Regulation of Agricultural Pesticides in Egypt

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The Overview

Who + What + How

APC

The Know-How

Regulation of Pesticides in Egypt
Dr. Yehia Ibrahim
Introductory Remarks

(Pesticides: The Problematic Solution)
Problem: Pests

• Food crops compete with 30,000 species of weeds, 3,000 species of nematodes and 10,000 species of insects.

• 20-40% of “potential” food production is still annually lost to pests.
Agricultural Pesticides: The Solution

Improve Agricultural Productivity

Protect our Food Supply

Contribute to Food Security

Alleviate Poverty

Contribute to National Security
It is rather natural that a man-made solution could turn itself into a problem; therefore management and continuous reviewing are wise practices.

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Problem: Pesticides

• It is important to appreciate that:
  – All pesticides are inherently toxic to some living organisms, otherwise they would be of no practical use.
  – There is no such thing as a “completely or absolutely” safe pesticide.
Pesticide use became widespread in the 1940’s. Many pesticides are now new and haven’t been around for long, so we don’t know exactly their long term effects.
As a Scientist and Regulator

• What is not proven to be real now could still be real and time and new technology may tell.

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Pesticide Development and Costs

- Life-Cycle
  - Chemical Development, Patent
  - Preliminary Testing and Toxicity
  - Field studies, Production
  - Safety Evaluation
  - Commercial Use

- Cumulative Costs
  - 1 million
  - 2 million
  - 4 million
  - 11 million
  - 12-15 million

- Years
  - -10
  - 0
  - 10
  - 17

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Pesticides: A Fair Judgment

(1) Pesticide use has become relatively imperative;
(2) Pesticides are resources that deserve protection;
(3) Pesticides are not blindly safe;
(4) Cost/Benefit analysis is always a must;
(5) Management and Regulation are key tools;
(6) Registration is only a first step.

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Solution

• Pesticide Regulatory Approach?

• Integrated Pest Management (IPM)
The Statutory Status and Functions of APC
1. Who are we?
2. What is the purpose of APC existence?
3. What is our vision for the APC future?
4. What are core values that guide APC to better serve its mission and reach its vision?
5. How do we measure APC success?
APC Functions

- Licensing
- Labelling
- Efficacy
- Import/export procedures
- Good manufacturing processes
- Distribution

- Quality control
- Use & Storage
- Disposal
- Dosage application
- Update of legal texts
- Accreditation of foreign manufacturers
- Training
Management of Agricultural Pesticides in Egypt

• By **Law**, the Agricultural Pesticide Committee (**APC**) is the only agency that exercises the **authority** and shoulders the **responsibility** of agricultural pesticide management and regulation in Egypt.
The Egyptian Agricultural Law, 53, 1966

Chapter I
Ag. Pest Control
Articles 72-77

Chapter II
Ag. Pesticides
Articles 78-83

Chapter III
Quarantine
Articles 84-89

Chapter I
Ag. Pest Control
Articles 72-77
The Egyptian Agricultural Law 53/1966

So other departments know not to monkey around with us!
“To assure that agricultural pesticides are used when needed and when needed they are managed and regulated by policies, procedures and practices that ensure their effectiveness on target pests, and their safety on the Egyptian public health and environment.”
Pre-History of Pesticide Use

• Sulfur
  – First seen in Egyptian writings 2400 B.C.
  – Chinese writings 1500 B.C.
  – Greek writings 700 B.C.
“Being the most reputable pesticide regulatory authority in the region, we have a vision to become one of the leading authorities in the world.”
Core Values and the 3 P’s

If core values are not translated into policies, procedures and daily practices, they are not worth the ink and paper.

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1. APC seeks partnerships with top international pesticide regulatory agencies;

2. APC respects and implements international pesticide regulatory agreements;

3. APC registers pesticides that are internationally accepted to be safe to humans & the environment;

4. APC members contribute unanimously to the innovative spirit of continuous improvement;

5. APC proactively develops value-engineered solutions to pesticide-regulatory problems;

6. APC is flexible, open to criticism, and ready to change whenever appropriate;

7. APC treats stakeholders with respect and strives to exceed their expectations;

8. APC is intolerant to mediocrity and complacency;

9. APC acts with integrity and in accordance to the law;

10. APC is indisputably concerned with the health and environmental safety;
THE APC – TRAIN

Authority
Professionalism
Commitment
Transparency
Responsibility
Accountability
Innovation
National Interest
APC & Pesticide Regulation
The Egyptian Agricultural Law

Minister of Agriculture

Ministerial Decree

The Agricultural Pesticide Committee

Proposes an AP-Regulatory Directive

National Directive of AP-Regulation

AP-Regulation in Egypt

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Two Active Decrees

2188/2011

1835/2011
“It ain’t what people don’t know that hurts ’em – it’s what they do know that ain’t true.”  
Will Rogers
Foundation of the AP-Directive: The 3-E Criteria

- Environmental & Health Impact
- Efficacy on Target Pest(s)
- Endogenous Quality
Pesticide Management

- Pesticides Act 1835/2011 regulates pesticides

- APC advises Government on all aspects relating to management and regulation of agricultural pesticides

- APC registers pesticides after verifying their chemical, biological and safety aspects

- Inspectors draw samples of pesticides for quality check by the Central Laboratory of Pesticides

- More than 200 of pesticide active ingredients are registered so far

- Details available at http://www.apc.gov.eg
Chief regulatory instrument is registration of new pesticides and re-registration of those already on the market.
All agricultural pesticides must be registered by APC.

• A substance is considered for possible registration if it is “officially” registered for pesticidal purpose in the USA, EU, Canada, Japan or Australia.
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APC establishes national standards for safe:

– use

– transportation

– storage

– disposal of agricultural pesticides

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Labeling Requirements: All registered pesticides must be properly labeled for lawful sale. The label must specify the pesticide’s active ingredient(s), how to use the pesticide on particular crop(s), and limitations on how or when it may be used.
Quiz ....

• Is the pesticide label a legal document? Yes!

Definition of Misuse

“to use any pesticide inconsistent with its labeling is an illegal misuse.”
Protecting Consumers of Agricultural Commodities

Double rate

Label rate

Half rate

Dosage

Time after application

PHI

MRL

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Controlling Existing Pesticides Through Re-registration

- Pesticide re-registration – a formal reevaluation of a previously licensed pesticide already on the market for its efficacy against target pest(s)
- Periodical Review of all pesticides for their registration eligibility, acceptable efficacy and sustained safety
Suspension or Cancellation of Pesticides: APC may restrict, suspend, or cancel the use of any pesticide that poses unreasonable adverse effects or imminent hazards to the human health and environment.
Possible Reevaluation Outcomes

• No further mitigation measures needed.
• Mitigation measures needed:
  – Regulation
  – Permit Conditions
  – Label Amendments
• Adverse effect(s) cannot be mitigated; pesticide product(s) must be canceled.

- General Use Pesticides (GUP) – Lower risk, available over-the-counter

- Restricted Use Pesticides (RUP) – Higher risk, only available at licensed dealerships for purchase by licensed applicators

- Limited Use Pesticides (LUP) – Higher risk, only available by special permit
Like CropLife International, APC makes full commitments in adherence and support of the FAO Code of conduct.
APC and the FAO Code of Conduct

• Since we have high confidence in the FAO Code of Conduct, and have a strong regulatory infrastructure on pesticides, we have been able to follow this code swiftly and instrumentally.
Adherence to Other International Undertakings with Direct Implications for Pesticides

- 1961 Codex Alimentarius, to protect the health of consumers and ensure fair practices in the international food trade,

- The 1989 Montreal Protocol on Substances that Deplete the Ozone Layer,

- The 1991 International Plant Protection Convention (IPPC),

- The 1992 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,

- The 2004 Stockholm Convention on Persistent Organic Pollutants (POP’s),

• Emergency Exemption: The use of an EPA- or EU-registered pesticide is granted when an emergency pest problem arises for which no pesticides are locally registered.

Growers who intend to export their agricultural products and whose farms encounter a pest problem on which there is no APC-registered pesticide may be granted the use of a locally unregistered pesticide(s) as long as they are currently EPA- or EU-registered.
The APC Decision Tree and Some Working Models
APC sets four critical control points (CCP’s) to build a decision tree for pesticide registration in Egypt.

In managing our work and leading our people, we use some well-searched and success-proven models.
Is the pesticide’s active Ingredient registered in EPA or EU?

Does the pesticide meet the certified chemical and physical specifications?

Does the pesticide Pass the efficacy Tests?

Does the Scientific Panel accept the pesticide analytical cost-benefit outcomes?

APC grants registration

Review & Re-Registration

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

No

Yes

No
Some APC Working Models

W Edwards Deming
1900-1993

"We have learned to live in a world of mistakes and defective products as if they were necessary to life. It is time to adopt a new philosophy in America."

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The Continuous Cycle

- **Plan**
  Planning, identifying pesticide eligibility and identity

- **Do**
  Testing pesticide for their efficacy against target pests

- **Check**
  Checking, includes monitoring and corrective action

- **Act**
  Issuing the registration eligibility decision
We listen very carefully to areas of importance to our stakeholders.

Importance-Performance Quadrants

- **Reduce**
- **Maintain**
- **Minimize**
- **Enhance**

Importance Level vs. Performance Level

- Reduce: 6/30/2013
- Maintain: 59
- Minimize
- Enhance

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RESPONSIVENESS

Driver

Expressive

Analytical

Amiable

Powerful

Popular

Perfect

Peaceful
APC’s Sources of Regulatory Data and Scientific Information

• We in the APC uses data and information from internationally reputable and reliable regulatory agencies and organizations to guide our registration eligibility decisions.
International Organizations

- World Health Organization (WHO)
- The International Program on Chemical Safety (IPCS)
- International Forum on Chemical Safety (IFCS)
- The International Agency for Research on Cancer (IARC)
- Food and Agriculture Organization (FAO)
- The Joint Meeting on Pesticide Residues (JMPR)
International Organizations

- The Inter-Organization Program for the Sound Management of Chemicals (IOMC)
- Organization for Economic Co-operation and Development (OECD)
- The European Union (EU)
- The European Chemical Bureau (ECB)
- The Chemical Industry Institute of Toxicology (CIIT)
- CropLife International
International Organizations

• The Japanese National Institute of Health Sciences (JNIHS)
• US Environmental Protection Agency (EPA)
• EPA Office of Pesticide Programs (OPP)
• EPA/OPP Certification and Worker Protection Branch
• Occupational Safety and Health Administration (OSHA)
International Organizations

• USDA Extension Service
• US National Institute of Health (NIH)
• US National Institute of Environmental Health Sciences (NIEHS)
• US Centers for Disease Control and Preventions (CDC)
• Agency for Toxic Substances Disease Registry (ATSDR)
International Organizations

- National Center for Environmental Health (NCEH)
- National Institute for Occupational Safety and Health (NIOSH)
- US Food and Drug Administration (FDA)
- Consortium for International Earth Science Information Network (CIESIN)
- China Institute for the Control of Agrochemicals, Ministry of Agriculture (ICAMA)
Some Useful Library Catalogs

• COPAC
• California Digital Library (CDL)
• The US National Library of Medicine (NLM)
• The British Library (BL)
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Designed By: Dr. Yehia A. Ibrahim

APC, MALR

Statutory
Status

Regulation
of AP

Directive
1835/2011

Major
Provisions

Special
Provisions

3 E-Criteria

4-CCP's

PDCA

Performance
Importance

Decision
Tree

Working
Models

PDCA

Importance

The 3P's

Core Values

Vision

Foundation

Basic

Know-How

Mission

APC-TRAIN

The 3P's

Vision

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3 E-Criteria

4-CCP's

PDCA

Performance
Importance

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6/30/2013
Thank you for

Your kind attention