

Resource Allocation for Agriculture

Food Security Research Project (FSRP)

Presented to Parliamentary Sessional Committees on
Agriculture and Lands and Economic Affairs and Labour
1 February, 2006.

Ministry of Agriculture & Cooperatives



Research funded by: **FSRP/MATEP**

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FSRP CORE BUSINESS: Improving Agricultural Policy and Food Security through

- Empirical Research
- Capacity Building
- Outreach

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Today's focus

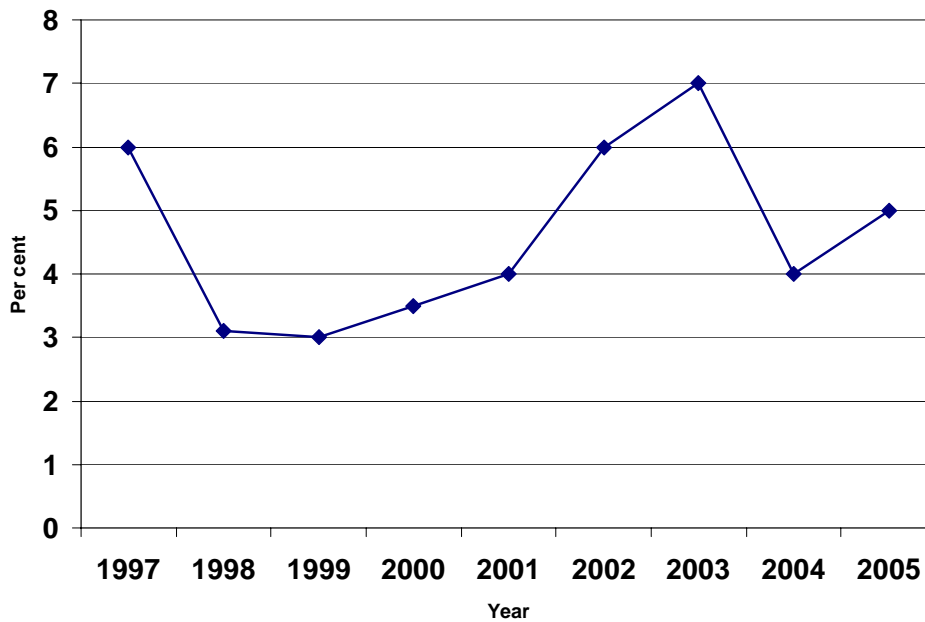
1. Resource allocation for agricultural sector
2. Promoting cost-effective use of fertilizer
3. Insights into maize sector
4. Returns to agriculture investment

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1. Resource Allocation to Agriculture

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Sector share of national budget: 1997 - 2005



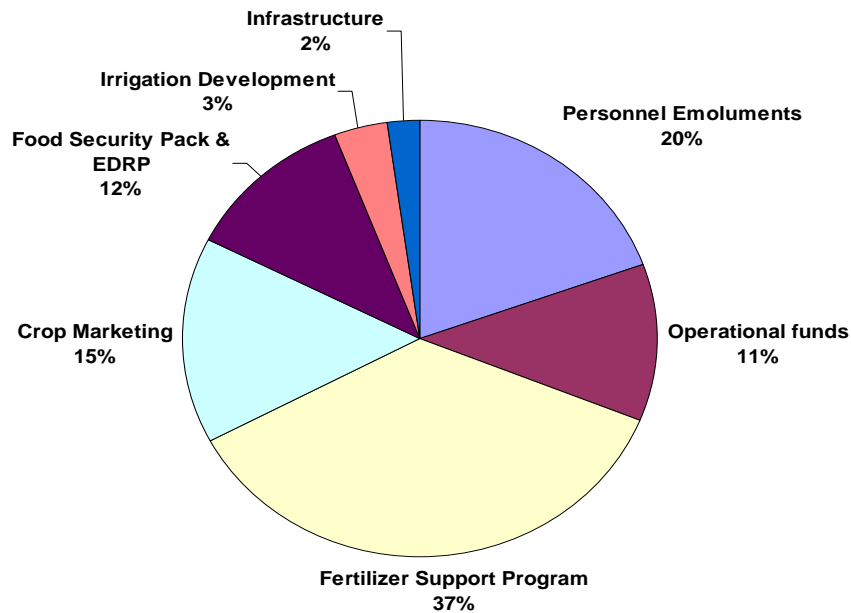
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Policy priority areas

- Irrigation
- Agricultural infrastructure and land
- Research – crops, livestock & fisheries
- Extension – crops, livestock & fisheries
- Animal health

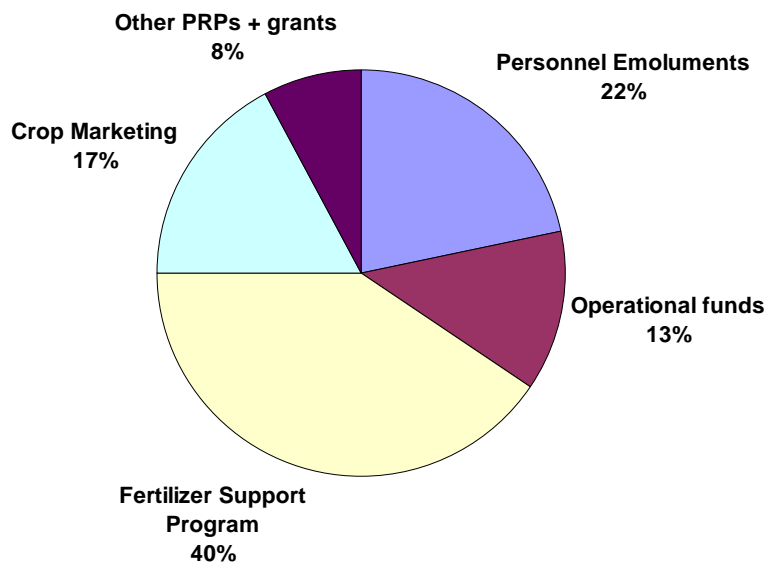
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Resource allocation to agriculture: ZMK465 in 2005



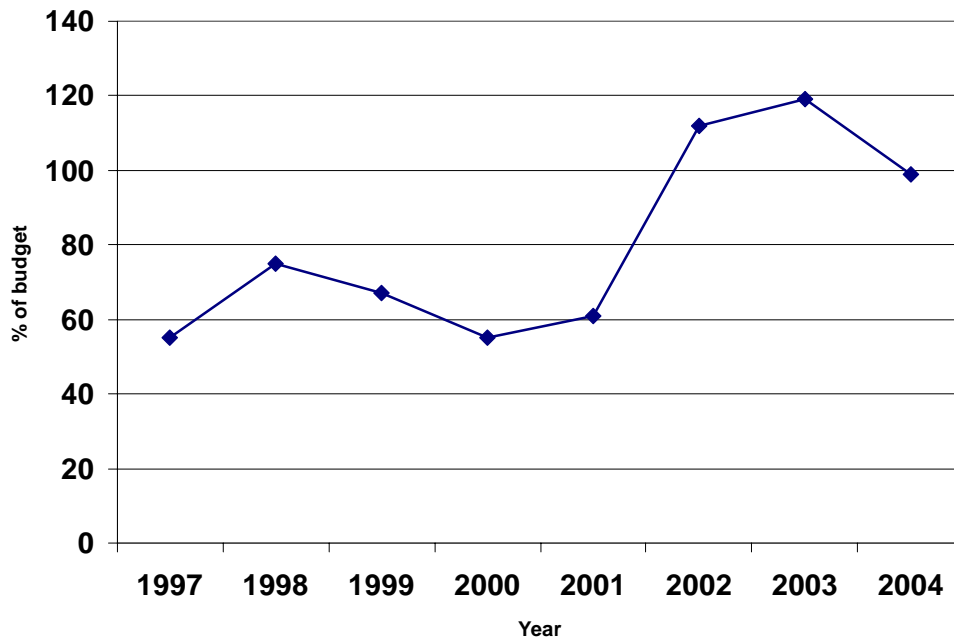
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Resource Allocation to MACO: ZMK346 in 2005



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Releases as % of budget: MACO 1997 - 2004



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Budget provision and funding for MACO in 2004

MACO	PROVISION	FUNDING
Personal Emoluments	68	57
Recurrent Departmental Charges	19	10
Grants and Other Payments	9	6
Poverty Reduction Programs/HIPC	141	162
Fertilizer Support Program	70	96
Strategic Food Reserves	47	47
Other PRP Programs	24	18
TOTAL	239	236

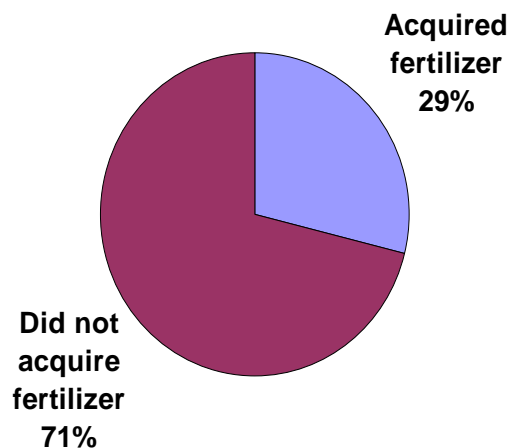
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2. Fertilizer

Budget priority #1

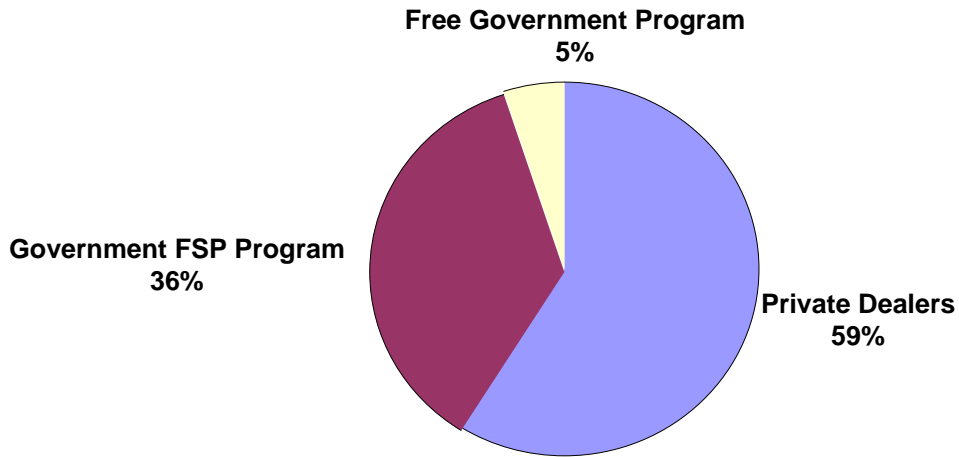
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Majority of farmers do not acquire fertilizer in 2002/03



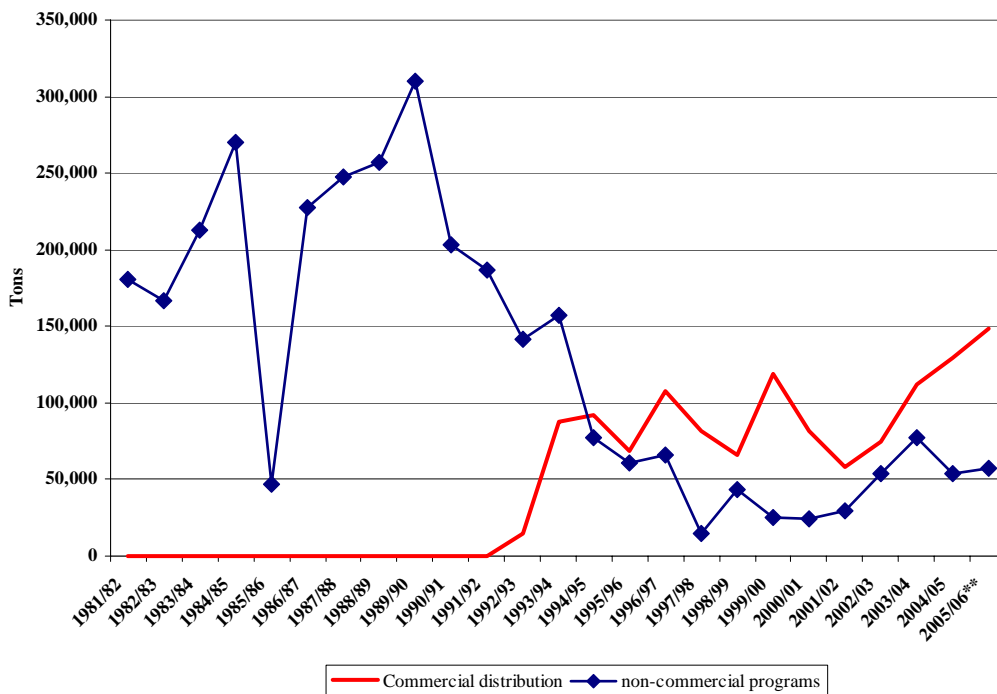
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How did Farmers Acquire Fertilizer in 2002/03?



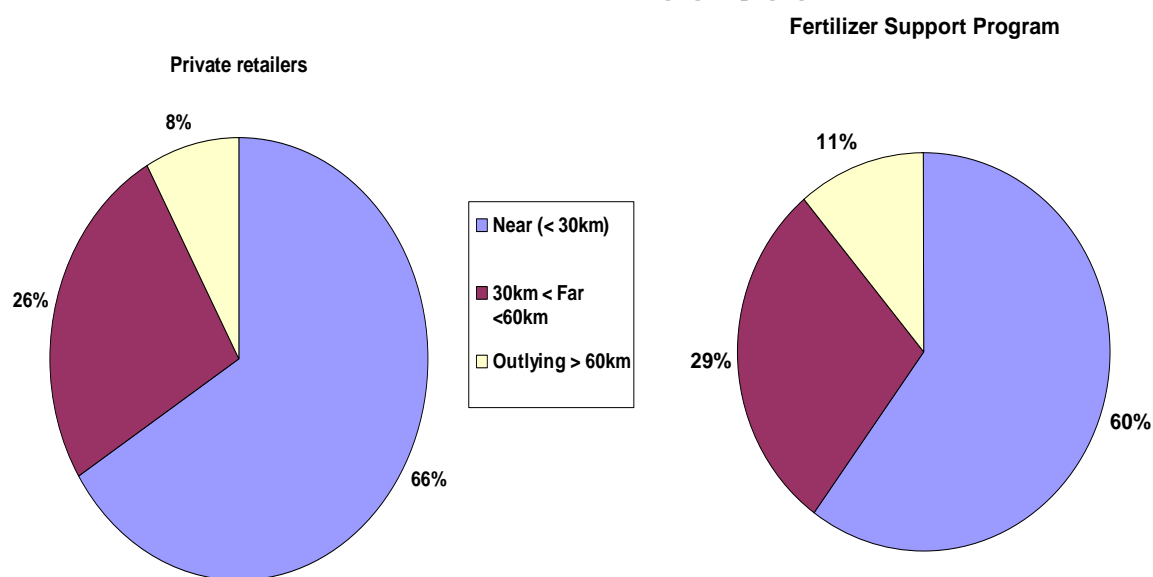
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Distribution trends for public and private channels



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Distribution pattern for FSP and private retailers in 2002/03



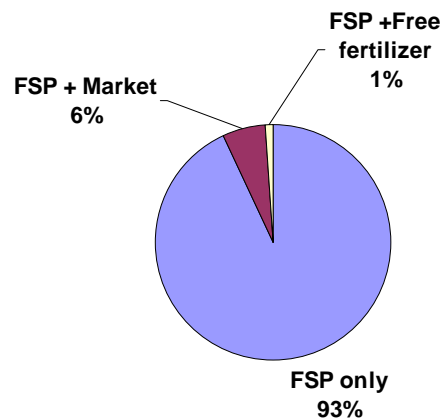
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Characteristics of smallholder households acquiring fertilizer from FSP and private traders

	FSP recipients	Acquire from private trader	Non-users
Income per capital (zmk ' 000)	804	774	266
Assets per capital (zmk ' 000)	425	342	173
Land planted per farmer (ha)	2.22	1.81	1.11
Maize area Per farmer (ha)	1.33	1.12	0.71

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Fertilizer purchasing behavior of FSP recipients



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Key Findings

- Households acquiring fertilizer from private dealers:
 - higher incomes and wealth
 - close to tarmac roads and district center
 - higher education
- Household acquiring fertilizer from FSP:
 - higher incomes and wealth
 - close to tarmac roads and district center
 - Civil service employees

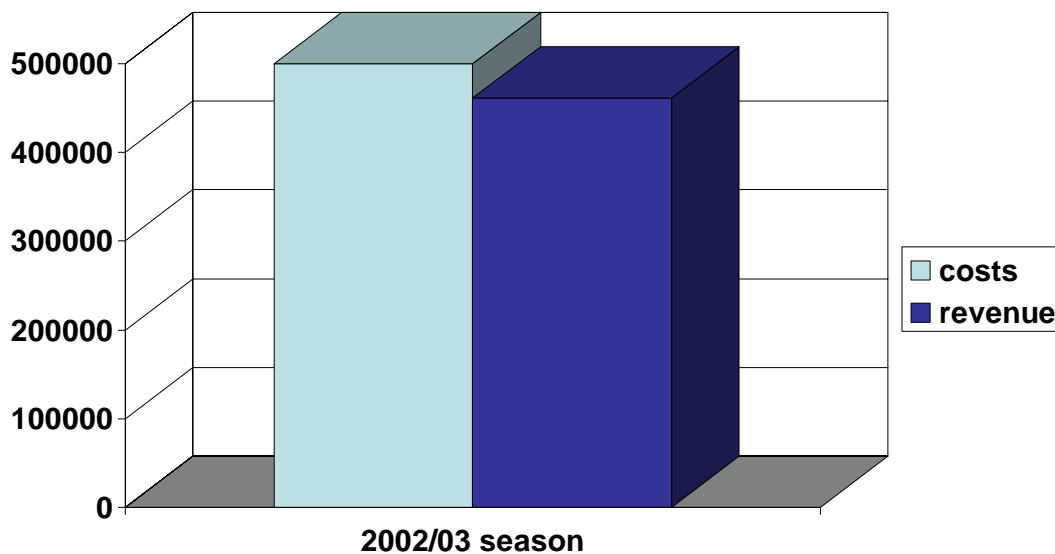
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Fertilizer profitability

- Actual yield gain (2002/03):
 - 1.6kg of maize per kg of fertilizer
- Potential yield gain:
 - 3 to 12kg of maize per kg of fertilizer

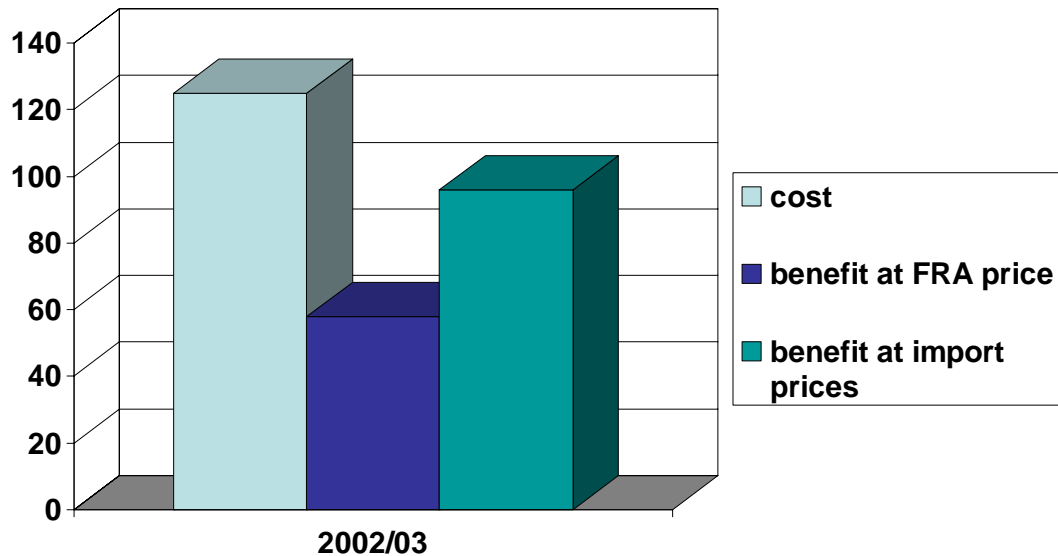
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Financial outcome of FSP to farmers



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Costs and Benefits of FSP to Zambia



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3. Maize

budget priority

#2 (FRA+FSP)

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Concentration of Maize Sales Among Smallholder Farmers

- Only 28% of the households sell maize
- 2% of the rural Households (25,000 farms) account for 50% sales of maize
- FRA price support focuses on these 2% of rural HH

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Characteristics of Maize Selling & Non Maize Selling Households

Attribute	Maize Sellers		Households Not Selling Maize
	2% of HH accounting for top 50% of total Maize	Rest of Maize Sellers	
Landholding Size (Hectares)	6.00	3.91	2.79
Value of farm assets (USD)	1,558	541	373
Total Household Income (USD)	2,282	514	291

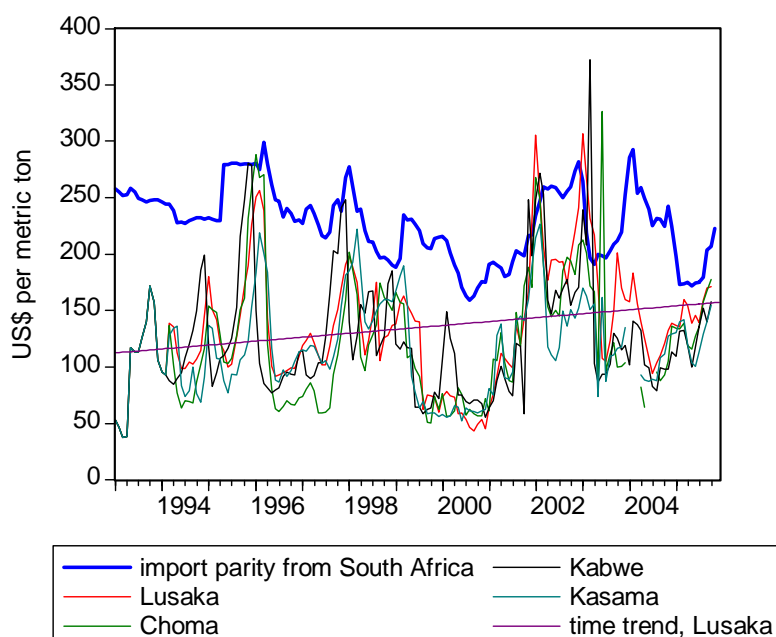
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Insights into the processing sector

- Large-scale millers:
 - Up to 60% share of total mealie meal consumed
 - Of this, 70% of the maize they mill is supplied by small holder farmers
- Hammermill channel:
 - market share of at least 40% of mealie meal
 - Mugaiwa is 20% cheaper than breakfast meal
 - The poor primarily consume mugaiwa
- Important for Government to nurture small milling sector, since the poor rely on it

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Importance of regional maize trade



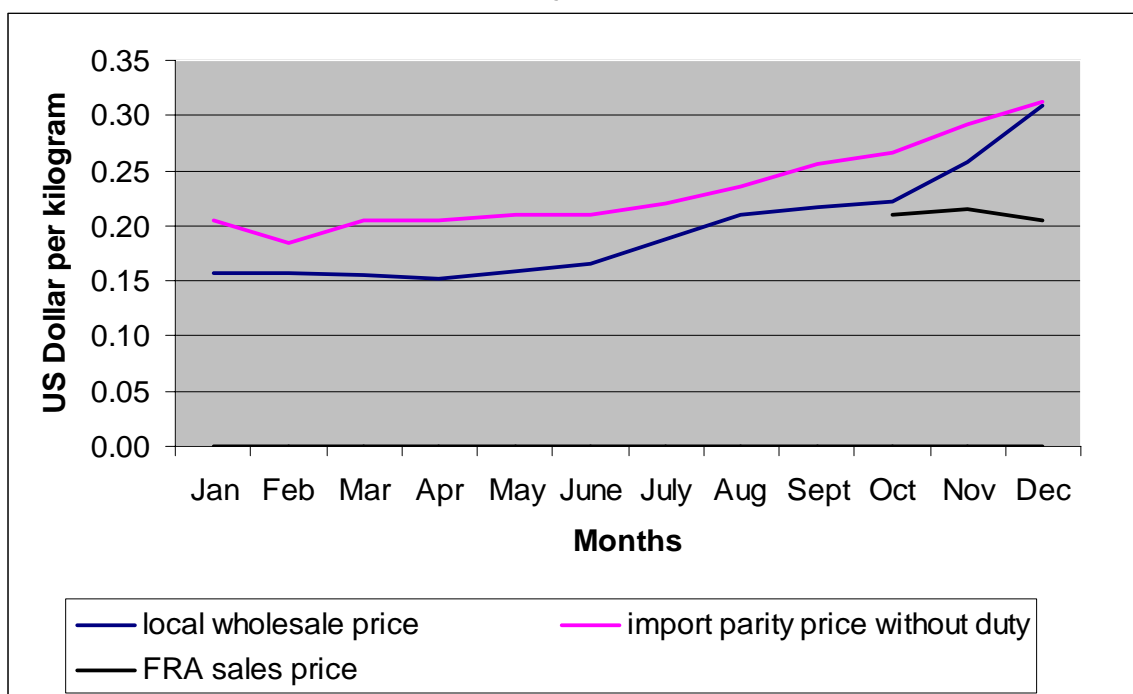
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Stop and go policies discouraged private maize import in 2005

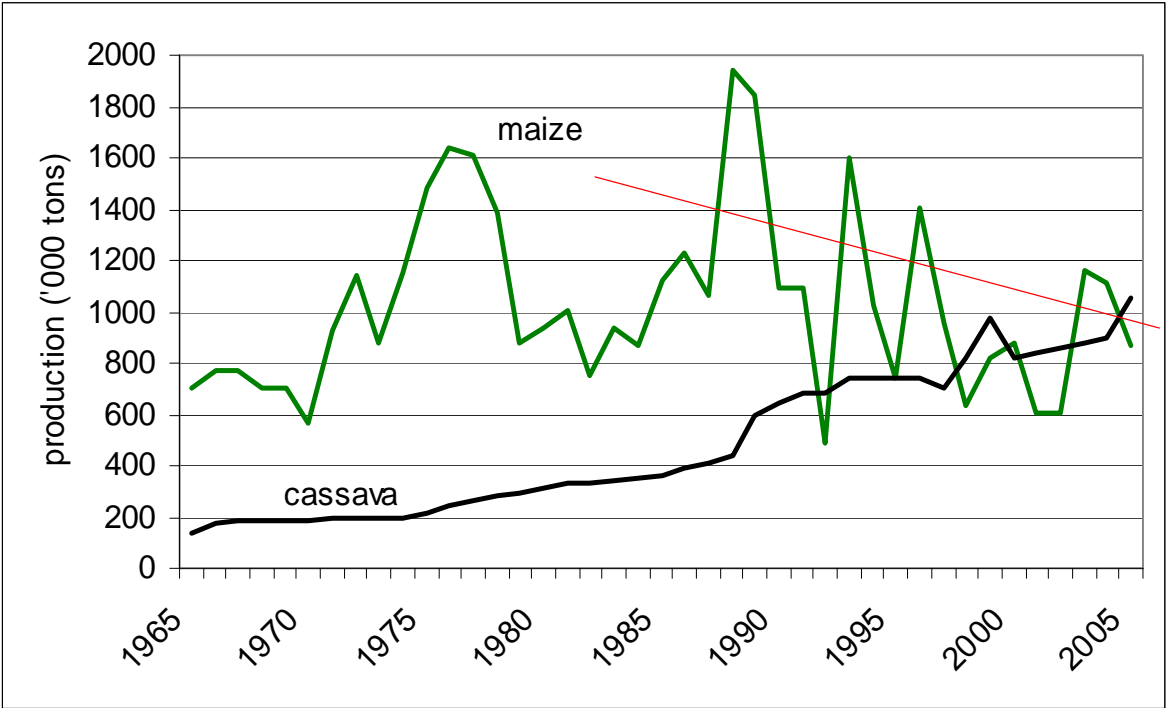
- Maize import duty raised, then rescinded
- Slow issuance of import permits
- New sanitary and phytosanitary requirements introduced
- Cheap FRA maize sales to millers discourages commercial imports
- Import delays cost Zambia consumers

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The millers' decision: import or buy from FRA?



Production Trends in Food Staples



Annual growth rates, 1992/3-2001/02

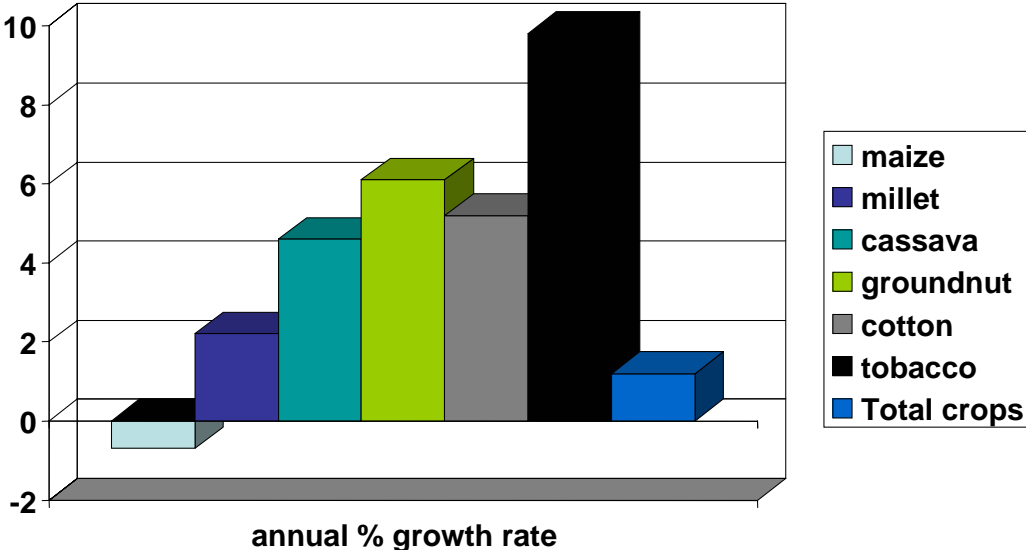
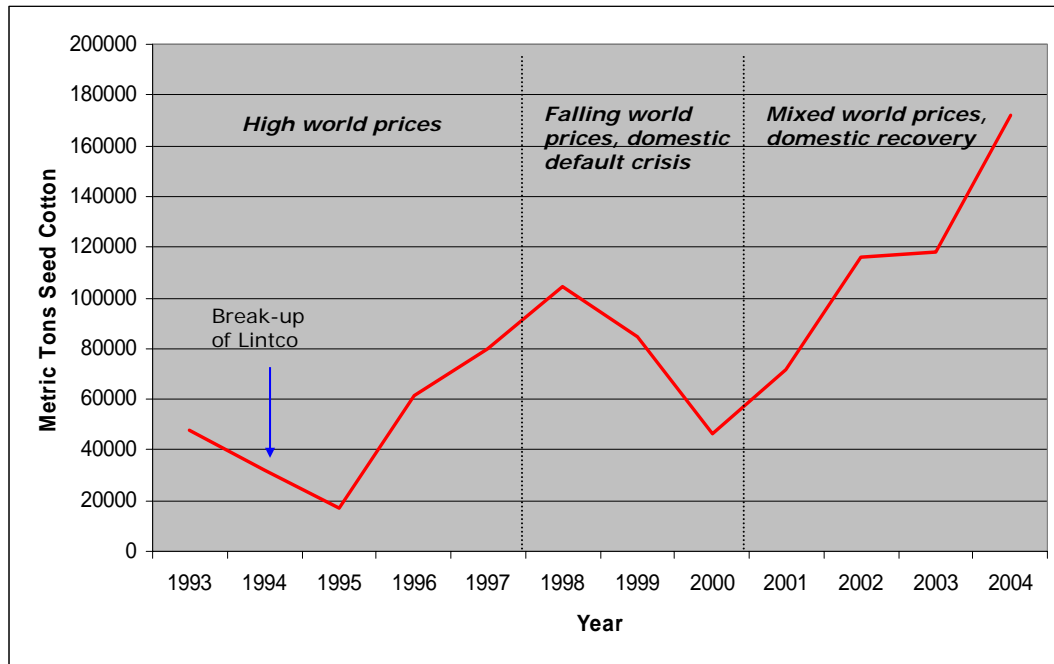
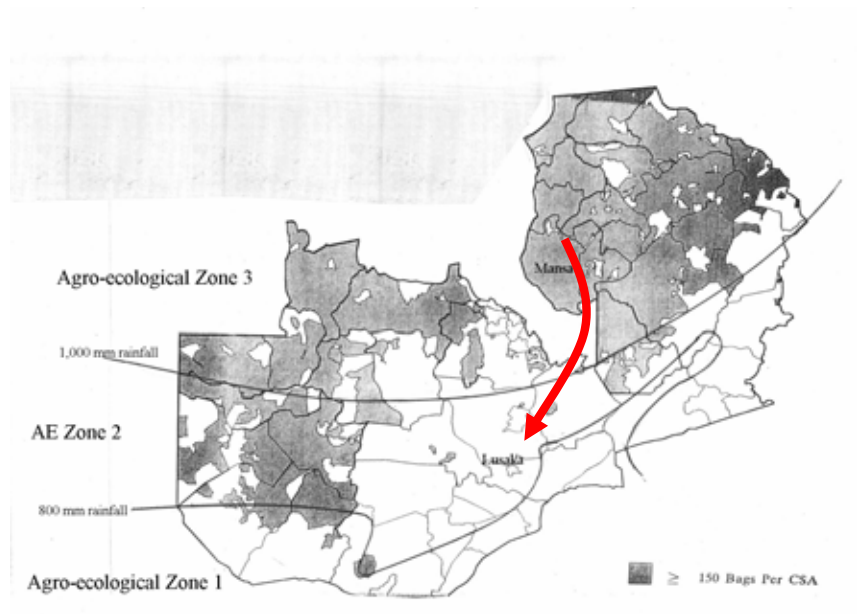


Figure 1. Seed cotton production in Zambia, 1993 - 2004



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Can the new varieties of cassava provide drought insurance in central Zambia?



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Is cassava a good food security crop in central Zambia? YES

	Cassava	Maize	
		good year	bad year
Yield/ha	30 tons	3 tons	1 ton
Calories/ha/year	11,000	9,200	3,000
Calories/day worked	193,000	60,000	23,000

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Cassava produces good yields in central Zambia, even in an erratic rainfall year



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4. Returns to Alternative Investments:

What can we learn from worldwide experience?

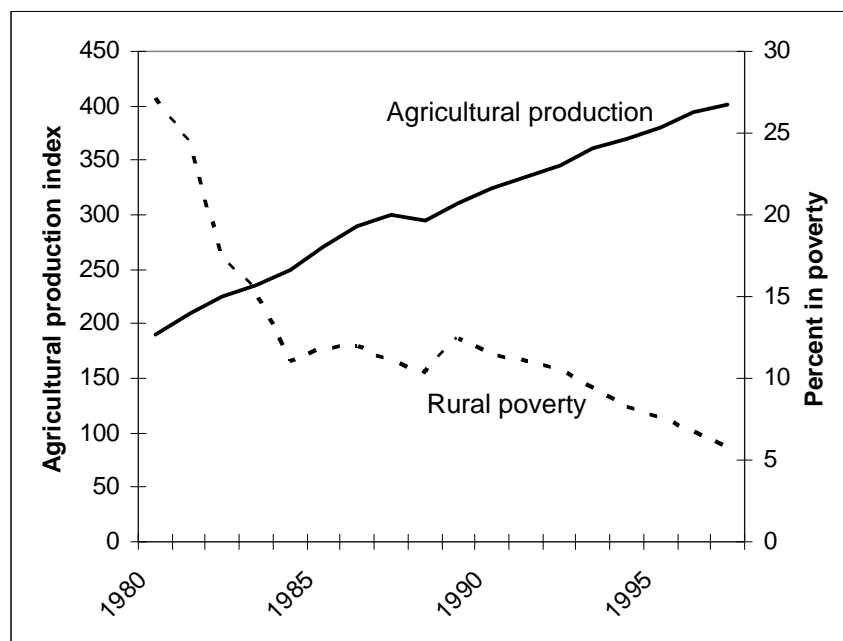
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Why spend on agriculture?

- Agriculture is a powerful poverty fighter
 - No country has ever achieved mass poverty reduction without a prior substantial boost in agricultural productivity
- Maputo commitment (CAADP): 10% budget spending on agriculture

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Agricultural growth and poverty reduction in China



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Returns

	Returns
Subsidies	Negative – 12%
Investments	
- research & extension	35% to 70%
- roads	20% to 30%
- education	15% to 25%
- communications	10% to 15%
- irrigation	10% to 15%

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Key budgetary implications for Zambia

- Why does Zambia focus the most resources on subsidies, which provide the least profitable forms of agricultural spending?
- Should GRZ spend greater share of its budget to
 - Agricultural productivity R&D
 - Extension
 - Rural infrastructure development
 - Irrigation

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Thank you
The end

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