

Increasing Smallholder Input Profitability & Fertilizer Use Efficiency in Malawi

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WORKSHOP ON GUIDING INVESTMENTS IN SUSTAINABLE AGRICULTURAL
INTENSIFICATION IN MALAWI

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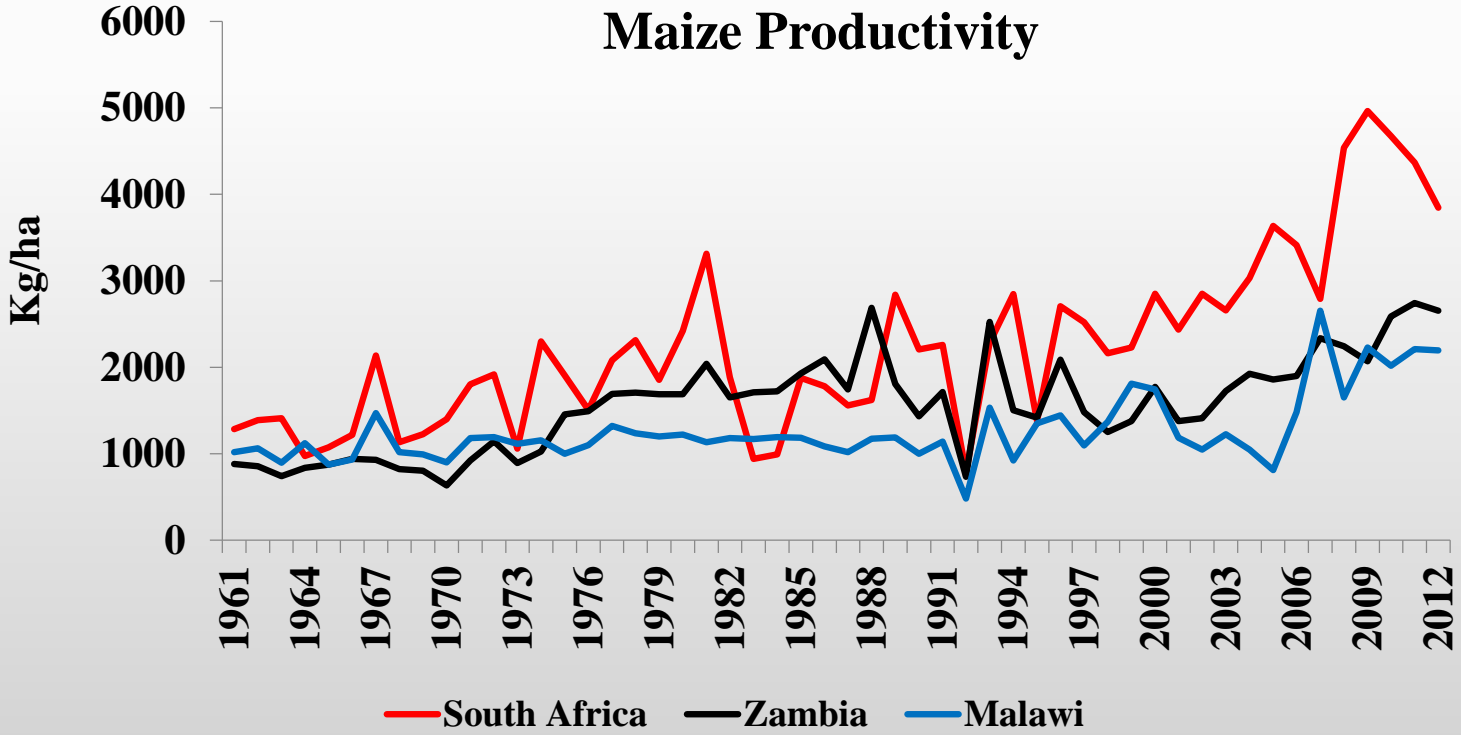


Key Questions

- Q1: How can the profitability of fertilizer and improved seeds be increased?**
- Q2: How can the targeting of FISP be done in order to increase maize output per Kg of fertilizer?**

Introduction

- Agricultural productivity in Malawi is low and erratic (MoAFS, 2011; Kilic et al., 2013)

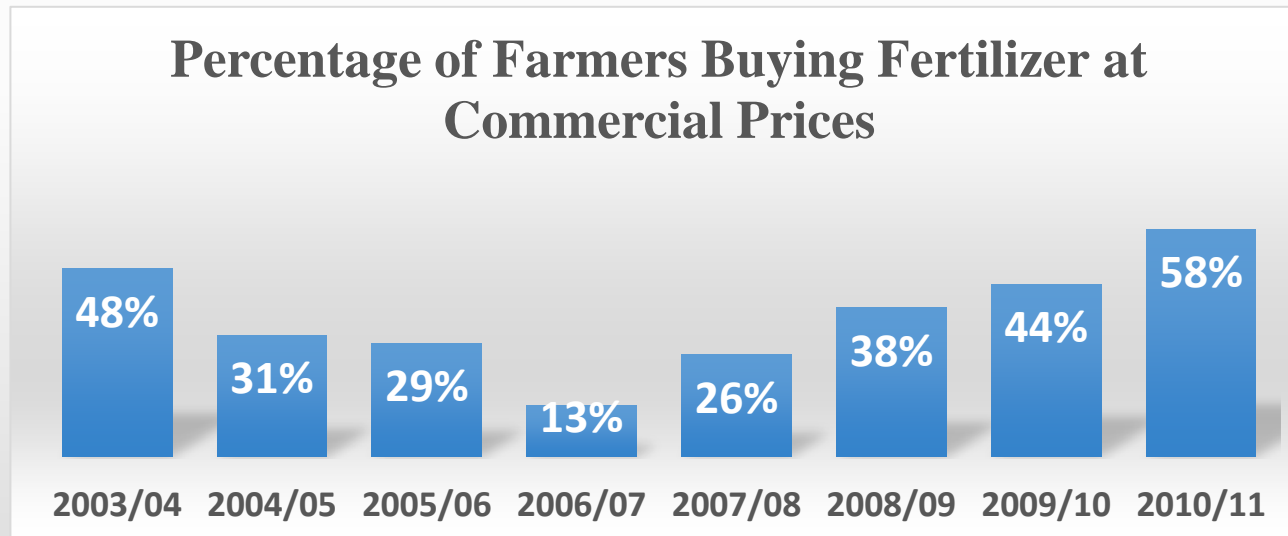


Yield Gap = 38% to 53%
for cereals
(MoAFS, 2011)

Introduction

❑ Low productivity among smallholders primarily due to:

1. Limited utilization of modern farm inputs, particularly inorganic fertilizer and improved seeds (MoAFS, 2011; Daudi, 2007).



Limited use of inorganic fertilizer and improved seed could be because they are unprofitable or marginally profitable for many farmers

Introduction

❑ Low productivity is primarily due to:

2. Low conversion rate

Malawi: 1kg fertilizer = 1.8kg of maize (Ricker-Gilbert et al, 2013)

Zambia: 1Kg fertilizer = about 3.5kg of maize (Jayne, 2013)

The Low conversion rate can be due to:

Lack of complimentary farm management practices

Amount and time of fertilizer application

Low management skills etc.

Research Questions and Hypotheses

□ Key Question 1

- To determine the conversion rate of fertilizer and improved seed in the production of maize, and how it vary over space
- To determine the factors that account for the spatial variation in conversion rate of fertilizer and improved seed
- To determine where fertilizer is profitable and where is it not
- To determine ways through which the cost and risk involved in the input and maize markets can be reduced

Targeting

- ❑ The main aims of FISP (GoM, 2008)
 1. achieve HH food security and national food self-sufficiency
 2. increase HH income

- ❑ There is likely to be a tradeoff between the two aims of FISP

Objective and Hypothesis

□ Key Question 2

- To determine the characteristics of productive households?
- **Hypothesis**

There is a tradeoff between the aims of FISP because poor households may not necessarily be productive.

Contribution

- Similar profitability studies in Zambia (Xu et al., 2009; Burke et al.), Kenya (Sheahen et al., 2013); Mali (Beahan et al., 2013).
 1. Considered only the profitability of fertilizer but that of improved seed is also important.
 2. The interdependencies between farmer's adoption practices have not been accounted for.
 3. Data not nationally representative
- Possible tradeoff between FISP goals is yet to be investigated

Data

- Nationally representative IHS 3 will be used, collected by NSO and World Bank.
- It has detailed information on fertilizer use and beneficiaries of the FISP
- It also has detailed information on the supply and demand side factors that are likely to affect the profitability of input use.
- Panel: Some of the households were sampled twice.

Relevance

- Identify strategies that can help increase the adoption of improved inputs by farmers
- Help direct targeting of FISP beneficiaries
- Help maximize the benefit of FISP

Issue for Discussion

- Should FISP be targeted at all farmers or a category of farmers (who)?

Thank you