



## Regional Trade in Food Staples: Stimulating Agricultural Growth and Improving Food Security in Eastern and Southern Africa

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COMESA AAMP Policy Seminar on Regional Trade  
Nairobi

December 11, 2008

MICHIGAN STATE  
UNIVERSITY



## Outline

- Importance of food staples
- Regional trade in food staples
- Secondary food staples
- Policy implications

## Value of Agricultural Production in Sub-Saharan Africa, 2000

	Value (\$US billions)	Percent
Ag. Exports	\$17	24%
<b>Domestic staples</b>	<b>\$50</b>	<b>73%</b>
Other	\$2	3%
Total	\$68	100%

Source: Diao and Hazell (2004)

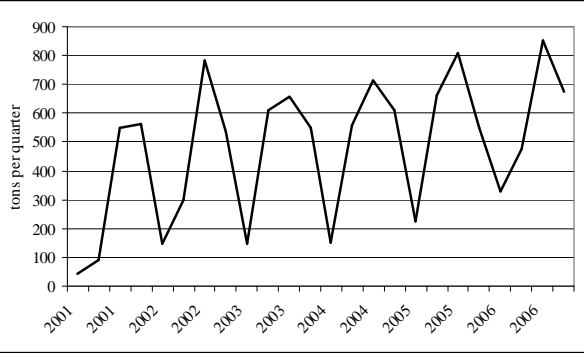
## Growing markets for food staples

Urban population will double in  
next 15 years

Urbanization → growing demand  
for purchased and prepared  
foods

Rural specialization → growing  
rural food markets

### Dried cassava exiting Zambia for the DRC



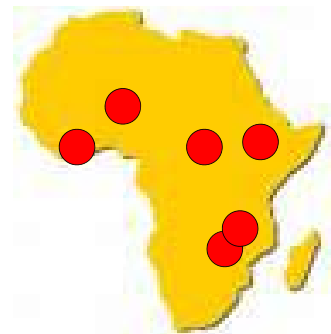
### Food Staple Markets

- Big
  - Growing
  - Important to the rural and urban poor
- 
- ➔ Agricultural growth
  - ➔ Poverty reduction
  - ➔ Improved food security

### Outline

- Importance of food staples
- **Regional trade in food staples**
- Secondary food staples
- Policy implications

### Deficit markets



### Surplus food production zones



### Mozambique



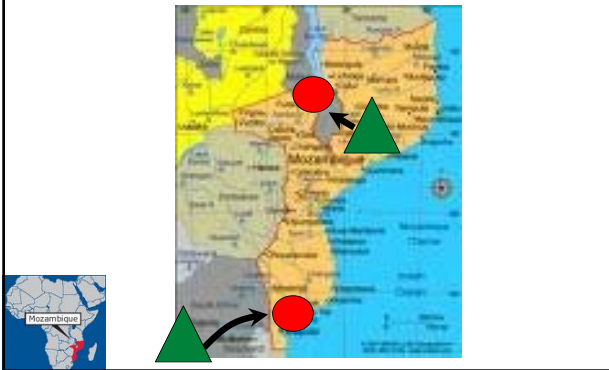
### Mozambique



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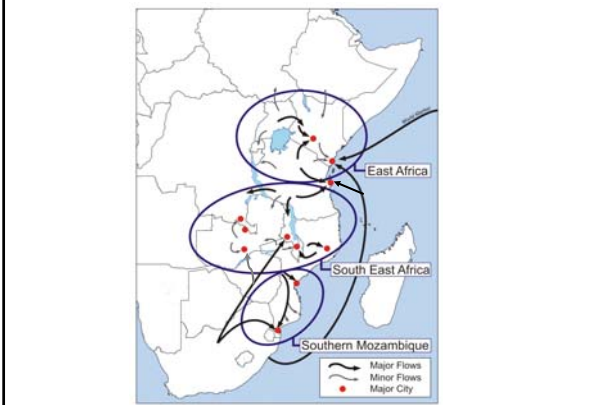
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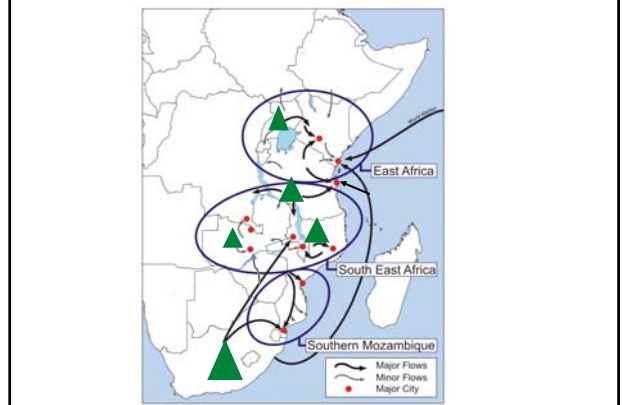
### Surplus Zones and Deficit Markets in ESA

Surplus Zones	Deficit Markets They Serve
Northern Mozambique	Malawi
Southern Tanzania	Malawi, DRC
Eastern Uganda	Kenya
South Africa	Zimbabwe, S. Mozambique, Malawi

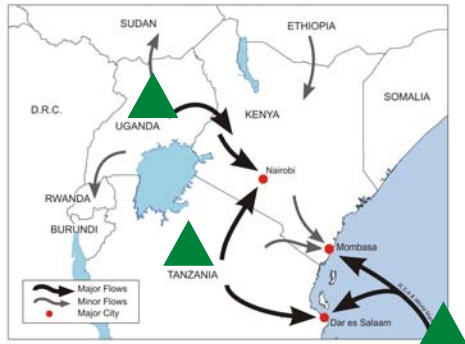
### Maize Market Sheds in ESA



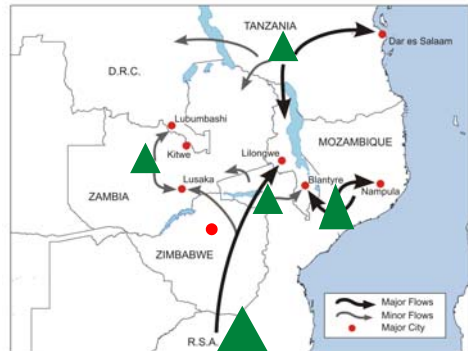
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### East Africa Maize Market Shed



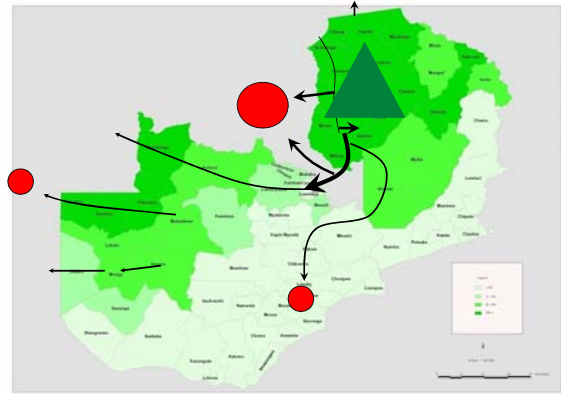
### South East Africa Market Shed



### Southern Mozambique Maize Market Shed



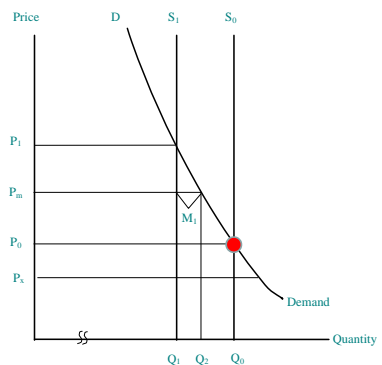
### Dried Cassava Trade Flows



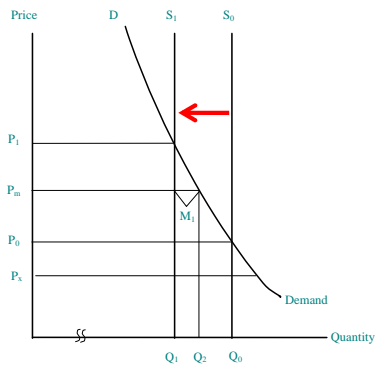
### Cross border opportunities

- Africa's political boundaries cut across natural market sheds.
- COMESA and other RECs enable cost savings by facilitating low-cost cross-border flows.

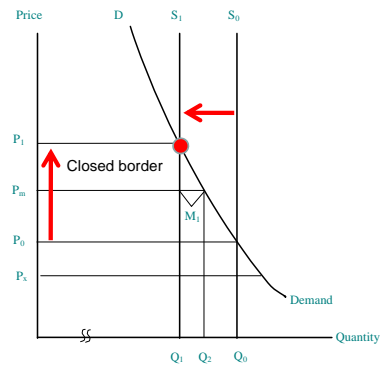
### Trade moderates price volatility



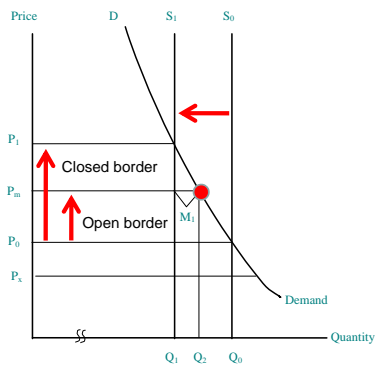
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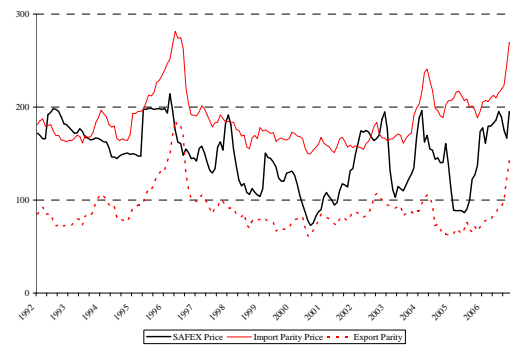
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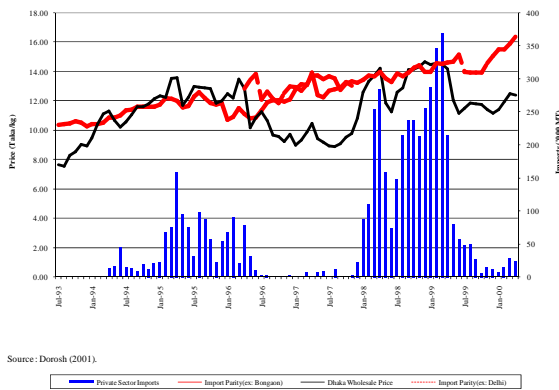
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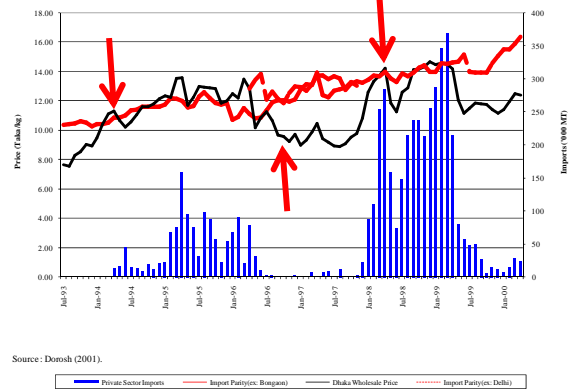
### South Africa, domestic and border prices for white maize, 1992-2006



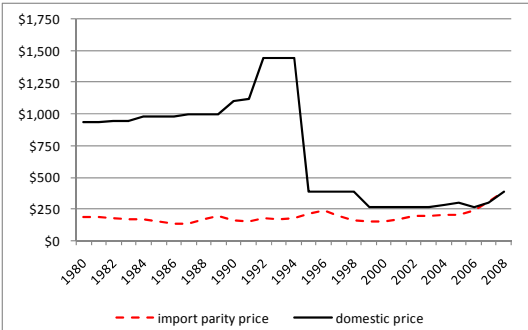
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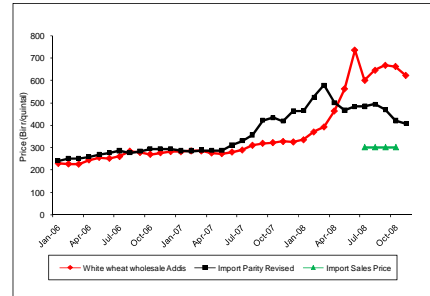
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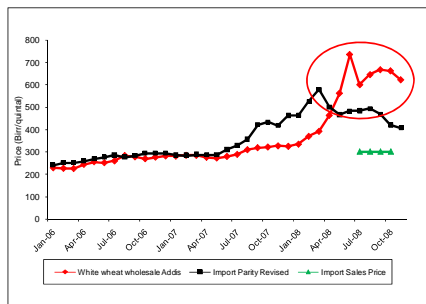
### Saudi Arabia, domestic and border prices for wheat, 1980-2008



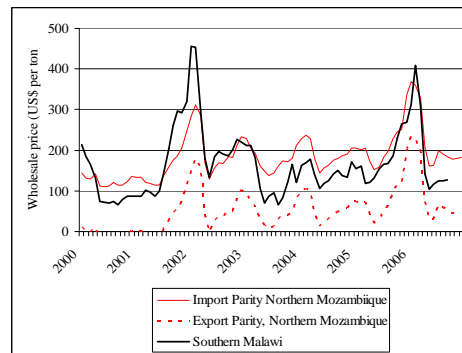
### Ethiopia Wheat



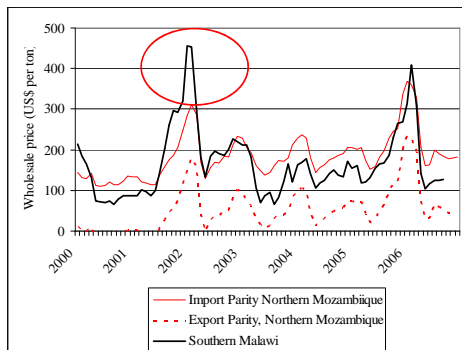
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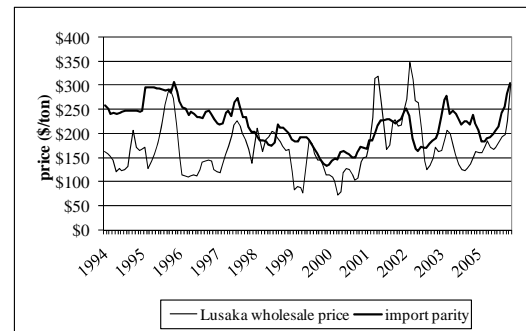
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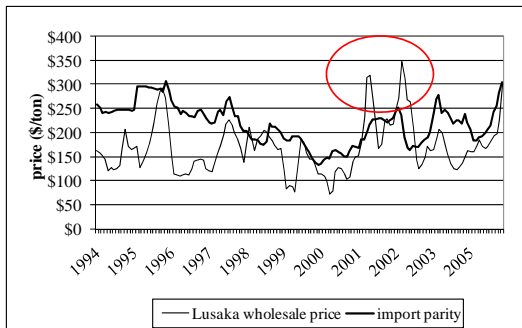
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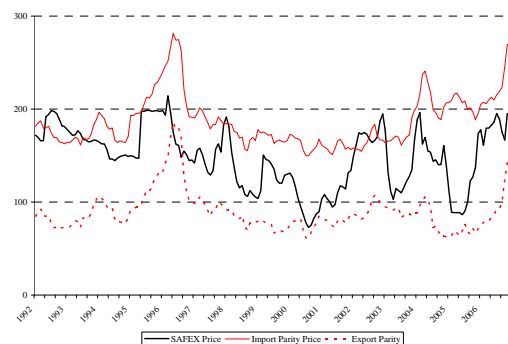
### When does import parity fail to cap price rises?

- When import and export bans prevent trade
- Foreign exchange unavailable
- Government protects farmers
- Late decision making and import authorization
- Uncertainty over government action
- When traders fear subsidized government sales will

### Import parity caps price rises

- When borders remain open
- Foreign exchange is available
- Under stable, predictable government policies

### South Africa, domestic and border prices for white maize, 1992-2006



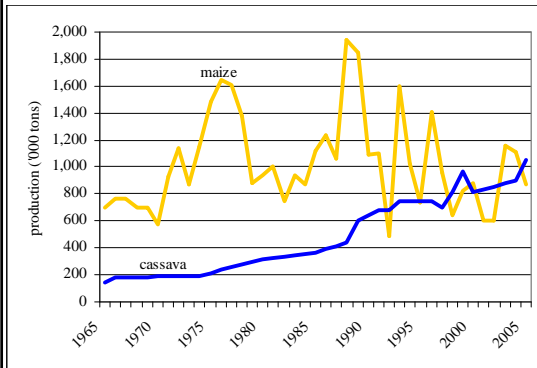
### Regional trade in food staples

- **Deficit Zones** ●
- Reduces price volatility
- Improves food security
- **Surplus Zones** ▲
- Improves producer incentives
- Accelerates agricultural growth

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## Cassava is drought-resistant

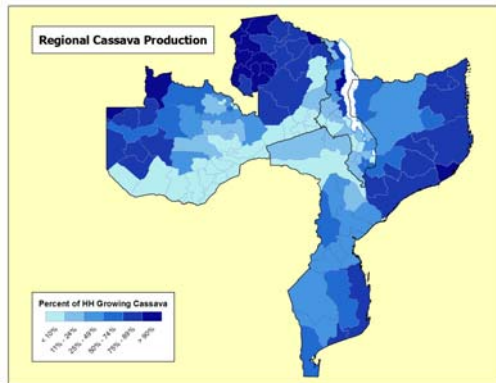


## Perennial food staples: cassava, banana

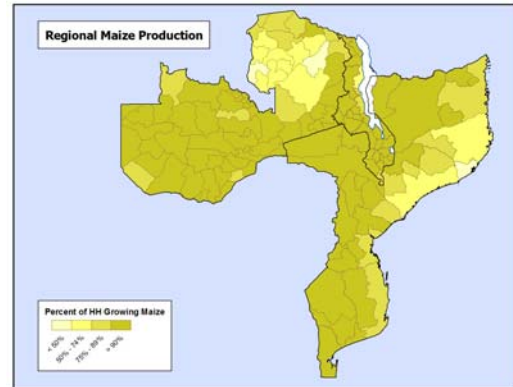
- Can be harvested any time of year
- Over multiple years
- Drought resistant
- → Dual staple zones allow farmers to expand cassava production for local consumption and export maize to deficit zones in times of stress



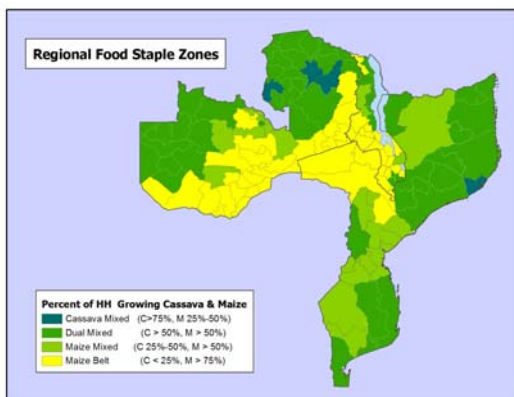
## Cassava production



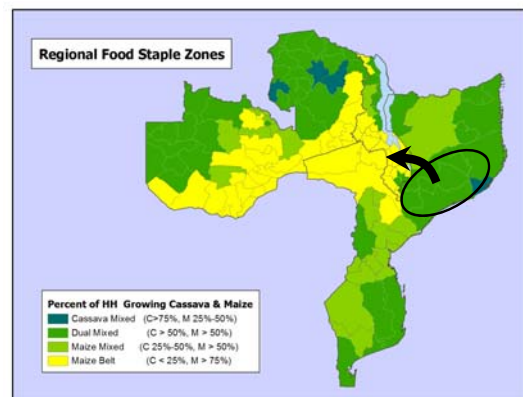
## Maize production



## Dual staple zones



## Dual staple zones



### Northern Zambia, a dual-staple zone

('000 tons of maize equivalents)	Dual staple zone	Maize belt	All Zambia
Cassava	270	12	282
Maize	<b>376</b>	525	901
Cassava plus maize	646	537	1,183

### Maize and cassava sell side-by-side



### Two food security shock absorbers

- Regional trade
- Substitution among food staples

### Trade policy impact on maize prices in Zambia

Maize harvest	Maize price under alternate trade regimes (% change from normal)	
	Closed border	Open border
Bumper harvest (30% above normal)	-50%	-26%
Drought (30% below normal)		

Source: Dorosh, Dradri and Haggblade (2007)

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Maize harvest	Maize price under alternate trade regimes (% change from normal)	
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Bumper harvest (30% above normal)	-50%	-26%
Drought (30% below normal)	+ 163%	+ 36%

Source: Dorosh, Dradri and Haggblade (2007)

### Open borders plus consumer substitution among food staples

30% fall in maize prodn	Closed border	Open border
Maize price	+163%	
Poor household consumption ('000 tons of maize-equivalents)		
Maize	-100	
Cassava	+43	
Total	-57	

Source: Dorosh, Dradri and Haggblade (2007)

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- a19** open border moderates price increases (by capping price increases at import parity) during a drought and also limits price fall during a bumper year (by allowing exports to cushion the price fall).  
aecsetup, 05/11/2007

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Maize price	+163%	+36%
Poor household consumption ('000 tons of maize-equivalents)		
Maize	-100	-43
Cassava	+43	+11
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### Policy Implications

- Open borders
- Secondary food staples
- Trust

### Open borders

- Stabilize prices
- Moderate consumption pressure,
- improve investment incentives for farmers and traders in surplus zones

### Trade bans

- Drive trade into informal channels
- Raise transaction costs
- Increase bands between import and export parity
- Discourage investment in staple food production and trade

## Secondary staples

- Stabilize food availability during drought years
- Substitute for maize in livestock feeds, starch and sweeteners
- Require public investments in research

## Trust

- Stable, predictable policies
- Open dialogue and communications
- Competitive markets (predictable policies, finance, good infrastructure)
- Good crop forecasting and market information systems