

Information To Inform Goals of Poverty Reduction, Food Security, Enhanced Productivity and Income Growth for Small-scale Farmers in Zambia

ACF/FSRP Presentation

Work By

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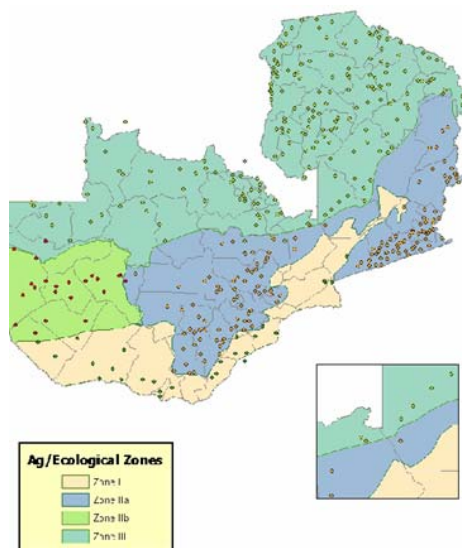
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Objectives - Overview

- Provide background on categorisation work
- Explain the format of research output becoming available from the use of information from SS 01, 04 and 08 – 10 years of systematic information on change among smallholders
- Highlight selected household-level income, food security & ag performance patterns
- Discuss possible factors for targeting
- Discuss the ways forward to use this info. 2

Supplemental Surveys: Empirical Data on Smallholders in Zambia – Nation Wide Random Surveys

(PHS/SS 99/00, 02/03 & 07/08= 364 SEAs)
(CFS 06/07 and onwards = 640 SEAs)



Map of Central Statistical Office Statistical Enumeration Areas (SEAs) Sampled in the CSO/MACO/FSRP Post Harvest and Supplemental Surveys in 2001, 2004 and in 2008) by Zambia's Agro-Ecological Zones

2008 Supplemental Survey With Smallholders





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Smallholder Categorisation Activity - Information For Enhanced Understanding and Targeting?

- Technical group cooperating for better coordination & use of information for providing assistance to smallholder sector
- Participants so far:
 - ACF,FSRP, MACO, PAM, FAO, UNZA, MACO-SADFS, EC-Del, ZNFU
(First meeting at Kafue George Aug 20-21,2008)
- Use concept of “farming as a business” to help think about the growth and targeting challenge
- Goal to understand the real drivers of rural income growth.
- Goal to also describe discernable groups/categories of smallholders according to production/asset and income capabilities who also face similar bottlenecks
- Challenge is to use such information for better programs and targeting. Help inform SNDP so more can be done. 6

Handouts: 17 Sets of Related Indicator Variables (Tables) Looking At Household Diversity From Different Angles with the Supplemental Survey Data

1. Base Variables - National Household-Level Net Yearly Income & Related Food Security Categorization Indicators
2. Agricultural and Other Household Income & Food Security Components
3. Business (Formal and Informal) Household-Level Income Sub-Components
4. Non-Ag Household-Level Wage Subcomponents
5. Household-Level Demographic Characteristics
6. Household-Level Land Access and Use Information
7. Other Household-Level Asset Information
8. Household-Level Livestock Information
9. Household-Level Cropping Information
10. Household-Level Area Allocation to Main Crops
12. Household-Level Maize Specific Cropping Information
13. Household-Level Maize Fertilizer Use and Acquisition Information
14. Household-Level Maize Sales Information by Agent
15. Household-Level Maize as a Single Cropping Information
16. Household-Level Location Information by Province
17. Household-Level Location by Agro-Ecological Zone

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Understanding the Logic of the Data in the Tables

- Walk participants through the logic of the set of explanation tables (pages 1-10)
 - Big picture over the three surveys
 - Big picture on income/other distribution
 - Yearly breakdown according to maize seller/buyer market categories
 - Yearly breakdown by income level and maize seller/buyer market category

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Food Security Results

- Food Security –calories available indicator
 - CSO’s target for healthy lifestyle 2600-2700 calories/ae/day
 - Zambia national level cal/ae/day ok - but 1/3 of hhs significantly below the CSO standard
 - Is this a verification of widespread malnutrition?
 - A majority of rural HHs who buy maize for consumption try to make up their food shortfalls but are constrained by low incomes.
 - Many other asset, education, livestock correlated with the cal/ae/day indicator

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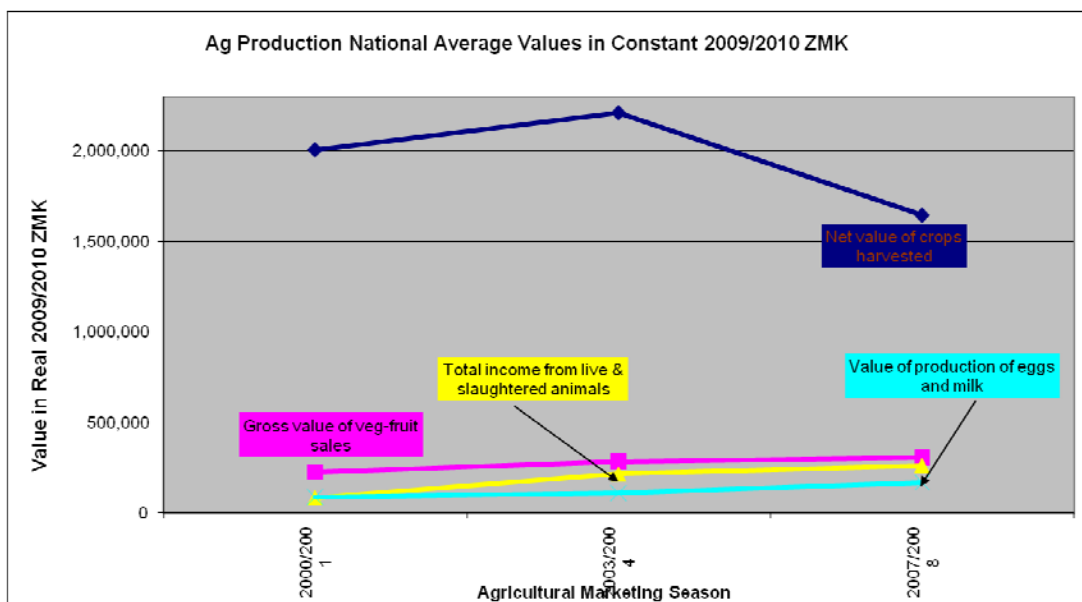
Selected Results & Implications from Data in Tables – Smallholder Income Levels & Sources

- Ag/ Livestock Net Revenue flat/falling since 04.
- Non-farm/off-farm net revenue growing – now appears to dominates ag/livestock – why in Zm?
- Both ag/livestock & off-farm/non-farm income very unequal – the bottom 2/3 s are very poor
- Net value of crops grown trend down since 2004
- Movement appears to be away from diversifications & ag. growth dynamics missing.
- Are components of business income & wage income driven enough by dynamic ag/livestock – are there weak multipliers in agriculture/livestock?¹⁰

Zambia National Production per Agricultural Household (mt/hh All HHS)

Attributes	Crop	1999/00	2002/03	2006/07	Trend
Production per ag. Household (tonnes)	Maize	1.20	1.09	1.30	↑
	Cassava	0.71	0.67	0.63	↓
	Groundnuts	0.06	0.07	0.06	→
	Sweet potatoes	0.16	0.11	0.09	↓
	Cotton	0.04	0.10	0.08	↗

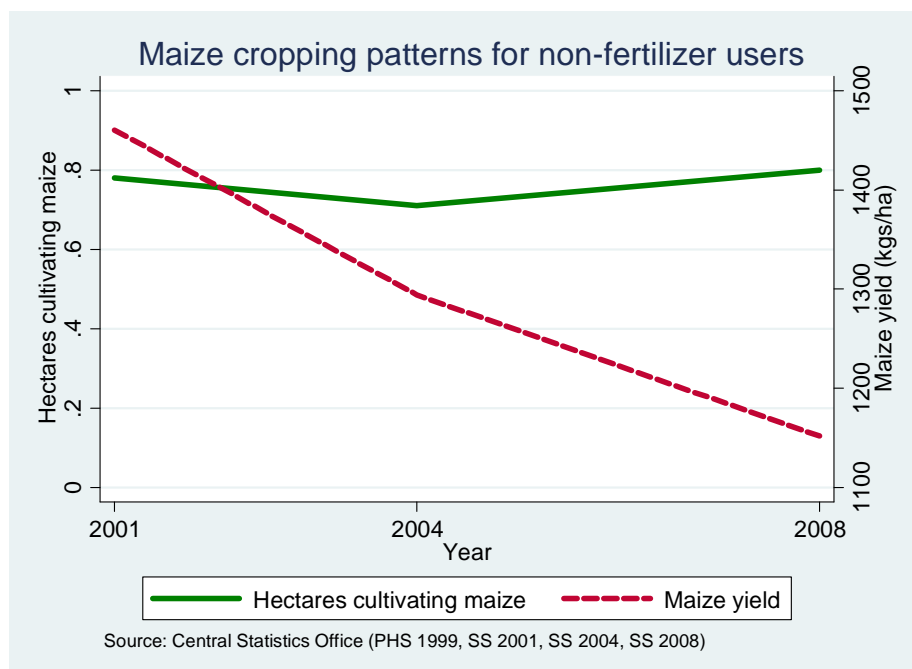
Smallholder Net Value of Crop Production



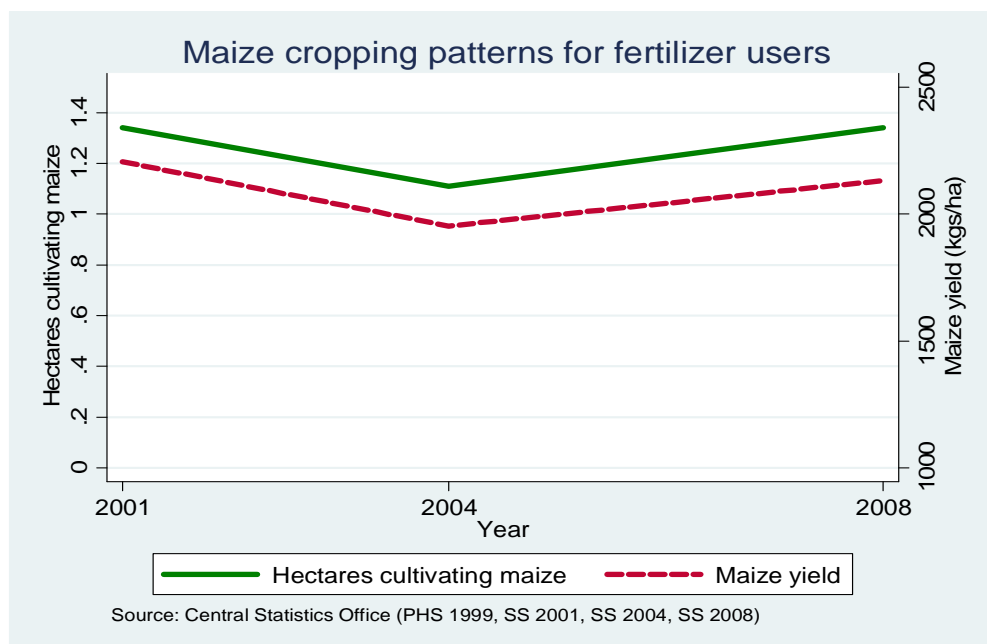
What Difference on Average Does Fertiliser Make for Maize Performance?

- Firstly – the data tell the story that well over 50 % of smallholders still not using inorganic fertiliser, nor are they producing enough to sell any maize, & for 1/3 of the rural cropping population it appears that hunger is there!
- And maybe hunger is present increasingly as maize yields are declining for non users?
- Second, when used, inorganic fertiliser on average does not appear to give the level of response needed to cover the costs. Zm. should & can do much better! Why is this not happening? ¹³

70 % of HHs Growing Maize Without Fertiliser – And With Declining Productivity - Why?

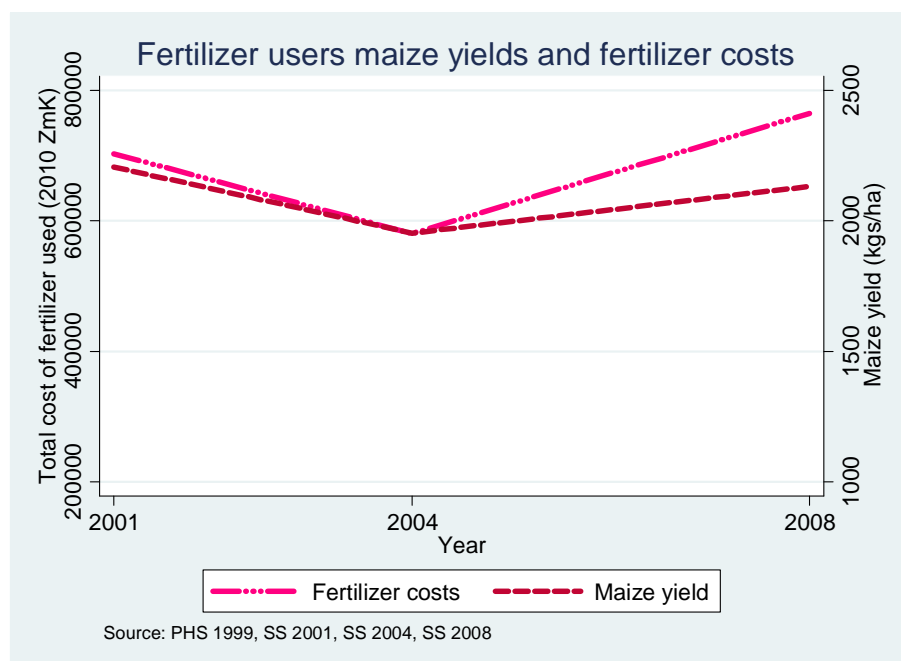


Growers of Maize With Fertiliser – Very Little if, Any Average Yield Growth?



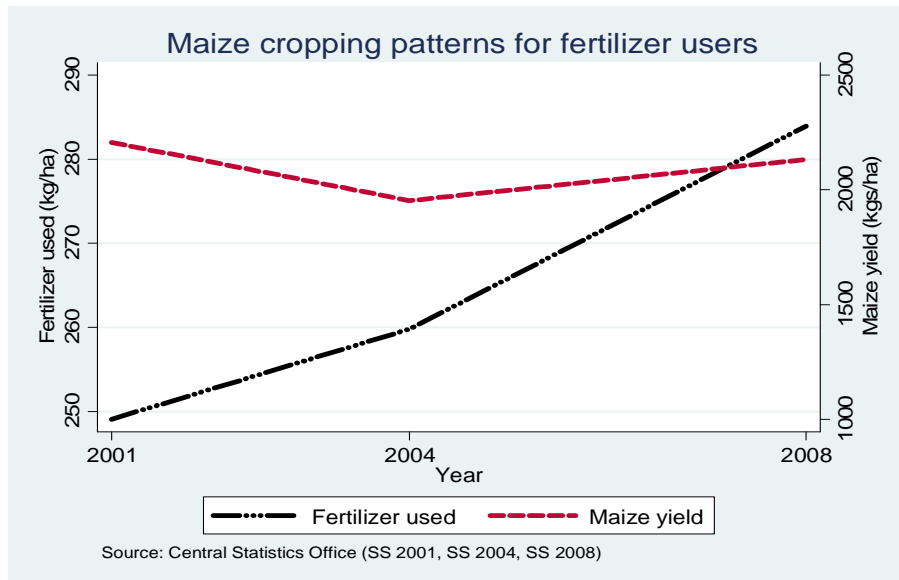
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Average Payoff to Using Fertilizer - Is It Too Little In the Face of Increasing Costs?



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Average Payoff to Using Additional Fertiliser per Unit of Area are Small? What Are the Missing Factors to Raise Responsiveness?



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Possible Factors Towards Lower Productivity?

- Growing soil acidity problems – dealing with ph of soil in Zambia among s/m is not taken seriously. The wrong kind of lime and many other factors.
- Rent seeking with a lime subsidies is not so attractive?
- Less opportunity for fallow – Table 6a - in 10 years the % of HHs with fallow fields down significantly
- Less crop rotation & organice matter to improve soils?
- Soil degradation – hard pans – less water take up
- Is it climate change & or poor science?

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Ways Forward To Use This Information?

- Finish & review the National-level data and tables
- Produce Provincial-level sets of same tables
- Much more effort needed to map out from the data the key patterns of performance at National and Provincial Levels- need to condense the messages in the vast amount of information in the tables.
- Stimulate discussion of findings at the National and Provincial level - Also use to facilitate input to SNDP. Clearly the information demonstrates that the pace of rural growth needs to be accelerated!
- Discuss forthcoming UNZA/FSRP work on selected hh revisits – understanding econ.& social factors associated with getting out/staying out of poverty.¹⁹



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

Thank you to Zambian smallholders, CSO, MACO and to cooperating partners for this opportunity to obtain/share information and ideas – we welcome questions and comments