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Banana Production in Africa: An Industry Under Threat?

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Background

- African Crop Science Society Conference (October 2013) - Uganda
- Southern Africa Phytosanitary Inspection Workshop (September 2016) - Pretoria
- South African Banana Growers Association
- Food and Agriculture Organization (FAO)

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Global Industry Overview

- Banana(Musa spp.) is a crop of high economic significance
- NB as both food and cash crop
- Produced in 133 countries
- A 28 billion USD industry
- 100 million tons produced globally on 9.9 million hectares

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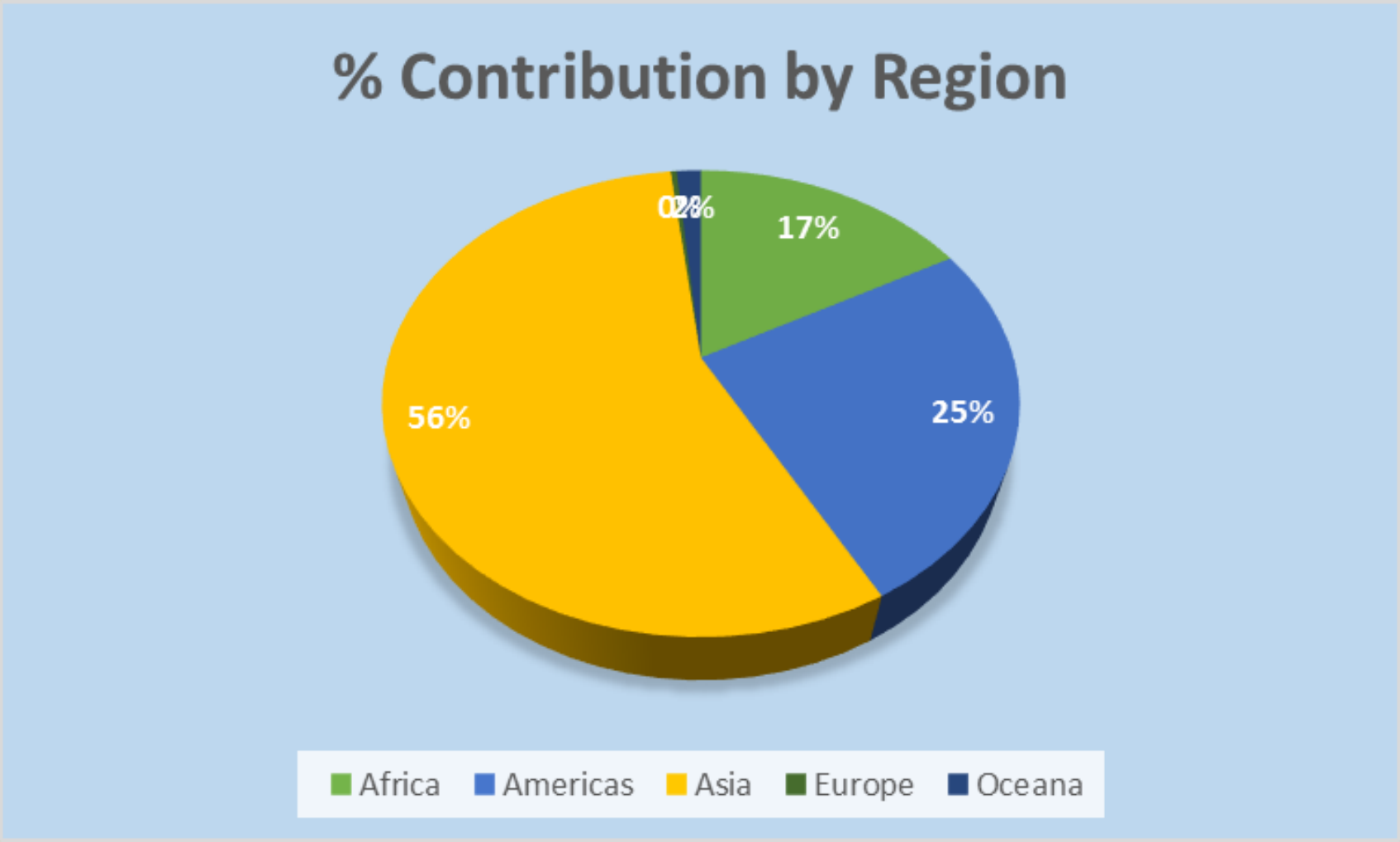
Global Industry Overview



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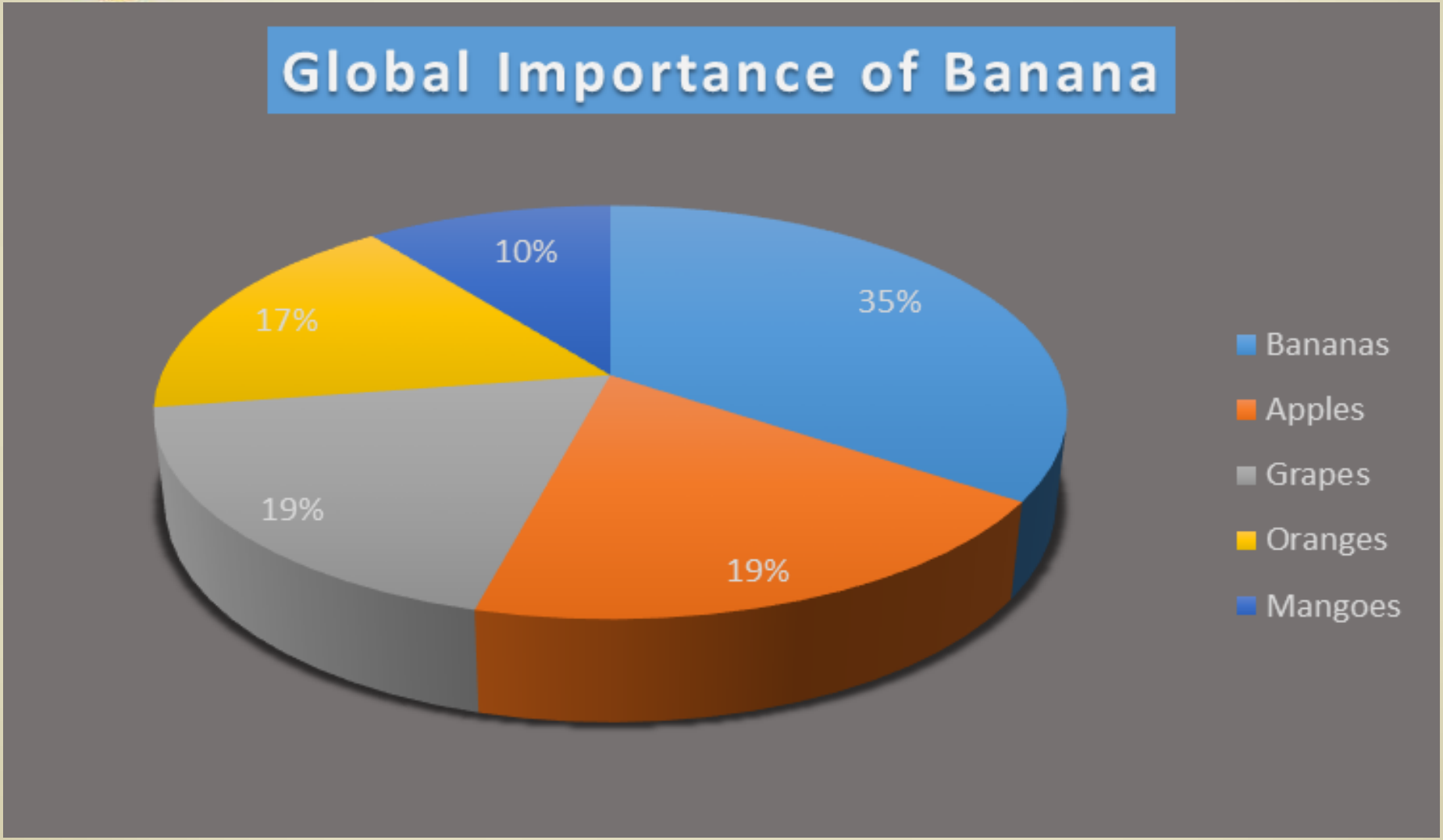
Global Industry Overview



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Top 10 banana producing countries (2015)

Rank	Country	Production (million tons)
1	India	30.05
2	China	11.94
3	Uganda	11.83
4	Philippines	9.45
5	Ecuador	8.24
6	Brazil	7.65
7	Indonesia	6.34
8	Colombia	5.27
9	Cameroon	4.94
10	Tanzania	4.08
28	Mozambique	0.45
30	South Africa	0.39

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Banana Consumption (per capita per annum)

- Philippines 56 kg
- USA 12.7 kg
- EU 10.8 kg
- RSA 8 kg
- Uganda 191 – 250 kg (matooke)

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African Industry Overview (2013)

- Africa contributes 17% of global banana production
- Produced in 41 countries
- Uganda is the largest producer in SSA
- Both fresh market and cooking bananas
- A staple food most countries in East Africa

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RSA Industry Overview (2013/14)

- Bananas produced in 3 provinces
- Total production 463395 tons
- Value of industry R16 billion

Rank	Province	% of Total Production
1	Mpumalanga	58
2	KZN	22
3	Limpopo	20

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RSA Industry Overview

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RSA Industry Overview (2013/14)

- Average price per ton R4278
- Imports of 100 000 tons
- Import price R2000 per ton
- 99.9% of imports from Mozambique

Channel	Value (tons)	%
NFPM's	277633	60
PROCESSING	176125	38
EXPORTS	9637	2
TOTAL	463395	100

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Banana Industry Under Threat?

- Climate change
- Lack of genetic diversity
- Diminishing soil fertility (low yields)
- Pests and diseases

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Typhoon Bopha, Philippines (2013)

Banana leaf spot (Black sigatoka)

Banana bunchy top virus

Banana weevil

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Fusarium wilt (Panama disease)

- Most destructive banana disease of all time
- A soil- borne fungal disease caused by *Fusarium oxysporum* sp. cubense (Foc)
- First outbreak (Race 1)- extinction of Gros Michel plantations
- Survives in soil > 30 years

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Fusarium wilt of banana (Foc TR4)

- New strain of the fungus known as Tropical Race 4 has emerged.
- Highly destructive to commercial Cavendish plantations.
- First identified in Taiwan (1990's)
- Jordan, then Mozambique -2013
- Lebanon, Pakistan, Queensland – 2015
- Currently in 2 locations in N Mozambique.

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Foc TR4

- Spread by contaminated plant parts, soil and water
- Rapid dispersal (14 000 plants infected in 2 years)
- No effective fungicides
- Symptoms appear on roots, stems, leaves, and fruit
- Confirmed by tissue sample analysis

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Global Distribution of Fusarium Wilt

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Foc TR4 – Containment

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Foc TR4 – African perspective

- Africa- banana a staple food for 20 million people (food security)
- Loss of income
- No resistant cultivars
- Breeding efforts concentrated in Asia
- Increase in banana prices (limited affordability)

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Current Status and Impact

- China - > 40 000 ha infected
- Philippines - > 40 000 ha abandoned
- Indonesia - > 8 million plants destroyed annually, loss of R75 million USD/ annum
- Two farms in Mozambique under quarantine
- South Africa on high alert (declared a phytosanitary risk)

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Foc TR4 – Interventions

- World banana forum – task force (December 2013)
- Australia – Biosecurity Queensland established guidelines for TR4 containment
- Latin America and the Caribbean – contingency plan to cater for 9 countries
- Africa – African consortium for TR4 launched in RSA (April 2014)

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Foc TR4 - Interventions

- BARNESA – Banana Research Network for Eastern& Southern Africa (breeding of resistant cultivars)

- FAO – Food and Agriculture Organization (phytosanitary guidelines& protocols)
- IITA – International Institute of Tropical Agriculture (research and fund-raising)
- Universities – Stellenbosch& Eduardo Mondlane (research and diagnostic services)

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Implications for extension

- Creation of awareness to stakeholders
- Farm monitoring
- Early detection and reporting
- Sending suspect plant samples for identification
- Training of stakeholders in quarantine activities

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Conclusion

- World banana production under threat, particularly from TR4
- Africa even more vulnerable due to limited resources
- Extension services have a major role to play in containing the looming epidemic (TR4)

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Thank you.