



**Pest Control Products Board  
Nairobi, Kenya**

**PESTICIDE REGISTRATION IN KENYA -  
BIOPESTICIDES**

**by  
P. N. Ngaruiya (Dr)**



# Introduction

- ❖ Pesticides, an indispensable tool in farming
- ❖ Chemical pesticides such as the Bordeaux mixture have been used for control of various pests since the 1880s
- ❖ Inorganic mercury based seed dressers discovered at the beginning of the 19<sup>th</sup> century but have since been withdrawn from the market due safety concerns.
- ❖ Followed by the discovery of the dithiocarbamate fungicides which are still being used today.



# Introduction

- ❖ In the 1940s, chlorinated hydrocarbons and organophosphorus were introduced
- ❖ The chlorinated hydrocarbons have been identified as severely hazardous and have been subjected to provisions of some international conventions
- ❖ Since then other chemical groups with more target specific activity have been developed.



# Introduction

- ❖ Registration is an important legal requirement
  - ❖ All over the world
    - ❖ US-EPA, UK-PSD, Canada- PMRA
- ❖ Every government has an obligation to ensure the safety of its citizens, animals, plants and the environment.
- ❖ The primary purpose of using pesticides is to control pests in crops and animals in order to reduce yield losses.
- ❖ Pesticides are toxic
- ❖ Possibility of ineffective products eg counterfeits
- ❖ Effects on environment eg DDT



# Legislation

- ❖ Until 1977, the regulations on pesticides were governed by the provisions of the Pesticides Control Act of the East African Community
- ❖ Thereafter the regulations were governed under the Pharmacy and Poisons Act, Cap 244.
- ❖ The enactment of the Pest Control products Act in 1982 transferred the legal mandate to the Pest Control Products Board.
- ❖ Mandated to regulate importation, exportation, manufacture, distribution and use of products used for the control of pests



# Legislation

- ❖ Section 4: “No person shall import into, or sell in Kenya any pest control product unless that pest control product has been **Registered**, packaged and labeled in accordance with regulations made under this act...”
- ❖ Definition; “A pest control product is a product, device, organism, substance, or thing that is manufactured , represented , sold, or used as a means for directly or indirectly controlling, preventing, destroying, attracting, or repelling any pest....”



# Legislation

May include;

- ❖ Conventional chemical pesticides
- ❖ Biopesticides; Botanicals, biochemicals, microorganisms, natural enemies
- ❖ Any compound or substance that enhances or modifies the physical or chemical characteristics of a pest control product to which it is added e.g adjuvants and wetting agents
- ❖ Technical grade active ingredients



# Scope

- ❖ Board empowered to regulate the manufacture, sale and use of:
  - ❖ insecticides, fungicides, herbicides and growth regulators used in agriculture,
  - ❖ public health pesticides
  - ❖ Pesticides for veterinary use.



# Registration procedure

- ❖ Every person desiring to register a pest control product is requested to submit an application for registration of a new pest control product, an experimental label and a copy of a dossier of technical information.
- ❖ Appointment of local agents
- ❖ Board considers various aspects in order to ensure safety to the public, animals and the environment.
- ❖ Safety, efficacy, quality and economic value of pest control products in line with the Pest Control Products Registration Regulations LN 46/1984.



# Registration procedure cont'd

- ❖ Technical information is summarized on the label in conformity to the Pest Control Products, Labeling, Advertising and Packaging Regulations.
- ❖ If the Board is satisfied with the information provided, the product is released under experimental permit for local biological efficacy trial.
- ❖ This is carried out in institutions that have been accredited by the board for various trials
- ❖ Some private eg. Delmonte for pineapples, some public eg Kenya Agricultural Research Institute (KARI),



# Registration procedure cont'd

- ❖ On completion of the biological efficacy trial, a confidential report is sent to PCPB.
- ❖ Submission of a commercial label reflecting the application rates, timing of application as recommended by the local researcher, among other things.
- ❖ Registration committee (MOH, KARI, CRF, KEBs) makes recommendations to the Board
- ❖ If the board is satisfied with the safety, efficacy, quality and economic value of a product, it is granted **full registration** for 3 years and a certificate of registration issued. This is renewable after every 2 years.



# Temporary registration

- ❖ Under certain circumstances, a product may be granted temporary registration for a period not exceeding one year within which any missing technical or scientific information should be provided e.g.
  - ❖ In case there is a need for an emergency control of infestations
  - ❖ Applicant commits to produce additional information



# Suspension or deregistration

- ❖ PCPB is empowered to suspend or revoke a certificate of registration if:
  - ❖ it realized later that the content of the application was false,
  - ❖ new information indicates that the product is unsafe,
  - ❖ the premises in which the product is manufactured, formulated or stored are unsuitable for the purpose.



# BIOPESTICIDES

Include;

- 1) Microbial pesticides (bacteria, viruses, fungi, etc)
- 2) Biochemical pesticides
  - ❖ Semiochemicals eg insect sex pheromones,
  - ❖ Enzymes (proteins)
  - ❖ Natural plant regulators and insect growth regulators
  - ❖ Botanical pesticides etc
- 3) Natural enemies
  - ❖ Parasitoids
  - ❖ Predators
  - ❖ Pathogens of pests



# Biopesticides; Current status in Kenya

- ❖ An increase in the number of applications
- ❖ About 45 out of 868 products are derived from plants or microorganisms (Pyrethrum based, neem, *Bacillus thuringiensis* etc)
- ❖ Due to MRL concerns
- ❖ Biodegradable, environmentally and user friendly, low preharvest intervals



## EXAMPLE; Microbial biopesticides: requirements

- ❖ Application form: using SEARCH format
  - ❖ Information to the applicant
  - ❖ Import/export of live organisms
  - ❖ GMOs/LMOs: National Biosafety Committee
  - ❖ Genetically modified crops: handled National Biosafety Committee
  - ❖ Detailed dossier + Summary of the dossier



# Microbial biopesticides: Requirements

- ❖ Dossier index for active agent
  - ❖ Identity of active agent (Taxonomy, methods of identification, enumeration , manufacture etc)
  - ❖ Biological properties (natural occurrence , lifecycle, infectivity, dispersal, colonization ability pathogenecity & relationship with pathogenic organisms, production of antibiotics, uses etc)



## Microbial biopesticides: requirements

- ❖ Physical chemical properties
  - ❖ Physical state
  - ❖ Colour
  - ❖ Odour
  - ❖ Stability
  - ❖ Reactivity towards containers



# Microbial biopesticides: requirements

- ❖ Toxicology (tiered)
  - ❖ Acute studies, ( oral, inhalation, medical surveillance data)
  - ❖ Mutagenicity
  - ❖ Intra-peritoneal injection for infectivity for fungi & protozoa
- ❖ Subchronic studies
- ❖ Chronic studies/carcinogenicity
- ❖ Neurotoxicity studies
- ❖ Teratogenicity
- ❖ Reproduction



# Microbial biopesticides: requirements

## ❖ Ecotoxicology

- ❖ Birds, fish, algae, bees, earth worms, soil microorganisms

## ❖ Behaviour in the environment

- ❖ Behaviour in the soil, persistence, mobility, behaviour in surface and ground water

## ❖ Residues

- ❖ Identity, levels, PHI, method of residue analysis



## Formulated product; Dossier index

- ❖ Identity
- ❖ Physical chemical properties
- ❖ Toxicology (6 pack)
- ❖ Emergency in case of accidental exposure
- ❖ Emergence in case of fire/spillage
- ❖ Intended uses
- ❖ Commercial label,
- ❖ Evidence of registration in other countries



## Formulated product; Dossier index

- ❖ Proposed packaging
- ❖ Procedures of destruction and decontamination

Guidelines for each item is provided

- ❖ Similar format used for microbial biopesticides & biochemicals

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THANK YOU