





# **CONTINENTAL WORKSHOP ON HARMONIZATION OF PESTICIDES REGULATIONS IN AFRICA 17<sup>TH</sup> -19<sup>TH</sup> APRIL,2016 CAIRO, EGYPT**

**Pesticides Utilization in Africa:  
status and trends.**

**By:**

**Flaubert NANA SANI**

**AU-IAPSC**





# OUTLINE



- Introduction,
- definition and history of pesticide
- Pesticides-Current use in Africa
- pesticides use in developing countries
- pesticides procurement & use
- *status of pesticide utilization in Africa*
  - weak actions on pesticides in members states
  - status of pesticides policy & regulations in MS
- trends in pesticides use in Africa
- conclusion





- **The use of pesticides has revolutionized**
  - global food production;
  - increasing crop yields to help alleviating hunger, providing food ;
  - support public health, in particular through vector control.
- 4% of global pesticide production goes to Africa;
- increase use on high value export & industrial crops.





# INTRODUCTION CONT.S



- free movement of goods and services increases pests;
- harmonize pesticide regulatory management to stay competitive in the international market;
- This enable countries to work together, share resources, lower the costs of pesticide registration, and coordinate implementation of international conventions;
- The goal is reducing duplication of efforts and streamlining review processes.
- Thus, the efficiency of regulatory agencies increases & the cost of data submission reduces.





# WHAT IS PESTICIDE

A pesticide is a chemical used to prevent, destroy, or repel pests.

## Examples:

Algicides, Antifouling agents, Antimicrobial, Attractants, Biopesticides, Biocides, Disinfectants and sanitizers, **Fungicides**, **Fumigants**, **Herbicides**, **Insecticides**, Miticides, Microbial pesticides, Molluscicides, Nematicides, Ovicides, Pheromone, Repellents, Rodenticides, Defoliant, Dessiccant, Insect growth Regulators, **Plant growth Regulators**





# HISTORY OF PESTICIDE



- 10,000 years ago, first practice of agriculture in Mesopotamia,
- 7,500 years ago rice & sorghum were farmed in the Sahel region of Africa.
- Farmed crops suffer from pests and diseases causing a large yield loss with possibility of famine for the population.
- Today losses due to pest range from 10-90%, with 35 to 40%, for all potential food and fiber crops
- **4500 years ago; first recorded use of insecticides**
- **1940s; growth in synthetic pesticides accelerated**

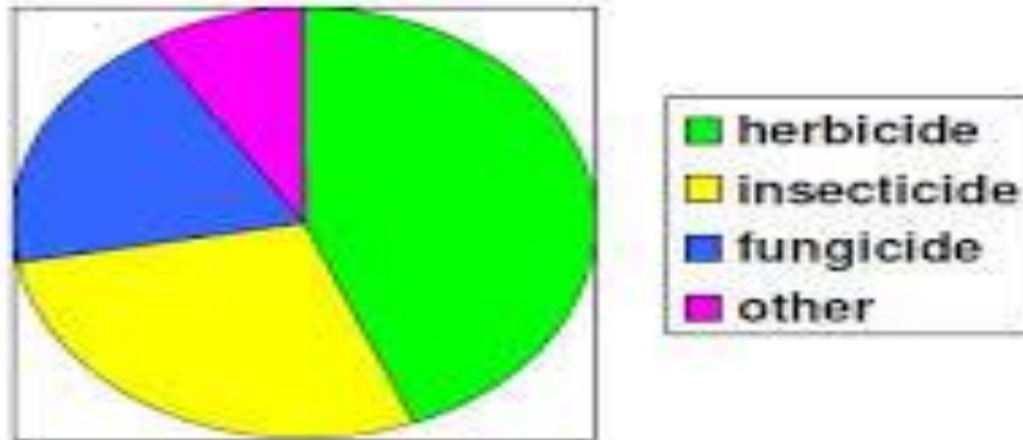




# Pesticides-Current use in Africa

- Pesticide use in Africa accounts for 2–4% of the global pesticide market of US\$31 billion (Agrow, 2006).
- Average pesticide use/ha in Africa is 1.23 kg a.i./ha, compared with 7.17 and 3.12 kg for Latin America and Asia (Repetto and Baliga, 1996).

Global Pesticide Use 2001 (%)







# Typical pesticide uses in developing countries

<b>In-field crop protection</b>	<b>Area spraying for mosquito and other disease vector control</b>	<b>Dosing of lakes, ponds &amp; lagoons to control disease vectors</b>
<b>Household insect and structural pest control</b>	<b>Stored product protection (seeds, food aid crops, etc.)</b>	<b>Insecticide treated bed nets &amp; Interior household residual spraying</b>
<b>Treatment of export crops, fumigation of timber</b>	<b>Outbreak pest control – locusts, rodents, etc.</b>	<b>Livestock tick control-dipping, spraying, pouring</b>

*And other uses. . .*





# “pesticides procurement or use”?



## Procurement includes . .

1. **Direct purchase of pesticides**
2. **Payment in kind, donations, provision of free samples and other forms of subsidies**
3. **Provision of credit to borrowers could be procurement**
4. **Guarantee of credit to banks or other credit providers could be procurement**

## Use includes . .

1. **Sale**
2. **Handling, transport, storage,**
3. **Mixing, loading, application**
4. **Disposal**
5. **Provision of fuel to transport pesticides**
6. **Technical assistance in pesticide management**





# Status of pesticide utilization in Africa

- **Several case studies are ongoing in the continent with different findings:**
  - pesticide used & perceived efficacy on pests depends on category of farming (subsistence farming, dual-purpose farming, commercial farms and agro-industries);
  - pesticides are used as the main pest control strategy because of susceptibilities of crops varieties grown;
  - insufficient regulation of pesticide usage by members states;
  - population decline of non target organisms (e.g. honeybees, pollinators in general);
  - inappropriate establishment of written SOPs for pesticide use ;





# Status of pesticide utilization in Africa cont.

- high frequencies of pesticides application on horticultural crops;
- internationally banned/restricted pesticides are still being used by less skill farmers;
- inability of regulatory agencies to control their activities in importation, monitoring & distribution & use of pesticides;
- discrepancy in accessibility to safer pesticides among countries



# Status of pesticide utilization in Africa cont.s

- Limited harmonization of legislation and regulations:
  - ❖ All African countries have legal arrangements for pesticide registration but ; most should be updated;
  - ❖ difficulties for MS to comply with pesticides procurement or use;
  - ❖ No enough evidence for current procedures and requirements to determine MS level of compliance with the harmonization guidelines;
  - ❖ Existence of a singly or many national responsible authorities in a MS for pesticide registration;
  - ❖ limited evidence in evaluating the economic, social & environmental risk and benefits of the planned pesticides.





# Status of pesticide utilization in Africa cont.s

## Weak Pesticide policy in Africa :

- The status of legislation is in a rudimentary stage of development;
- inadequate capacity to set, implement, and enforce a regulatory systems for pesticides use;
- 76% of MS lack pesticides control mechanism:
- use of toxic materials in a more hazardous manner;
- inadequate of information on associated hazards;
- unwillingness of farmers to accept risk of crops loss;
- the effect of tropical climates on the use of protective clothing;
- the paucity of expertise and pesticides subsidies;
- insufficient education and training in pesticide use;
- difficulties in conducting needed research due to fiscal constraints;
- Problems with communication & extension and
- absence of host free periods;





# WEAK ACTIONS ON PESTICIDES IN AFRICAN MEMBER STATES

- Establishment of Inventory of POPs pesticides
- Identification of stockpiles of obsolete stocks
- Inventory of contaminated sites
- Disposal of obsolete pesticides .
- Raising awareness
- **HEALTH IMPACTS**
- **Pesticide sourcing costs& affordability**
- **Capacity building**





# TRENDS OF PESTICIDES USE IN AFRICA



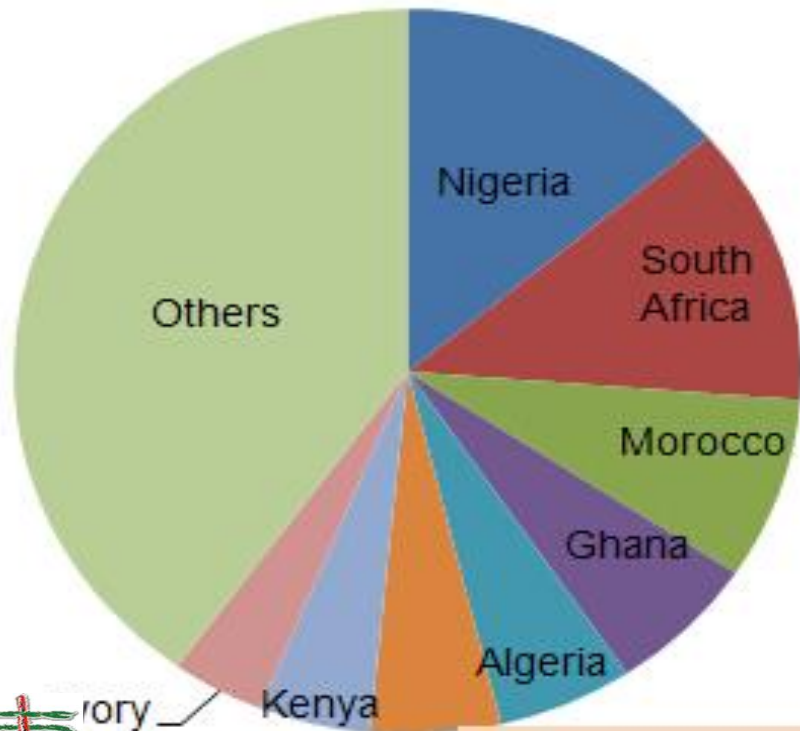
- ❖ Pesticide markets in increase
- ❖ Pesticide Evaluation Report & Safer Use Action Plan (PERSUAP) exist in Africa
- ❖ Sub-regional bodies in charge of pesticides;
- ❖ Ratification of UN pesticides conventions and protocol by African members states;
- ❖ Technical assistance for development of host country pesticide regulatory capabilities
- ❖ Support for training in safer pesticide ;
- ❖ Mitigation: Exposure Minimization Opportunities







# Agrochemical and Pesticide Markets in Africa to 2018



*Announce [www.mordorintelligence.com/CropsMarkets](http://www.mordorintelligence.com/CropsMarkets)*



Library



# TRENDS OF PESTICIDES USE IN AFRICA



<b>herbicides, plant-growth regulators and anti-sprouting products</b>	<b>41.5% of the demand</b>
<b>insecticides</b>	<b>(27.1%),</b>
<b>fungicides</b>	<b>(21.5%),</b>
<b>disinfectants</b>	<b>(3.4%),</b>
<b>other agrochemicals and pesticides</b>	<b>6.5%).</b>
<b>Web site</b>	<b><a href="http://www.researchonglobalmarkets.com">http://www.researchonglobalmarkets.com</a></b>





## Application intensity, pest incidence & pesticides access:

- increased use and reliance of pesticides since 1990s in African countries (S. Williamson et al /crop protection, 27 (2008)).
- Choice of pesticides depends on farmers' perception of its efficacy on pests, type and intensity of pests, crops growth stage and availability of pesticides, crops growth and the availability of pesticide (Isubikala et al , 2000)
- Supply channel of pesticide in Africa are both formal & informal for agricultural and non agricultural pesticides:





- **Supply channels:**

- authorized retail outlets of agricultural supply companies;
- via government extension services;
- small-scale informal traders operating via local shops;
- itinerant peddlers visiting villages and weekly markets, and
- bulk supplies from general markets in larger cities.





# Mitigation: Exposure Minimization Opportunities

Opportunities to minimize exposure exist before, during and after pesticide use. . .

Consider transport,  
packaging & storage  
practices

- Waiting periods
- Clean/bathing
- Storage & disposal practices



- Choice of formulation and equipment,
- Use of buffer zones

**MS adapt to All  
options require  
training &  
monitoring!**





- **Cooperation initiatives among MS in the establishment of harmonized pesticide registration requirements, procedures and evaluation criteria are in Africa:**
  - CPAC: The Central Africa Inter-State Pesticides Committee. It is a sub-regional inter-state body in charge of pesticide regulation for CILSS 6 MS)
  - CSP : comite Sahelien des pesticides (13 CILSS member states in west Africa):
  - a few MS have pesticide registration schemes;





## **PESTICIDES CONVENTIONS: RATIFICATION , ACCEPTANCE, FORMAL CONFIRMATION:**

- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (PIC) ( 40 member states) ;
- Basal Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal (46 MS);
- Stockholm Convention on Persistent Organic Pollutants (POPs) (45 MS)
- Montreal Protocol on Substances that Deplete the Ozone Layer (55 MS)
- International Code of Conduct on Pesticide Management

Index Committee on Pesticide Residues





# Some key resources for PERSUAPs, IPM & safer use.

## IPM, Safer Use & USEPA Pesticide Registration Status Resources

**Pesticide Action Network Database**  
[www.pesticideinfo.org](http://www.pesticideinfo.org)

**US EPA Office of Pesticide Programs**  
[www.epa.gov/pesticides](http://www.epa.gov/pesticides)

**CABI Crop Protection Compendium**  
[www.cabi.org/comp/enda/cpc](http://www.cabi.org/comp/enda/cpc)

***Africa Bureau IPM and Pesticide Use Guidelines***  
[www.encapafrika.org](http://www.encapafrika.org)

## How to prepare a PERSUAP

**PERSUAP preparation guidance**  
**ENCAP Website**  
[www.encapafrika.org](http://www.encapafrika.org)

✓ **Also included in the Participants' Sourcebook!**







# CONCLUSION



- The Rotterdam Convention, together with the Stockholm and Basel conventions and FAO's voluntary Code of Conduct, promotes a life cycle approach and provides the necessary tools for managing pesticides.
- Pesticide use in Africa is in increase thus, education and training programs on safe use and disposal of pesticides is critical to the solution of pesticide dilemma
- National governments need to adjust their laws and regulations accordingly to existing conventions and make them more uniform and mutually compatible. This would improve trade and provide better protection for the population and the environment against poor quality and highly hazardous pesticides.





# I thank You for your kind attention

