Documentation and Identification of LMOs in South Africa

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South African Ports of Entry

GM Crops in South Africa

Crop	Trait	% of Total
GM Soybean	HT	65
GM White Maize	IR / HT	9
GM Yellow Maize	IR / HT	26
GM Cotton	IR	85

(James, 2005)

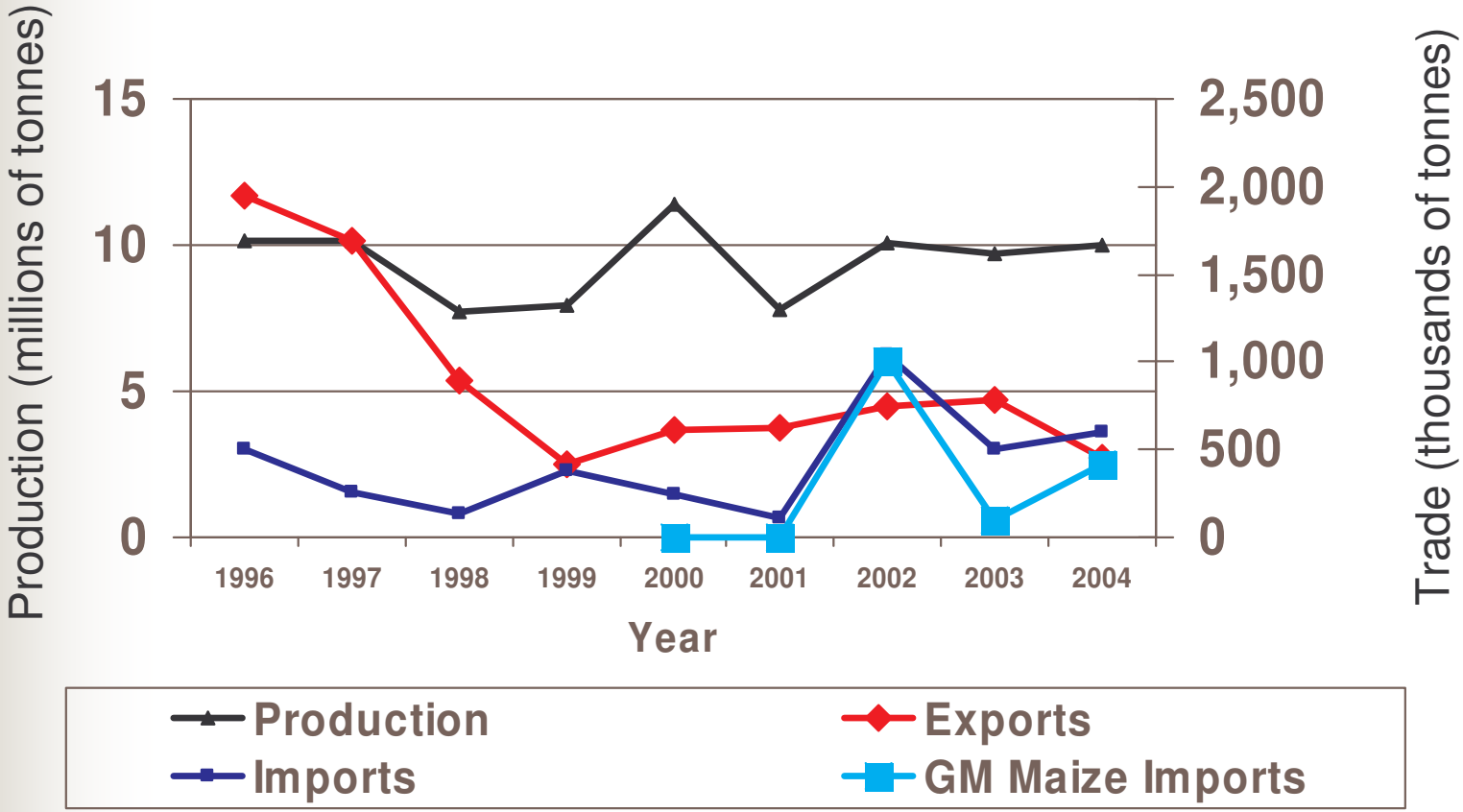
General Release

Type of approval: General release—conditional Use of the event: Importation/exportation; commercial planting; food and/or feed				
Event	Crop	Trait	Company	Year approved
Bolgard RR	Cotton	Insect resistant Herbicide tolerant	Monsanto	2005
Bollgard II, line 15985	Cotton	Insect resistant	Monsanto	2003
Bt11	Maize	Insect resistant	Syngenta	2003
NK603	Maize	Herbicide tolerant	Monsanto	2002
GTS40-3-2	Soybean	Herbicide tolerant	Monsanto	2001
RR lines 1445 & 1698	Cotton	Herbicide tolerant	Monsanto	2000
Line 531 / Bollgard	Cotton	Insect resistant	Monsanto	1997
MON810 / Yieldgard	Maize	Insect resistant	Monsanto	1997

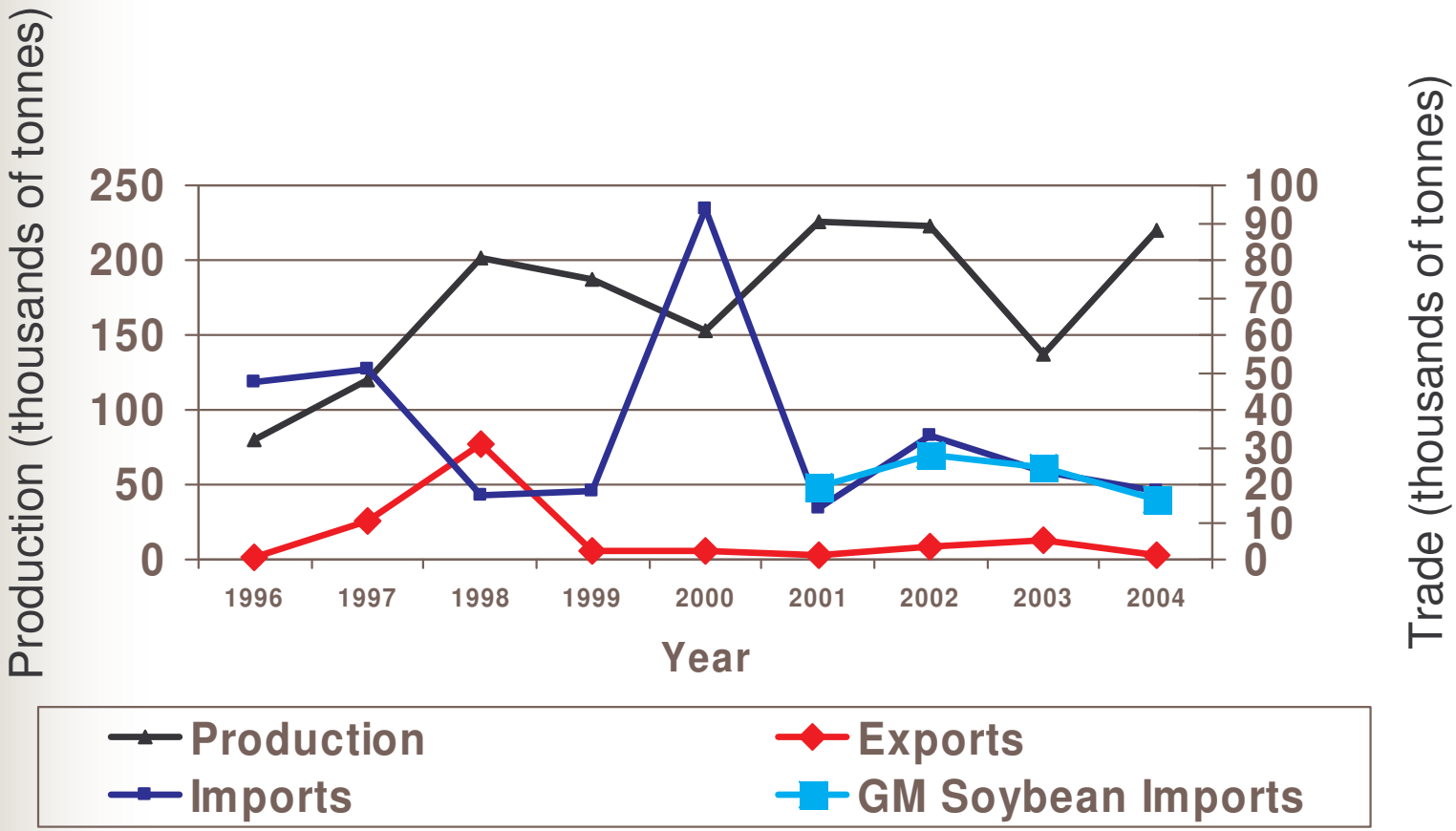
Commodity Clearance

Type of approval: Commodity clearance (excludes events that have obtained general release clearance before commodity clearance Use of the event: Importation for use as food or feed				
Event	Crop	Trait	Company	Year approved
MON810 x NK603	Maize	Insect resistant Herbicide tolerant	Monsanto	2004
MON810 x GA21	Maize	Insect resistant Herbicide tolerant	Monsanto	2003
TC1507	Maize	Insect resistant Herbicide tolerant	Pioneer Hi-Bred	2002
NK603	Maize	Herbicide tolerant	Monsanto	2002
GA21	Maize	Herbicide tolerant	Monsanto	2002
Bt11	Maize	Insect resistant	Syngenta	2002
T25	Maize	Herbicide tolerant	AgrEvo	2001
Bt176	Maize	Insect resistant	Syngenta	2001
Topas 19/2, Ms1Rf1, Ms1Rf2, Ms8Rf3	Oilseed rape	Herbicide tolerant	AgrEvo	2001
A2704-12	Soybean	Herbicide tolerant	AgrEvo	2001

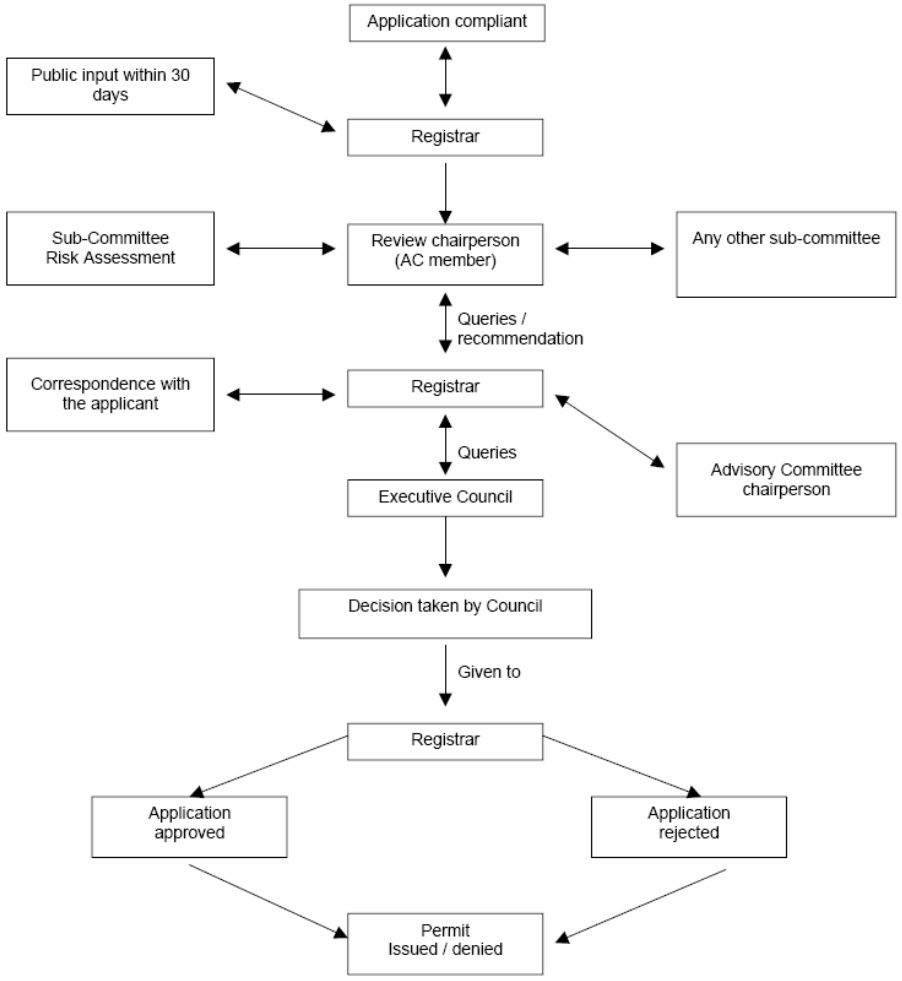
Maize Production vs Trade



Soybean Production vs Trade



Process of LMO Application in South Africa



Transboundary Movement of LMOs

- Export of LMOs
  - Contained use / Food, Feed or Processing
  - Environmental Release
- Import of LMOs
  - Contained use / Food, Feed or Processing
  - Environment Trial Release
  - General release / Commodity Clearance
- LMOs in Transit

LMO Export Requirements

Contained use / Food, Feed or Processing	Environmental Release
Contact details of exporter	
Contact details of Competent National Authority in SA	
Common name, scientific name or OECD unique identifier code	
Contact details of Party of Import	
List of LMOs	
Intended dates of of transboundary movement	
Description of modification and characteristics of the LMO	
Regulatory status of the LMO in SA	
Intended use of the LMO	Centres of origin
The quantity of the LMO	
Requirements for safe handling, storage, transport and use, including packaging, labelling, documentation, disposal and contingency procedures, where applicable	
Methods and plans used in SA for monitoring the LMO	
Evaluation of the impacts of the LMO	

LMO Import Requirements

LMO intended for Environmental Release	LMOs with Commodity Clearance or General Release
Contact details of importer	
Contact details of Competent National Authority in Party of Export	
Common name, scientific name or OECD unique identifier code	
Contact details of exporter	
List of LMOs	
Intended dates of of transboundary movement	
Description of modification and characteristics of the LMO	
Port of entry	
Regulatory status of the LMO in Party of Export	
Intended use of the LMO in SA	
The quantity of the LMO	
Requirements for safe handling, storage, transport and use, including packaging, labelling, documentation, disposal and contingency procedures, where applicable	
Methods and plans used in SA for monitoring the LMO	
Emergency procedures in the event of an accident with the LMO	
Risk assessment	

Policy of GMO Consignments in Transit

- **Consignments**
  - Containing GMOs (raw) approved for commercial use in SA
  - Containing > 1% processed GMOs (< 1% are exempt)
  - Containing GMOs (raw and processed) not approved for commercial use in SA

Requirements for Transit Consignments

- **Notification letter**
  - Contact details of the Exporter
  - Contact details of the importer
  - LMOs that might be present
  - Intended dates of import and export
  - Quantity of consignment
  - Transit method of transport
  - Suggested methods for safe handling, storage, transport and use, including packaging, labeling, documentation, disposal and contingency procedures, where appropriate
- **Proof of acceptance by the receiving country / Import Permit**

Handling and Packaging of Consignments

- At Port of Entry
  - Transfer material directly onto railway or road trucks or a dedicated storage facility
  - Seal and mark each truck or storage facility
  - Keep a written record of the number of trucks, content, volume and seal numbers of truck or bags as applicable
  - Clean the surrounding area at the loading site that is related to the consignment

SOP: GMO Status Certification

- **Negative-GMO status certification (< 1% GM)**
  - **A1:** *When a GMO equivalent is commercially available in South Africa*
  - **A2:** *When there is no GM equivalent commercially available in South Africa*
- **Positive GMO status certification**
  - **B1:** *For a consignment containing one or more GMO events commercially available in SA*

Requirements for Third Party GMO Testing

- The test method must be relevant for the specific consignment
- If the consignment falls within Category A1, the analysis must cover all the GMO's commercially available in South Africa
- If the consignment falls within Category B1, the analysis must cover those GMO's for which certification is being sought
- The Third party must retain a sufficient part of the sample for re-analysis for a minimum of 3 months after a certificate of analysis was provided to the applicant
- For analysis in support of non-GMO certification, the LOD (limit of detection) or LOQ (limit of quantification) of the test must be below 1.0%
- Protein based ELISA and strip test methods are only applicable to unprocessed products
- Only PCR based tests may be used to determine the GMO or non-GMO status of a processed product
- The third party must, on request of the Department, be able to provide proof of competency to perform some or all of the test methods listed in the Table below by providing relevant documentation or certification, and may be subject to inspection in terms of the Genetically Modified Organisms Act.

GM Test Method Required

Consignment	Status	Recommended method[1]
Category A1	Unprocessed / milled	Strip test, ELISA or PCR
Category A1	Processed	PCR
Category B1	Unprocessed / milled	Strip test, ELISA or PCR
Category B1	Processed	PCR

1 The recommended test method must have an LOD or LOQ below 1.0%.

Challenges, Limitations and Lessons Learnt

GMO Testing Facility

University of the Free State

“Serving Public Interest without Serving Interest Groups”