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Mozambique's Natural Resource Boom

What potential impacts on the competitiveness of
Mozambique's **Agriculture** industry?



October 2014

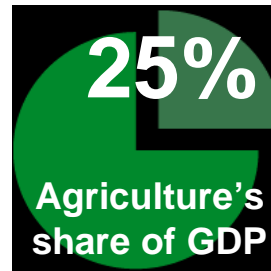
Agriculture is an important contributor to Mozambique's economy



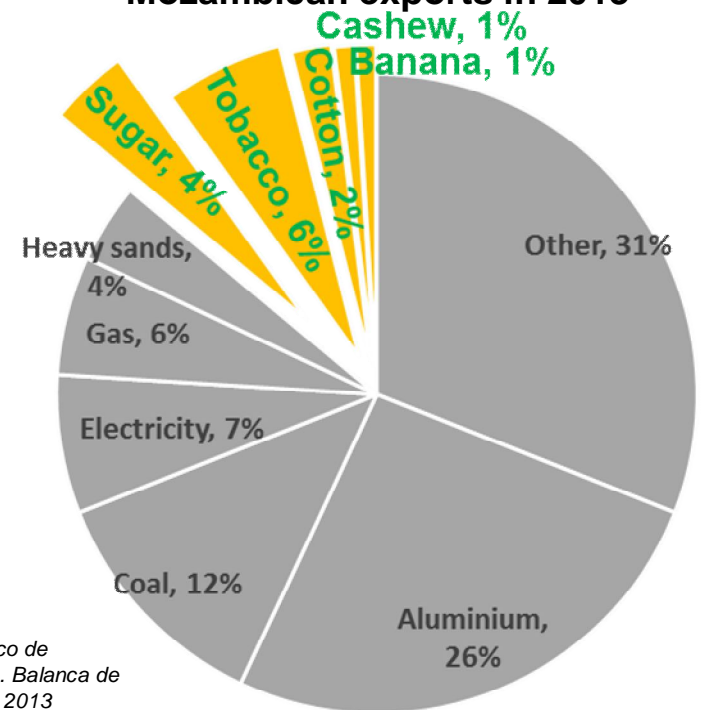
Top food crops	'000 tons
Cassava	10,051
Maize	1,177
Sweet potatoes	900
Paddy rice	280

Source: Food & Agriculture Organization, FAOSTAT, accessed August 20, 2014

Over the 1992-2012 period:



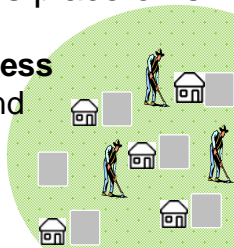
Agriculture accounted for 17% of Mozambican exports in 2013



Source: Banco de Mocambique. Balanca de Pagamentos 2013

More than **95%** of Mozambique's production takes place on smallholder farms

Limited access to finance and markets



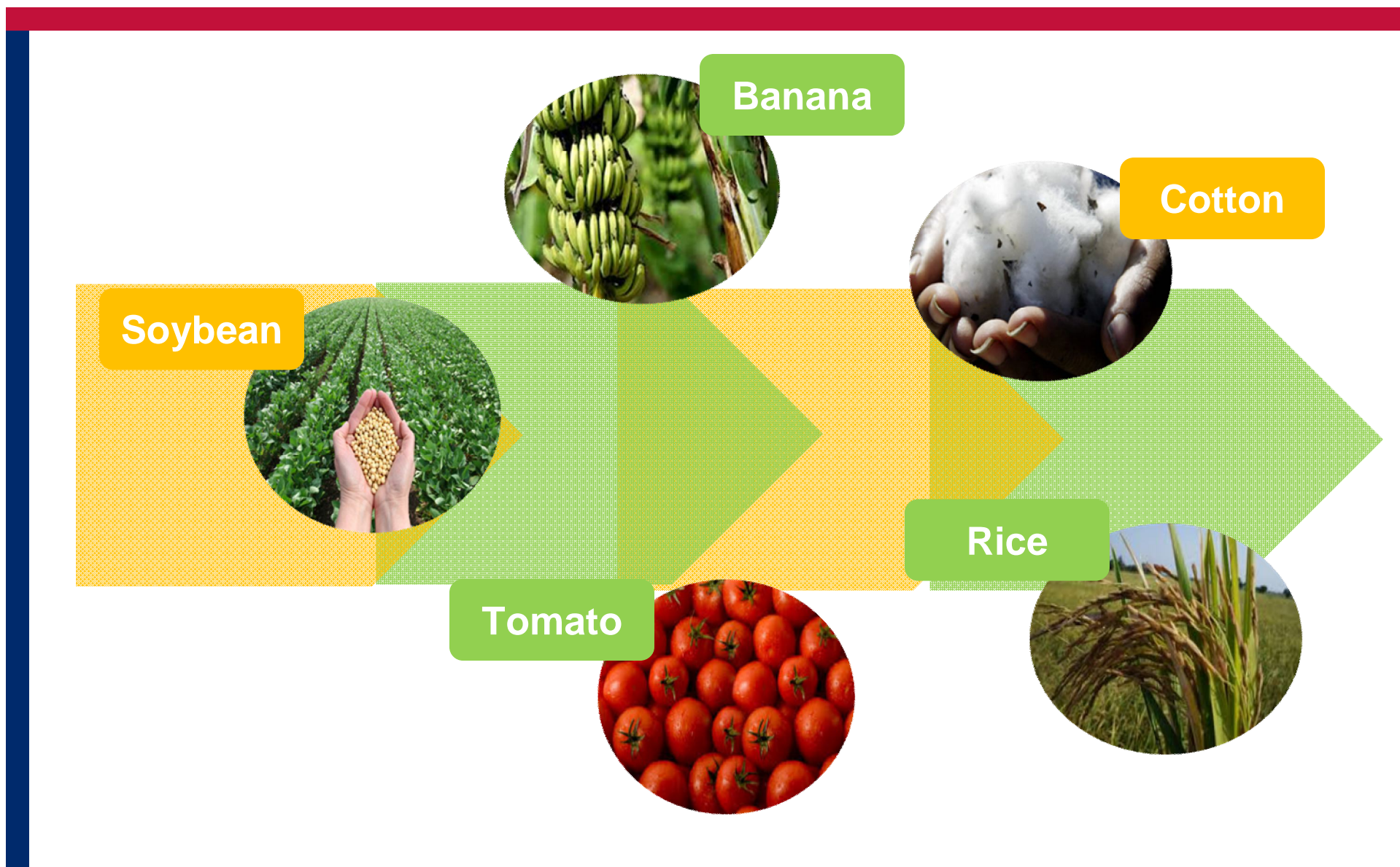
75% of smallholders occupy an average area ranging from 0.5 to 3 hectares

Low yields: cereal yields 1/4 to 1/3 of Zambia and Malawi's

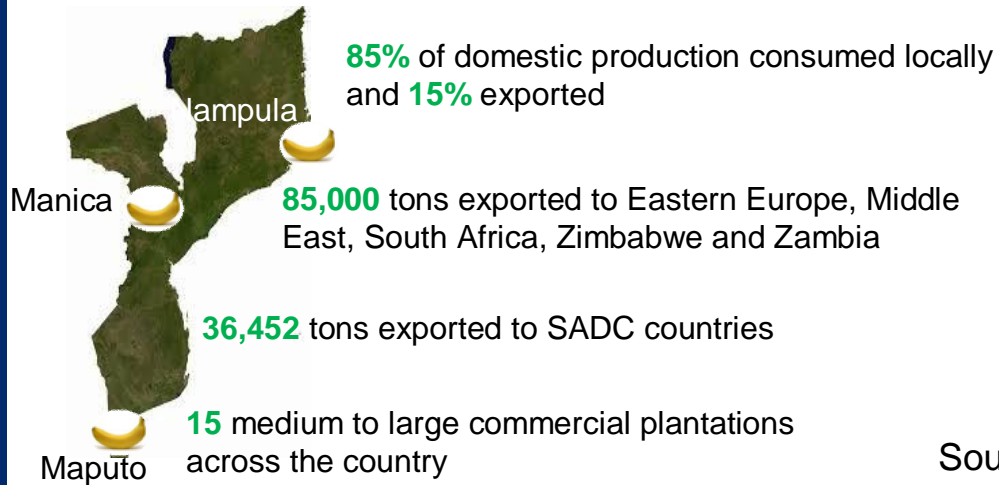
Low use of inputs by smallholder farmers:

- 3% use inorganic fertilizers
- 6% use pesticides
- 9% use improved seeds
- Low use of animal traction and mechanization

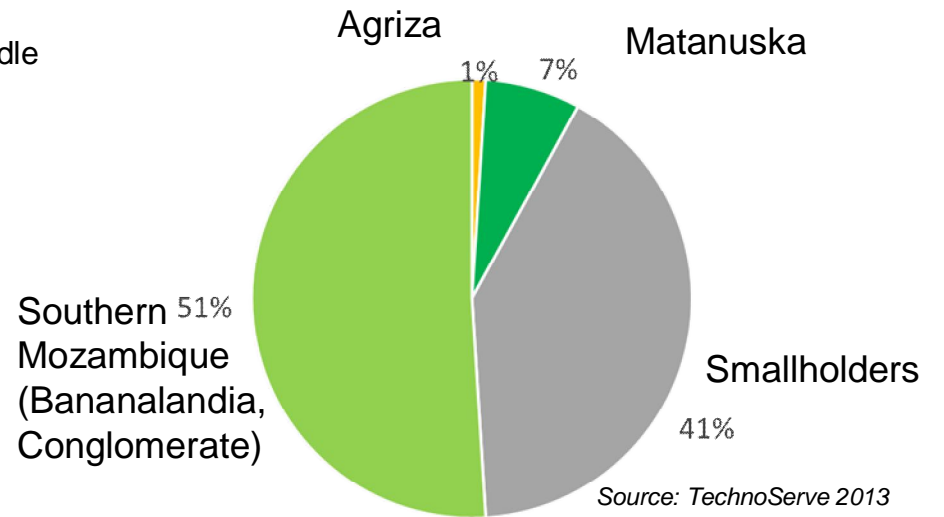
Five key value-chains analyzed in-depth



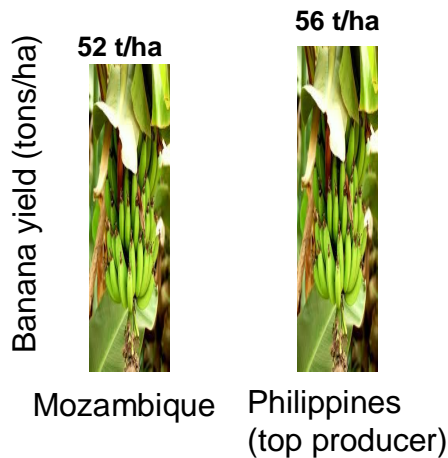
Mozambique enjoys very good conditions to grow bananas on a commercial basis



Distribution of Banana Production (% tons)



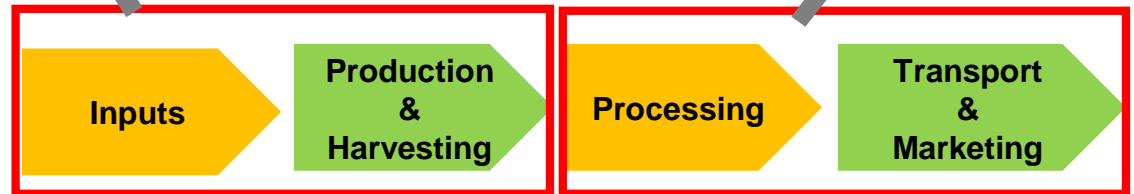
World class Banana yields!



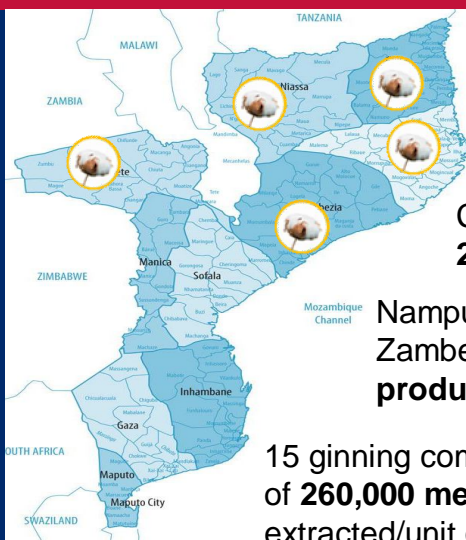
Farm-level segment
73% of costs

Banana value-chain (large-scale)

Post-plantation segment
27% of costs



Cotton is one of Mozambique's Top 10 exports

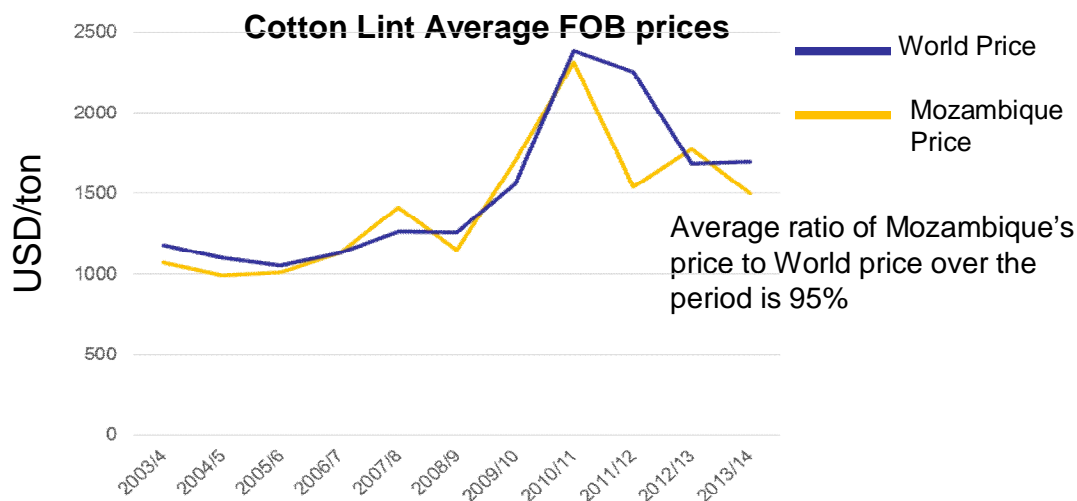


Cotton is Mozambique's **3rd most important** agricultural source of foreign exchange earnings (nearly **US\$100 million in 2013**)

Cotton is a source of livelihood for around **250,000 farmers** (mostly smallholders)

Nampula, Cabo Delgado, Tete, Niassa and Zambezia account for **84% of total production**

15 ginning companies in Mozambique with installed capacity of **260,000 metric tons** and ginning ratio (% lint extracted/unit of seed cotton) of 38% (Burkina Faso 42%)



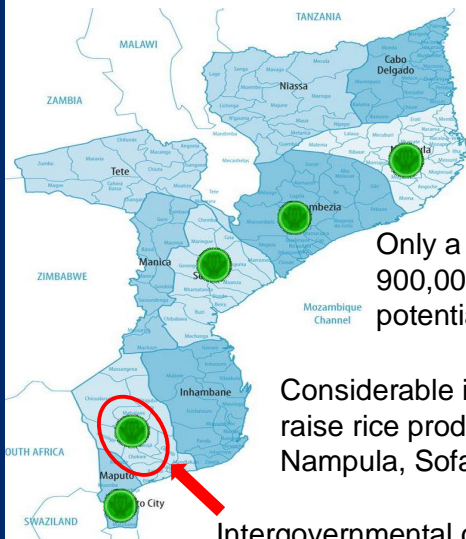
Africa accounts for 11% of world lint exports and...Mozambique only accounts for 2% of Africa's share



Mozambique Cotton Institute (IAM: Instituto do Algodão de Moçambique)

- Established in 1991 to support and supervise production, marketing, processing and export of cotton
- Works closely with ginning companies to promote efficiency and competitiveness in the industry
- Acts as buyer of last resort if farmers are unable to sell to the ginning concessionaire in their district

Mozambique depends on imports for two-thirds of total rice consumption

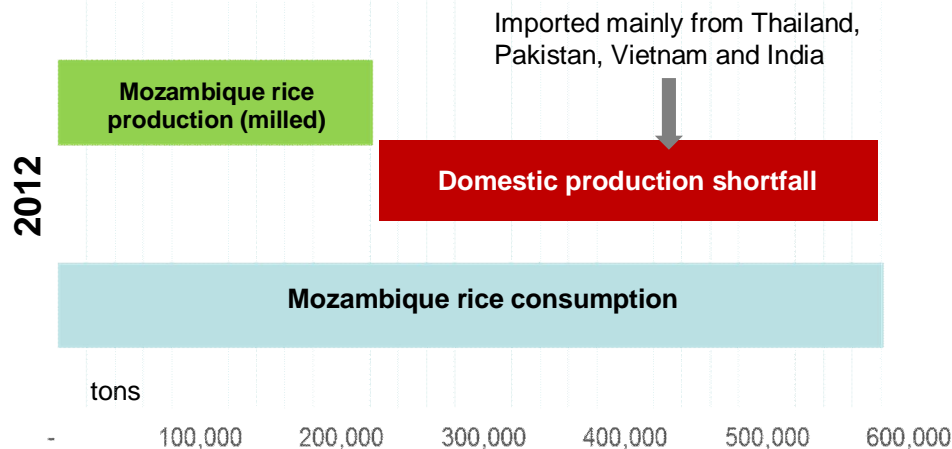


Rice plays an important role in the diet of Mozambicans: currently a quarter of all cereal calories consumed

Only a third of Mozambique's 900,000ha of rice production area potential is currently cultivated

Considerable initiatives are underway to raise rice production in Zambezia, Nampula, Sofala, Gaza and Maputo

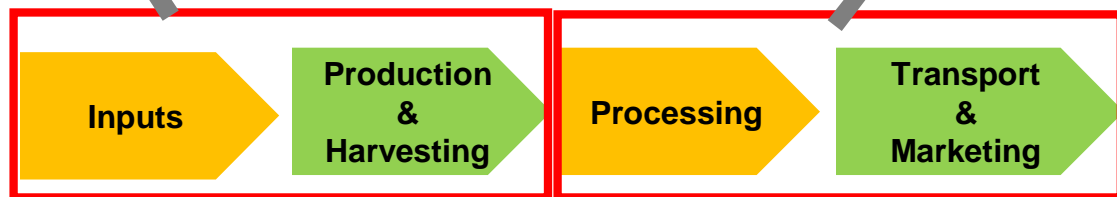
Intergovernmental cooperation with China has led to new developments in the Chokwe and Xai-Xai irrigation perimeter



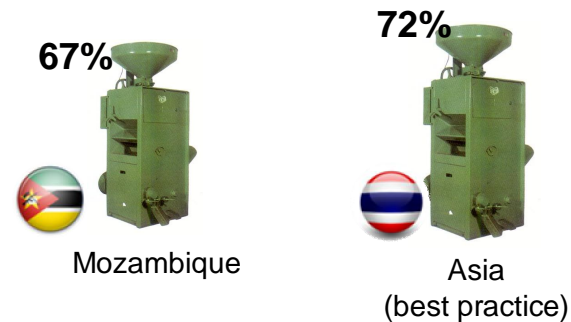
Farm-level segment
73% of costs

Post-plantation segment
27% of costs

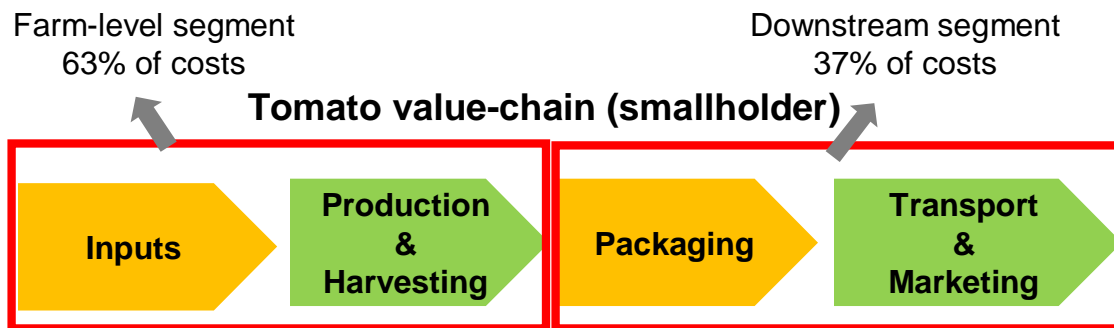
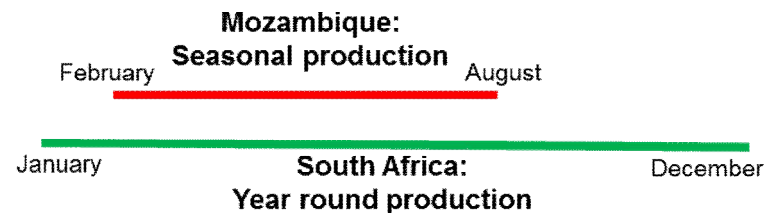
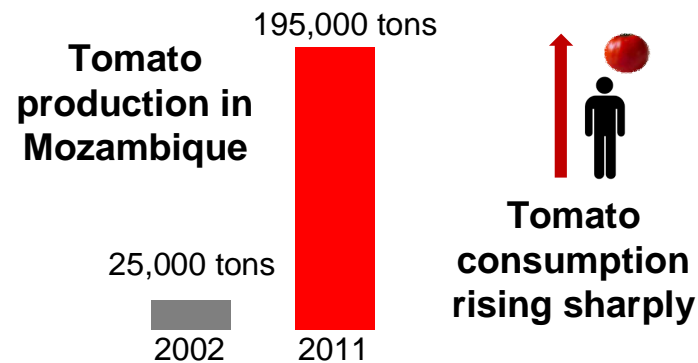
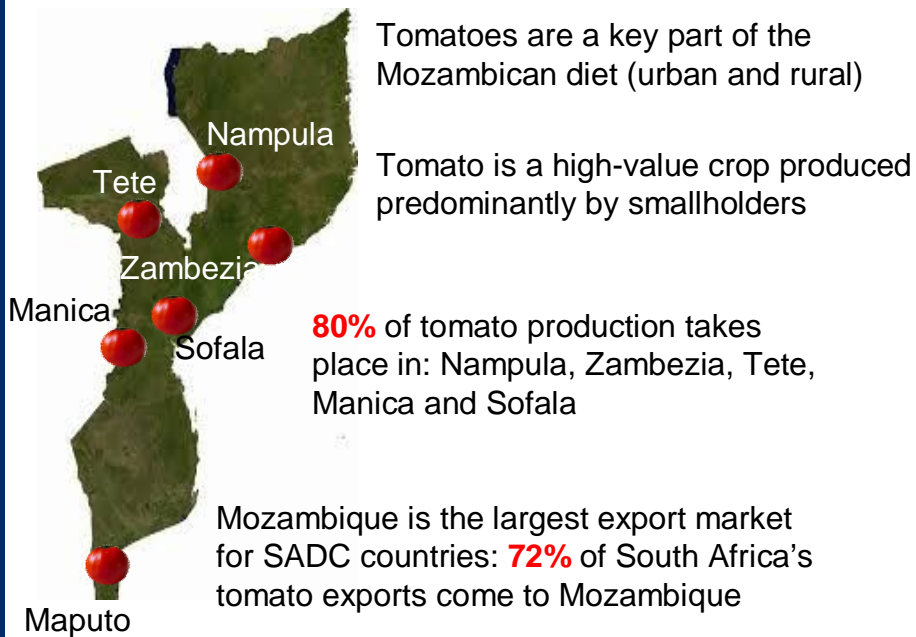
Rice value-chain



Milling Ratio (% of processed rice obtained from paddy)

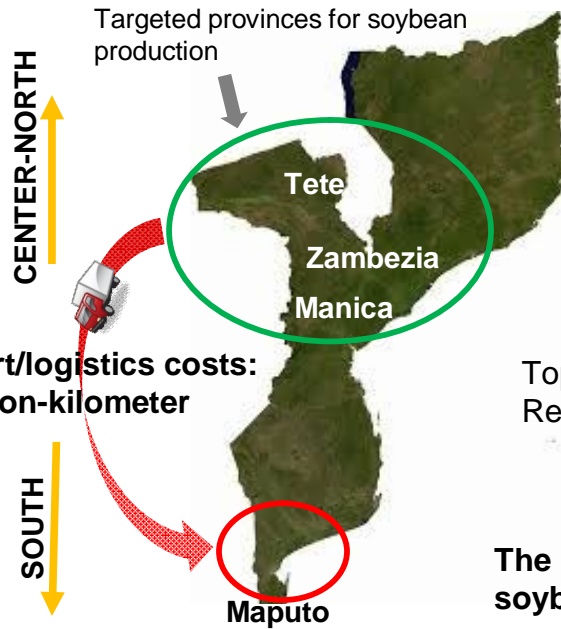


Approximately **271,000** households (smallholder farmers) cultivate tomatoes in Mozambique



Soybean has huge growth potential in Mozambique

Demand in Center-North is met by domestic production in the same region)



Cultivation of soybeans in Mozambique has experienced rapid growth since its introduction in the 1980s

Since 2008/9 TechnoServe and Clusa have promoted the scale up of soybean production

**High transport/logistics costs:
50 MZN/ton-kilometer**

Top producers include MOCOTEX, Africa Century, Rei do Agro, Hoyo-Hoyo, AgroMoz and Alif Quimica

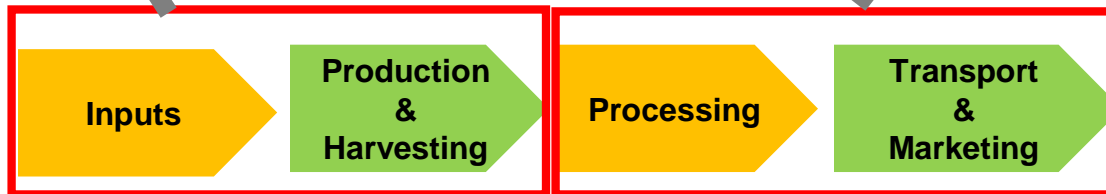
Demand in the South (Maputo) is fully met by imports from South Africa, Argentina, India and Malawi

The domestic poultry industry is key to soybean production

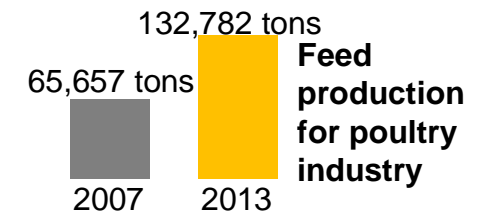
Farm-level segment
83% of costs


Post-plantation segment
17% of costs

Soybean value-chain (smallholder)




+ Development of soy-driven industries: soy oil, soy milk, soy tofu...













\$  Cost of a broiler (chicken) is **34% soy-cake**

Mozambican agriculture: use of inputs varies across different crops

Use of:	Improved seed, planting materials	Mechanization	Fertilizers	Other agro-chemicals	Irrigation
 Banana					
 Cotton		 * when cultivating > 2 ha			
 Rice					
 Soybean					
 Tomato					

4 out of 5 of the selected value-chains are currently competitive

Sample profitability analysis based on 30MZN/\$	 Banana CIF Europe; 40 tons/ha	 Cotton Ex-ginnery FOB; 0.7 tons/ha	 Rice Maputo wholesale price; 4 tons/ha	 Soybean Entry soy mill; 1.2 tons/ha	 Tomato Maputo price; 40 tons/ha
Gross Revenue (Metical/ton)	28,500	57,305	14,219	18,568	16,624
Costs (Metical/ton)	11,356	38,453	20,047	13,140	7,123
Profit (Metical/ton)	17,144	18,852	(5,828)	5,428	9,501
Cost-benefit ratio	0.40	0.67	1.41	0.71	0.43
Competitive?					

Dutch Disease: a threat to Mozambique's competitiveness

- 1 One of the potential effects of Mozambique's impending resource boom is an appreciation of the Metical (one consequence of the phenomenon known as "Dutch Disease")
- 2 This means buyers would need more units of their currency (for example dollars) to buy the same amount of Mozambican products
- 3 This would result in a loss of competitiveness relative to other exporters whose currencies have not undergone a similar appreciation









Certain value-chains show **resilience** to Dutch Disease



Strong value-chains







	30MZN/\$ Cost-benefit ratio	20MZN/\$ Cost-benefit ratio	Impact of Dutch Disease
 Banana	0.40	0.52	 Strong resilience to Dutch Disease
 Soybean	0.71	0.96	 Mild resilience to Dutch Disease
 Tomato	0.43	0.51	 Strong resilience to Dutch Disease

Some value-chains would be **severely impacted** by Dutch Disease

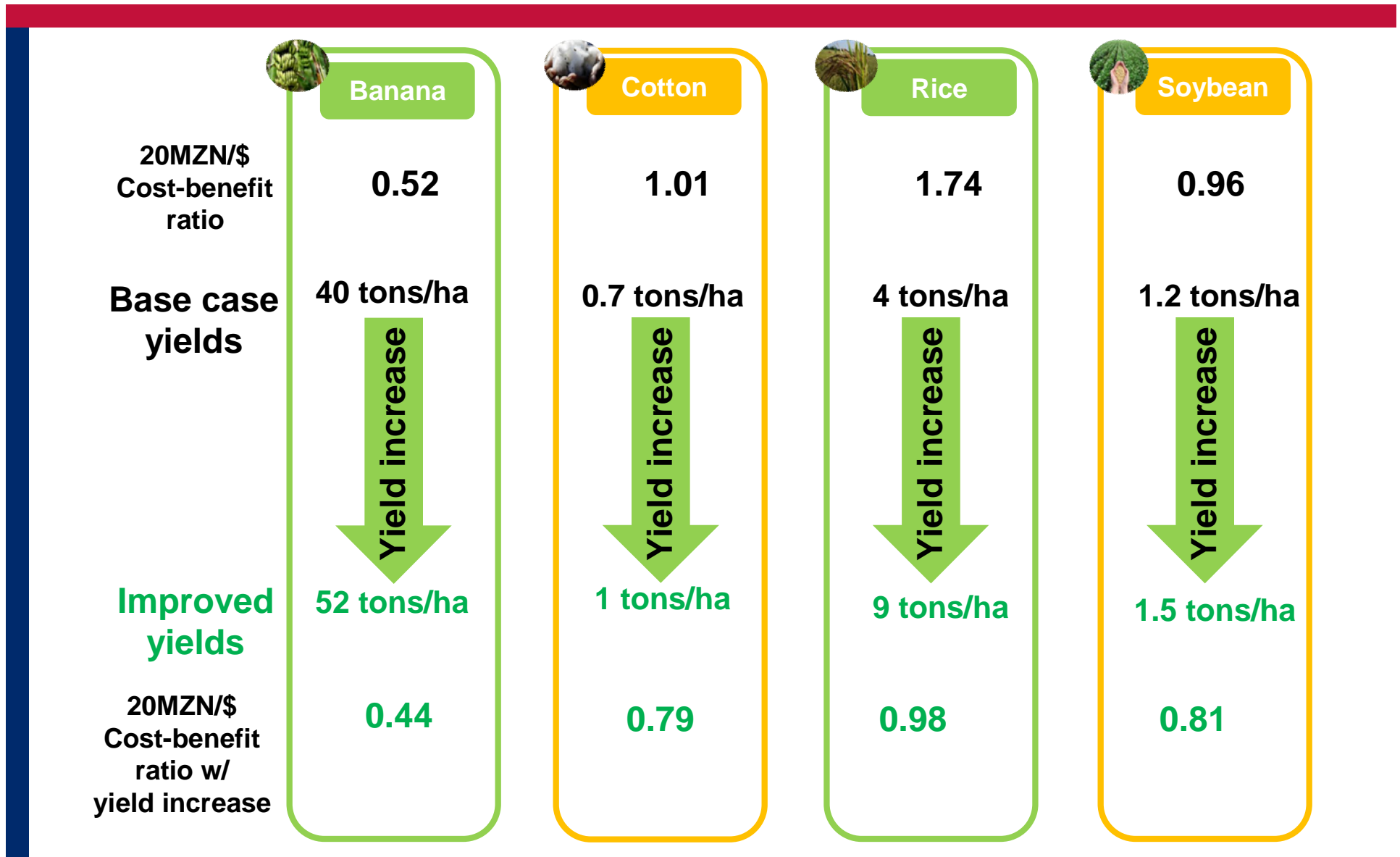


Weak value-chains

Metical appreciation 

	30MZN/\$ Cost-benefit ratio	20MZN/\$ Cost-benefit ratio	Impact of Dutch Disease
 Cotton	0.67	1.01	 Vulnerable to Dutch Disease
 Rice	1.41	1.74	 Highly vulnerable to Dutch Disease

Increased agricultural yields can boost competitiveness



A multi-layered approach to Mozambique's agriculture competitiveness

Reduce bureaucracy and streamline processes

Ensure minimum wage increases reflect productivity

Business environment

Eliminate illegal taxes

Simplify legal framework for land rights

Improve access to electricity

Transport & Logistics

Improve road quality and storage infrastructure (silos, cold storage)

Increase management efficiency

Increase port efficiency

Remove/Reduce non-tariff barriers (TEEN, PSI, scanners)

Expand production areas

Promote use of inputs (improved seeds, fertilizers, pesticides, seedlings)

Increase access to irrigation systems and mechanization services

Farm-level

Improve production and harvesting techniques

Increase domestic R&D and local production of seedlings to reduce phytosanitary risk

Processing

Upgrade processing machinery and increase asset utilization

Improve management efficiency and quality control

The End

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