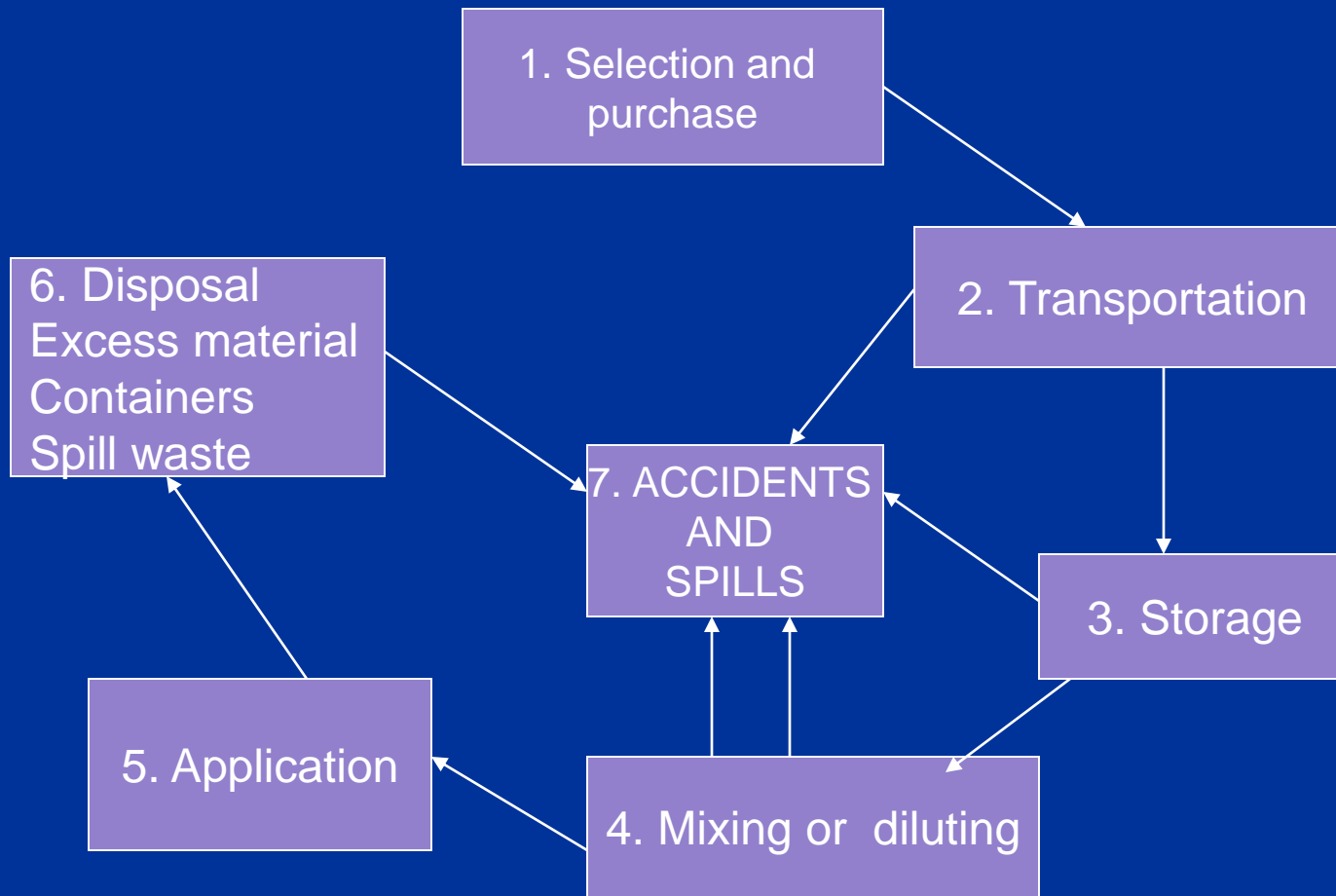
# Safety in the pesticide use cycle

## Cont'd

- 4 Since pesticides are purchased in concentrated form, they must be mixed properly and safely
- 5 From a safety standpoint, application is key
- 6 Disposal of excess pesticide concentrate or diluted materials and pesticide containers must be considered.



# Pesticide Use Cycle





# How to identify effective pesticide products

- Recommendations by manufacturers
- EPA/Ministry of Food and Agriculture (PPRSD) recommendations
- (Published Handbooks)
- Research institution/Universities
- Growers organizations and other growers



# Determination of the registration status of pesticide product.

- Consult the national regulatory authorities ie. EPA, PPRSD.
- Buy Pesticide products from on Distributors and Retailers registered by the EPA
- Check label on advice in horticultural crops.

