

Role of DoH in the Regulation of Genetically Modified Organisms



Biosafety Symposium



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Presentation Outline:



- Legislative Framework
- Department of Health Considerations
 - Nutrition
 - Food Safety
 - Biosafety
 - Pesticide Residues
- Department of Health: Monitoring Activities
- Conclusion



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Regulatory Framework

Provision of Health Services is a Constitutional Imperative

Health Act, 2003 (Act 61 of 2003)

Endeavour to protect, promote, improve and maintain the health of the population

Foodstuffs, Cosmetics & Disinfectants Act, 1972 (Act 54 of 1972) :

Forbid sale of Foodstuffs, Cosmetics & Disinfectants that may be detrimental/harmful to health



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Nutrition



- Maize is a staple food in the country
- Ranked as most commonly eaten foodstuff in Food Consumption Surveys
- Identified as one of food vehicles to address under-nutrition especially in children in Food Fortification
- DoH therefore considers **food safety considerations critical to positive health outcomes** for the general population and in this instance specifically for children



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Food Safety Considerations (1)



- Definition of **Food Safety**:
“Food will not cause harm
when eaten according to
intended purpose”
(World Health Organization)

Forbid sale of
Foodstuffs that may
be
detrimental/harmful
to health

Food Safety Considerations (2)



- **Biosafety/Biotechnology**

- DoH has ensured safety assessment of GMO events through:

- serving on the GMO Executive Council (EC)
- considering Toxicity, Allergenicity, Nutritional and Compositional profiles of GM events
- Ensuring that experts on these topics are appointed to serve on the Scientific Advisory Committee (SAC)
- Basing the food safety risk management decisions on Internationally accepted guidelines from the Codex Alimentarius Commission

Food Safety Considerations (3)



Codex Alimentarius is an international food standard setting authority under the FAO/WHO of the United Nations
Their mandate is to **protect health of consumers** and facilitate international food trade

South Africa is a member state of the Codex Alimentarius Commission

Principles in **risk analysis/risk assessment** are based on Codex principles

GM foods available in South Africa have been through **rigorous safety assessments** that are based on international guidelines for assessment

Concerns



**GM Maize is tolerant to
Herbicides/Pesticides .
Farmers are
“over –spraying ” their maize crop/s
with pesticides**



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Food Safety Considerations (3)



- Pesticide Residue Considerations:
 - 2 step process at request of DAFF (Act 36 of 1947) :

1. **Toxicity** assessment when registering active ingredient.

DoH Food Control determines the **Acceptable Daily Intake (ADI)** if no human safety concerns

Food Safety Considerations (4)



- Pesticide Residue Considerations cont:
 2. When registration on a specific food commodity, **Exposure Assessment** is done and **Maximum Residue Limit (MRL)** confirmed and published as amendment to Regulations governing maximum limits for pesticide residues that may be present in foodstuffs. (No. R. 246 of 11 February 1994)

Monitoring Activities



- National Sample Run – 2012/2013
 - Provinces & Municipalities were requested to sample maize for pesticide residue analysis
 - In this run the focus was on testing for **Glyphosate**
 - **Results:**
 - All samples tested were found to be compliant i.e. no exceedance of the Maximum Residue Level(MRL) set at **2mg/kg** in terms of the R. 246 of 11 February 1994



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Glyphosate



- Joint Meeting Pesticide Residues in Food (JMPR)
- European Food Safety Authority (EFSA)

<https://corporateeurope.org/sites/default/files/attachments/sap-glyphosate-eu.pdf>

- Health Canada

“glyphosate is unlikely to pose a carcinogenic risk to humans from exposure through the diet.”



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Glyphosate (2)



Toxicology : “the dose makes the poison”

Scenario:

A person weighing 60 Kg would have to eat 500 Kg of maize meal, the equivalent of 1 ¼ bathtubs full of “Stiff Porridge” per day to reach the still acceptable amount of 60 mg GF per day, that is regarded as a safe quantity for humans to be consumed over a lifetime per day.



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Conclusion



- DoH will assure robust food safety assessment through continued:
 - Participation in the EC of the GMO Act, 1997
 - Participation in the Codex Alimentarius Commission
 - Confirmation of pesticides and MRLs through toxicological and exposure assessments.
 - Monitoring of pesticide MRLs in various food commodities **based on risk profiles**
 - Co-operation with other Government Departments & Stakeholders



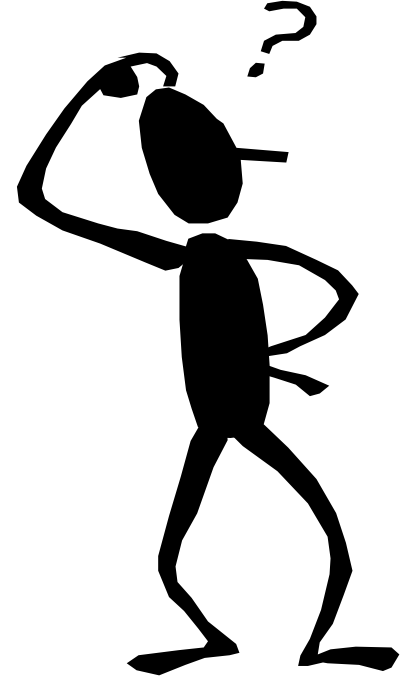
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Thank you



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