

Progress and Challenges in Zambia's Goal of Public Facilitation & Private Sector-Led Agricultural Growth to Reduce Rural Poverty

Oral Submission to Supplement Written Materials Delivered to
The Parliament Committee on Agriculture and Lands
Lusaka, Zambia May 2, 2007

FSRP/MATEP Research/Outreach Team
Presented by Jones Govereh, FSRP Country Coordinator

Research and Outreach Activities Supported By:

Ministry of Agriculture & Cooperatives



The Agricultural Consultative Forum

FSRP/MATEP

Overview of Oral Presentation

- Review list of written materials submitted
- Submit 3 updated items as replacements
- Submit selected supplemental tables on smallholder farm size, crop production and marketing behavior
- Focus oral comments on key highlights
 - Where empirical insights come from: CSO/MACO/FSRP surveys, rapid field appraisals and triangulation with outside studies
 - Maize production/marketing features & issues
 - Credit arrangements/credit, cotton and marketing act update
 - Agriculture sector investment portfolio – raising the payoff to public funds & stimulate more private investment
- Leave time to respond to committee questions
- All Items Also Downloadable from [FSRP Website](http://www.aec.msu.edu/fs2/zambia/index.htm) http://www.aec.msu.edu/fs2/zambia/index.htm

Written Materials Submitted

- Proceeding of Nov-2006 Fringilla policy dialogue with MACO, MCTI, FRA, ACF, FSRP & others
- Copies of Fringilla powerpoints on maize marketing & agriculture credit act
- Draft policy brief on smallholder maize production and marketing
- Draft report on smallholder maize marketing and production
- Draft policy brief on deliberations for and about revisions needed to the cotton act

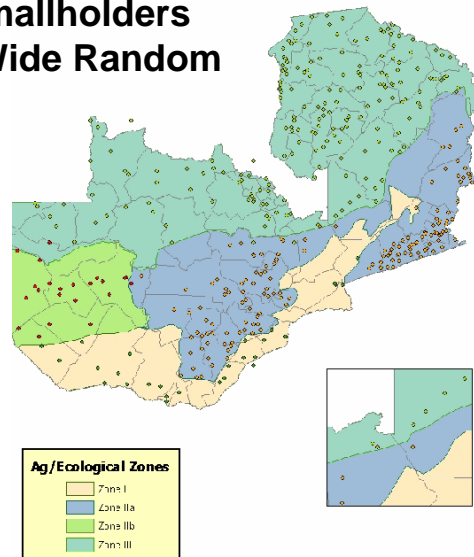
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Revised/ Additional Items Being Submitted to Parliament

- Final FSRP policy brief on smallholder maize production and marketing
- Final FSRP report on smallholder maize marketing and production
- Final policy brief on deliberations needed on revisions to the cotton act
- Supplemental single page tables for additional discussion on smallholder characteristics
- Copies of this powerpoint presentation

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Empirical Data on Smallholders in Zambia – Nation Wide Random Surveys



Map of Central Statistical Office Statistical Enumeration Areas (SEAs) Sampled in the CSO/MACO/FSRP Post Harvest and Supplemental Surveys in 2001 and 2004 by Zambia's Agro-Ecological Zones

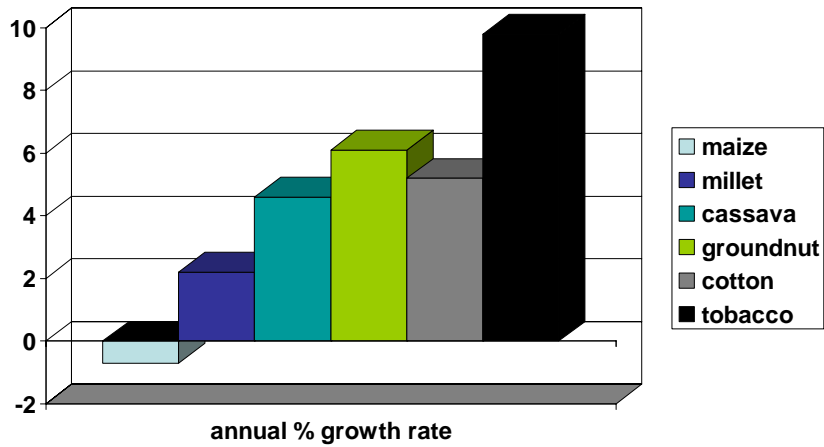
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Oral Comments – Maize Production & Marketing Features and Issues

- Diversification has reduced maize production in areas where other crops have a comparative advantage (see Annex for more details)
- But maize productivity among smallholders in remaining areas has not improved
- Pan-territorial maize pricing can reverse the progress in diversification

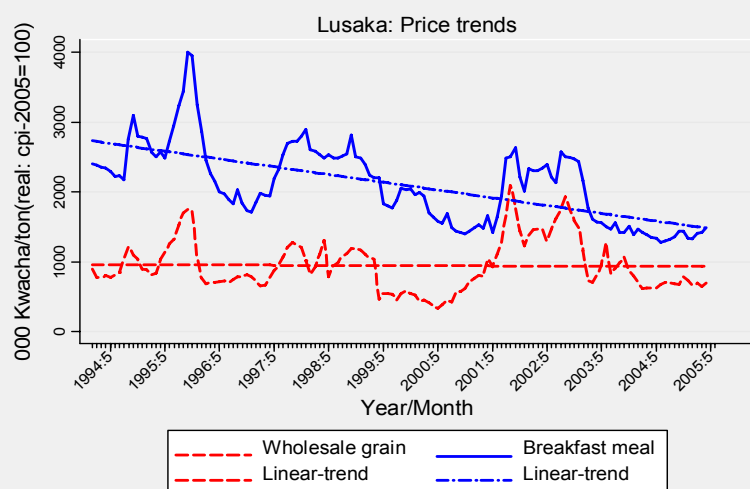
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Zambia Annual Growth Rates, Selected Crops 1992/3-2001/02



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Good News for Zambian Consumers - Tangible Benefits of GOZ & Commercial Development & Competition in The Maize Milling Industry:



Source: Agricultural Marketing Information Centre-Zambia-various years

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Short-Run Maize Marketing Situation-1

- FRA direct interventions in maize mkt – modest increase since 2001; very large increase in 2006 election year with high financial and economic costs
- Maize export opportunities in 2006/07 mostly lost – FRA is a high price supplier & private traders mostly precluded from exporting
- FRA plans for 2007 – Same/higher goals & uncertainty for private trader and commercial farmer sales/exports. Large maize inventory carrying costs, grain quality challenges and related cost

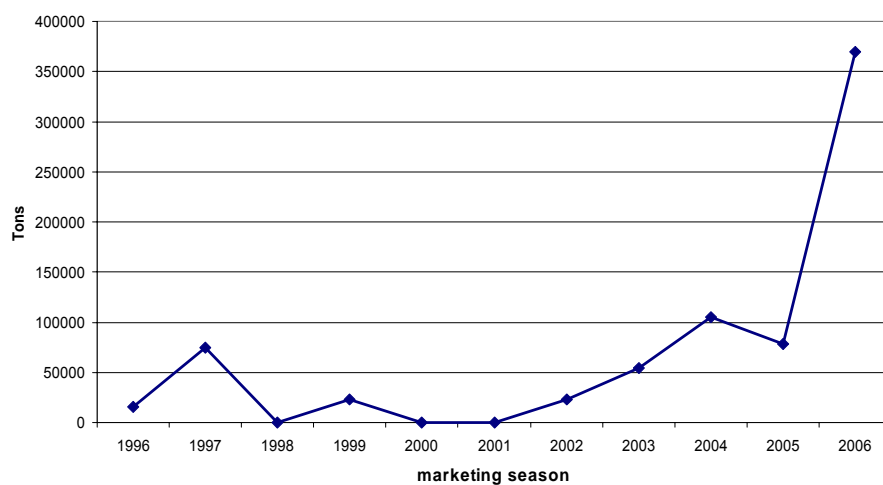
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Short-Run Maize Marketing Situation-2

- FSP subsidy investments also end up going disproportionately to better off smallholders
- Regional trade – Zambia is losing export opportunities (esp to DRC) when regional and international maize markets tighten – Zambia has potential to become a reliable regional supplier & draw on Moz/Tan/South Africa when supplies are short.
- FRA may have bought as much as 70,000 mt of maize from Mozambique and Tanzania in 2006 (see Annex for further details)

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FRA domestic maize purchases



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Caution Regarding Size and Role of FRAs Strategic Reserve

- All evidence indicates that relying on regional trade is much more cost effective than very large and costly **strategic stocks** – cost to maintain grain quality and uncertainty on private sector storage investments of large FRA stocks overhanging the market
- Size of strategic stock need not be more than 2-3 months, because this is time required for imports
- GOZ needs timely information to make strategic import/export decisions
- These issues already addressed in AMDP
- Waiting for implementation of AMDP
- FRA's role needs to be predictable, stable and facilitating

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Insights/Questions from an FSRP Rapid Market Appraisal Study Trip to Eastern Province - Mar, 2007

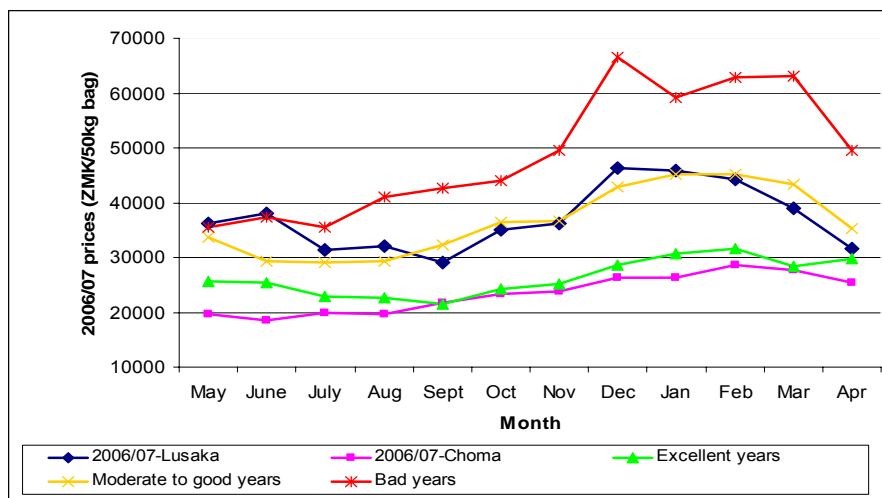
- Very low prices throughout Districts for this normally high price period of the marketing season suggest that in spite of seemingly very large FRA 2006 purchases in Eastern Province, smallholder farmers still have ample stocks to sell

- With no export options for the 2007 marketing season prospects are for continued low market prices after FRA purchases are completed.

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Maize Price Seasonality in Lusaka and Choma

1994/95-2006/07 (CPI 2006=100)



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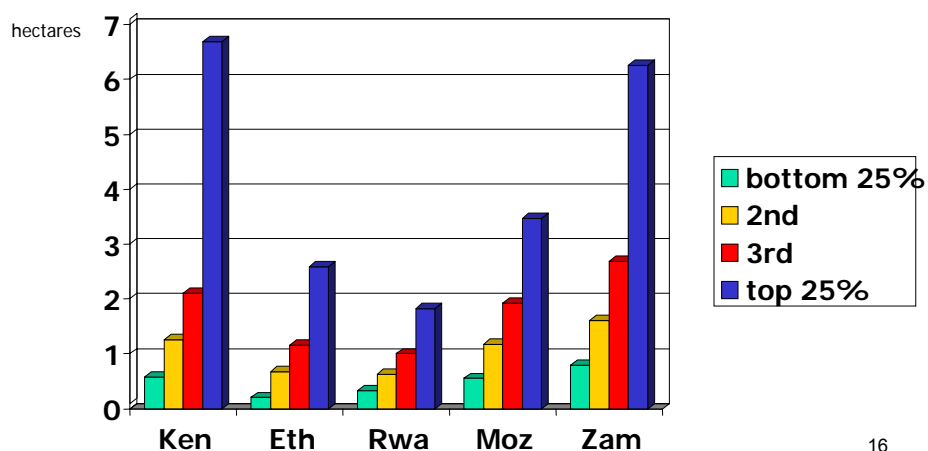
Source: AMIC

Given Smallholders Differences - Effects on Policy of Concentration of Smallholder Maize Production & Sales

- Only 30 % of the smallholder households in Zambia sell maize in a normal year
- And only 2% of the smallholder households (24,256 farms) account for 50% of sales of maize
- Some 38 % of rural households are net buyers of maize
- Buyers don't produce or have other income sources

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Marketing Starts with Production Capacity - Not All Smallholders in Zambia Are the Same: Farm Size Distribution



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Characteristics of Smallholder Farmers By Maize Sales Groups, Zambia PHS / FSRP Supplemental Survey - 2003/04 Mkt Season

Maize Sales Groups	N=	Crop area (ha)	Asset values (Kw 000)	Gr. Rev., maize sales (Kw 000)	Gr. Rev., crop sales (Kw 000)	Total hh income (Kw 000)
Top 50% of maize sales smallholders	24,255	5.1	6,809	3,622	4,323	15,727
Rest of smallholder maize sellers	330,104	2.0	1,348	271	548	3,102
Households not selling maize	890,682	1.3	1,080	0	283	1,956

Similar patterns were found in the panel base year: 1999/00 for the PHS/Supplemental

Fertilizer Use by Smallholder Maize Sales Groups, 2003/04 Marketing Season

Maize sales groups	Number of households	% of fertilizer users	Total quantity (tons) purchased
Top 50% of maize sellers	24,255	92	19,960
Rest of maize sellers	330,104	51	38,951
Households not selling maize	890,682	22	32,063
TOTAL	1,245,041	31	90,974

All Fertilizer Sources by Smallholder Maize Sales Groups, 2003/04 Mkt Season

Maize sales groups	Shares of FSP fertilizer	Shares of commercial fertilizer
Top 50% of maize sellers	21	23
Rest of maize sellers	38	47
Households not selling maize	41	30
TOTAL	100	100

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Average Smallholder Purchases by Source & by Maize Sales Groups, 2003/04 Marketing Season

Maize sales groups	Fertilizer Support Program		Commercial Fertilizer	
	<i>Number of purchasers</i>	<i>50 Kg bags per household</i>	<i>Number of purchasers</i>	<i>50 Kg bags per household</i>
Top 50% of maize sellers	9,216	25	13,097	16
Rest of maize sellers	69,321	5	99,031	4
Households not selling maize	80,161	4	115,788	3
TOTAL	158,698	5	227,916	4

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Effects of Raising Maize Prices Above Market Clearing Levels

- Higher maize prices hurt the majority of the population who are net maize buyers
- Net maize buyers tend to be relatively poor farmers
- Zambia becomes a high price supplier to regional mkts and tends to lose market opportunities
- Many smallholders need improved technology to produce on less area enough maize to eat & raise incomes from selling other crops and labor services
- Since smallholder sales are so concentrated, FRA price-raising policies have highly regressive effects on income distribution
- Distribution of input subsidies also relatively concentrated according to production but many of these same smallholders are able to purchase inputs

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Other Factors - Why is Maize Production & Marketing Not Thriving?

Information base required for government & private sector investors to make informed decisions

- CFS and PHS surveys no longer accurately measure agricultural production
- Large scale maize production is especially unreliable
- Small-scale production estimates do not take account of rural population growth
- Over time, production levels are increasingly underestimated
- Timely stocks information is lacking
- Inadequate market information, analysis & outreach

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Oral Comments–Credit Arrangements – the Credit, Marketing and Cotton Acts

- Given smallholder agricultural credit repayment difficulties, indirect arrangements with outgrowers and marketing/processing firms are critical for smallholders to gain access to key production inputs
- To buy from farmers, traders need to have the capability to finance inventories
- This put great importance on progressive improvements in credit and cotton acts

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Agricultural Credit Act (ACA)

- Current Act devoid of Warehouse Receipt System (WRS)
- Need a comprehensive ag credit legal framework with WRS to guide all market participants
- Need to facilitate a competitive ag marketing environment
- Need to improve inventory credit and ag trade
- Need to allow issuance of warehouse receipts recognized as documents for transfer of ownership + legal rights to underlying commodities

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Proposed Amendments To Ag Credit Act Provide For:

- Appointment of an authorized agency to regulate a WR, inventory credit & trade
- Certification of warehouse operators
- Definition of duties and obligations of warehouse operators
- Use of WRs as negotiable documents of title

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Proposed Amendments To Ag Marketing Act - Objectives

- Goal is to support free trade within Domestic, Regional & Int. markets
- To provide for a comprehensive agricultural marketing legislation
- To realign Government regulatory and market support functions
- To clarify the strategic roles of the FRA
- To harmonize and consolidate existing agricultural marketing related Acts.

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AMA KEY ELEMENTS

- Clarify current role of Food Reserve Agency
- Registration of farmers and other market participants
- Establish an agricultural marketing council
- Promote of grades and standards for agricultural commodities
- Provide for improved marketing information
- Manage public storage facilities to encourage private investment in storage
- Harmonize and coordinate agricultural commodity Acts

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Oral Comments – Cotton Act Upgrades To Sustain this Success Story

- Cotton is an unquestioned success of Zambia's turn towards a market economy.
- After reform in late 1994, production rose from 32,000mt to some 90,000mt in 1998.
- After collapsing to less than 50,000 mt in 2000 production rose steadily approaching 200,000mt in 2006.

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Cotton - Two pillars of Success

- Two private companies that purchased Lintco ginning operations in 1994:
 - Showed a strong and effective commitment to providing large numbers of farmers with a reliable input package (financing cotton production)
 - Effective basic extension message
 - Attractive prices during many years
 - Guaranteed market for the product
- Economic environment was relatively stable and Lonrho (now Dunavant) and Clark (now Cargill) were allowed to carry out their business activities with little interference

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Challenges to this Success?

- Credit default in 2006 returned to levels not seen since the late 1990s
 - sharp appreciation of the kwacha as seen in 2006
- Substantial change in the structure of the sector over the past two years.
 - Small companies already in the sector have expanded their operations
 - New players are coming in the sector
 - Risks under-cutting provision of input credit and extension

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What Needs To Be Done Next?

- Enacting new Cotton Act as revised by stakeholders
 - Government one actor among many, not the main driver
 - ACF, FSRP, ginners, CAZ to meet with Minister soon
- This would also result in sustainable expansion of cotton production through:
 - reliable provision of inputs on credit (financing)
 - good extension advice
- Strengthening of operational capacity of CAZ
- Exchange rate stability

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Oral Comments – Ag Sector Investment Portfolio – Raising Payoffs to Public Funds & Stimulating Private Investment

- 1998-2003 poverty levels declined but more could be achieved if AMDP, AIM, FNDP, NAP & CAADP commitments/principals agreed to fully implemented
- Private investment in domestic & export agriculture was growing but is being discouraged
- 99 % of PRP investments in agriculture subsidize private goods, not delivering key public goods needed to stimulate private investment
- Real productivity enhancements are missing to continue growing agriculture
- 2007 budget increase in research & extension, but still modest compared to FRA & FSP spending

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Threats to Diversification

- Export crop
 - unanticipated fluctuations in the Kwacha
 - Inconsistent MACO attempt to suspend cotton marketing
- Food crops
 - research pipeline dry
 - reintroduction of maize and fertilizer subsidies, pan-territorial pricing, trade controls & direct intervention of FRA

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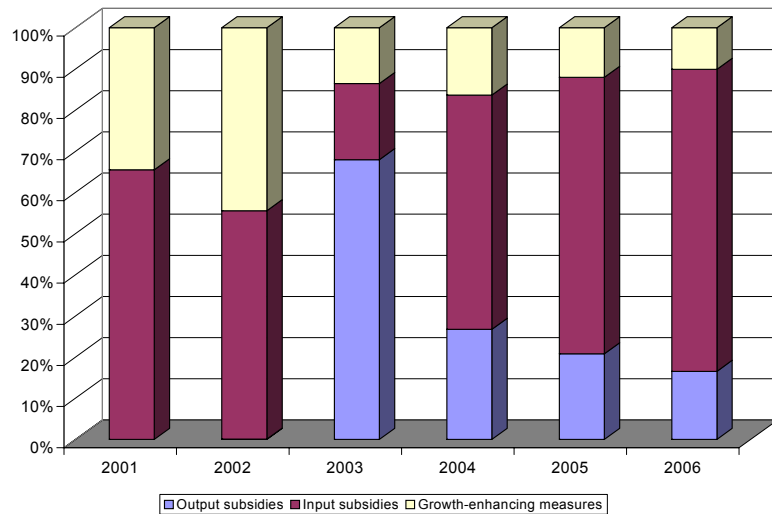
Where Does Zambia Spend its Agriculture Budget: How Much & For What?

2006 Budget Spending	Total (with donors)	Discretionary (GRX only)
Recurrent private subsidies		
• <i>Fertilizer</i>	31	45
• <i>FRA</i>	8	11
Operating expenditure		
• <i>Salaries</i>	13	19
• <i>Operating costs</i>	6	9
Donor programs	32	
Investments		
• <i>Capital spending</i>	1	2
• <i>Energy and water</i>	1	1
• <i>Lands</i>	1	2
• <i>Roads and transport</i>	1	1
Other	7	10
Total	100	100

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Poverty Reducing Investments

(PRPs + agricultural spending through other ministries)



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Greater Commitment to Agriculture Means Phasing Out Private Good Investment & Phasing In Investments In:

- Agricultural science/technology/extension
- Livestock disease control
- Rail-port-road infrastructure
- Farmer organizations
- Regional trade / predictable government actions in markets
- Accurate and timely information on production & prices
- Development of public sector awareness of markets' potential and local analysis capacity
- Reliable and effective regulatory functions

Dilemma: Current commitment of resources is needed to bring long-term economic & political payoffs

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Summary -1

- Structural adjustments worked to start the drive to diversification and reduce rural poverty levels
- Further growth & poverty reduction still required but needs strategic public goods are still missing
- Government action & investment is needed but sustainable growth requires positive dynamics between public & private sector investment

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Summary 2. Effects of Raising Maize Prices Above Market Clearing Levels

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Summary 3. Marketing and Credit Arrangements

- Clarify the strategic role of government in the market
- Need to allow issuance of warehouse receipts
- Enact cotton act amendments
- Promote public and private dialogue and partnership
- Macro economic stability

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Summary 4. Why is Agriculture Production & Marketing Not Thriving?

Information base required for government & private sector investors to make informed decisions

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Summary 5. Effective Policy Responses Require Accurate Crop/Supply Forecasts

- Incentives & resources for CSO to develop accurate crop forecasts
- Stocks information – farmers (smallholders & commercial farmers, millers, traders, feed manufacturers)
- Improved market price information needed for public and private agents

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Zikomo Kwambili,
Natotela sana,
L'i tumezi ahulu,
Twalumba kapati,

Thank you to Zambian smallholders and to Parliament for this opportunity to obtain/share information and ideas – we welcome questions and comments

Annex Slides to Further Explain Key Messages

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Supplemental Oral Comments – Ag Sector Investment Portfolio – Raising Payoffs to Public Funds & Stimulating Private Investment

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Poverty (%) trends in Zambia

Year	Urban Poverty	Rural Poverty
1991	48.6	88.0
1993	44.9	92.2
1996	46.0	82.8
1998	56.0	83.1
2003	52.0	74.0

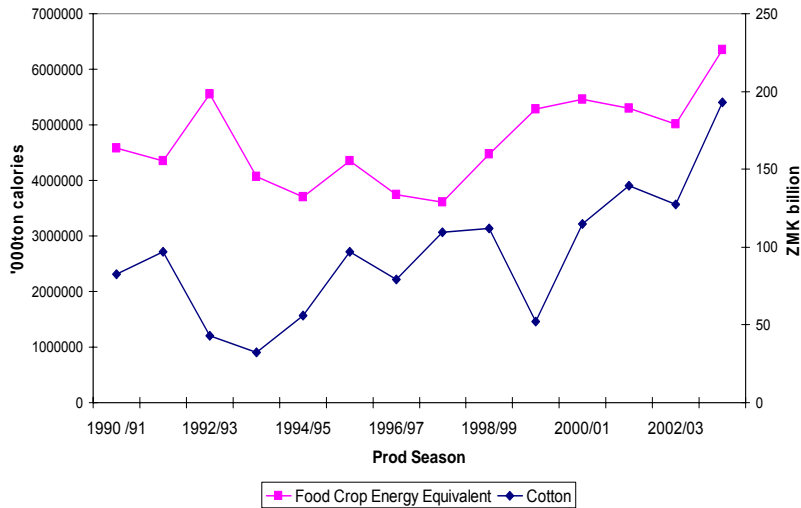
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Possible Drivers of Poverty Reduction

- Growth in non-maize staple production
- Growth in cotton and tobacco
- Reduction in cost of living due to falling maize meal prices

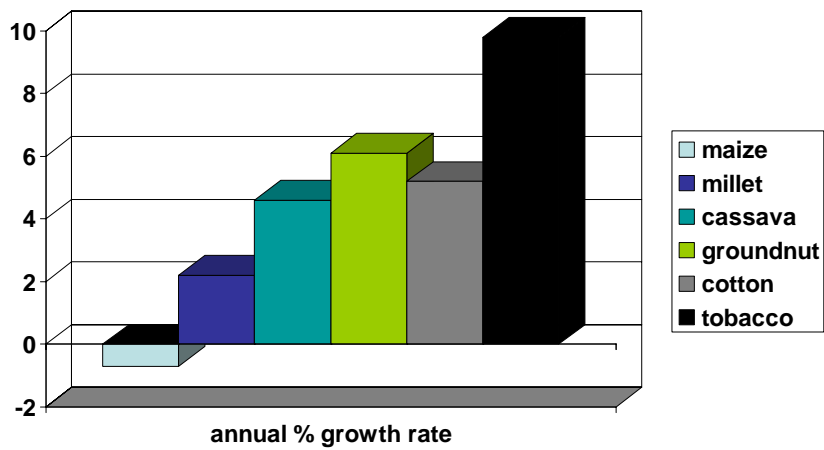
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Trends in Food Balance, Smallholder Farmers, 1990 - 2003



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Zambia Annual Growth Rates, 1992/3-2001/02



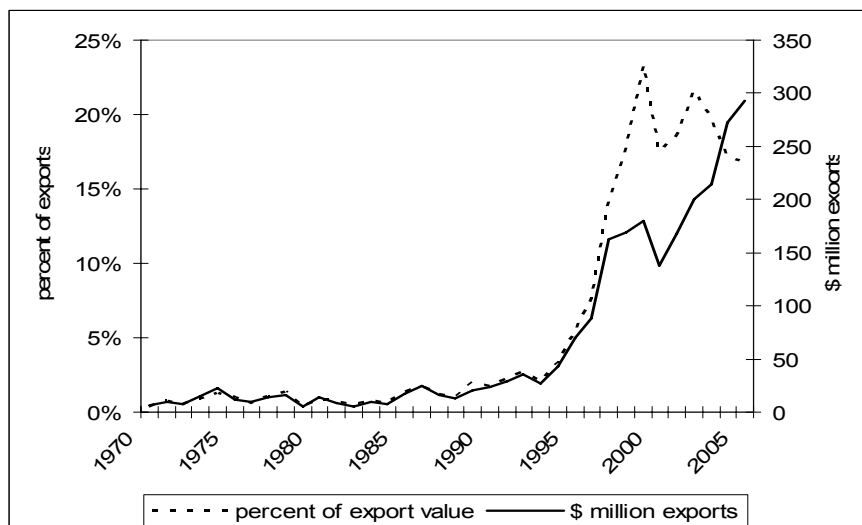
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Drivers of Diversification

- Food crops:
 - Removal of massive maize subsidies (17% budget in mid-1980's)
 - Publicly funded research: cassava, sweet potatoes
- Export crops
 - Privatization of parastatals
 - FDI liberalization
 - Foreign exchange market liberalization
 - Tax incentives

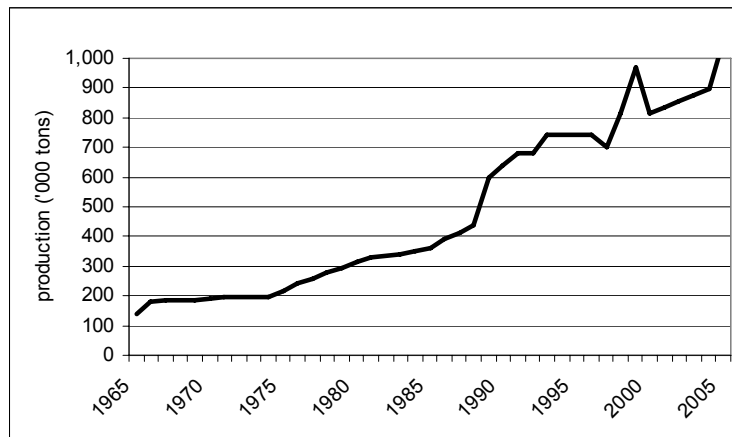
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Trends in Agricultural Export Revenues



Cassava Production Surges Due To:

- a) release of new varieties and
 - b) removal of maize subsidies
-



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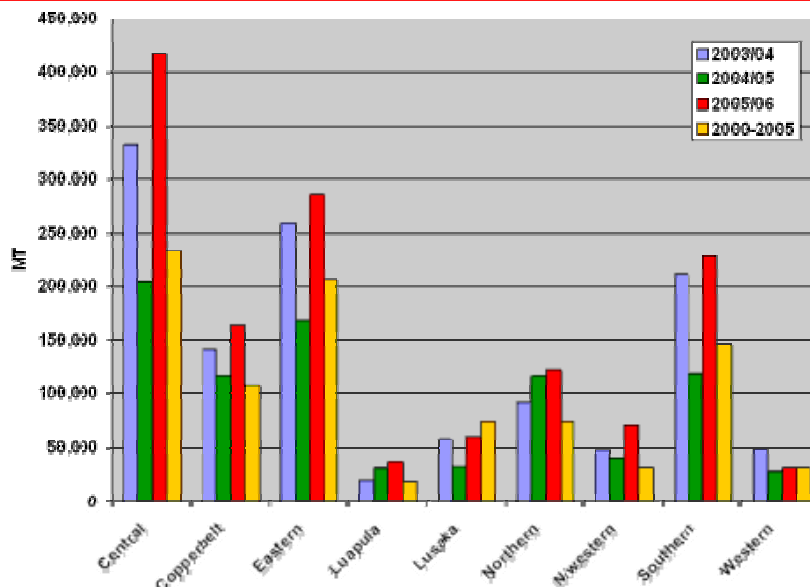
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Supplemental Oral Comments - Learning From Marketing and FRA Purchase Data

- Comparing CSO/MACO/FSRP marketed surplus data with FRA purchase results from 2006 buying campaign
- Where was the production and where did the purchases come from?
- Where is consistency and outliers?

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Figure 2. Maize production comparison (2003/04 – 2005/06 and five year average)



Source: MACO via FEWS

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Zambia –2006 FRA Purchases Compared to Prior Market Surplus From Smallholders

Province	Mkt Surplus 99/00 mt	Mkt Surplus 02/03 mt	FRA –Pur. 2006 mt
Central	81,878	82,283	72,005
Southern	64,216	79,775	77,075
Eastern	35,626	63,568	103,033
Northern	19,422	46,397	72,709
Lusaka	12,482	16,066	16,927
Copperbelt	30,232	39,523	15,867
Northwestern	14,008	23,380	14,690
Western	9,245	8,004	4,453
Gd. Total	272,950	370,332	389,510

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2006 FRA Purchases – Explaining Highside **Outliers** - Could it be: Ghost sales? Or Purchases from Moz. & Tan. Maize Production/Marketing?

Province District	Mkt Surplus 99/00 mt	Mkt Surplus 02/03 mt	FRA Purchases 2006 mt
Eastern Chadiza	1,391	1,586	28,257
Eastern Nyimba	1,133	486	10,088
Northern Mbala	5,962	6,406	20,386
Northern Nakonde	1,545	4,521	11,704
Total	10,031	12,999	70,704 (57,000 mt =\$US 10 million)

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4 High Side Outliers - Border Point Locations in 2006

