Strengthening Farmers' Demand for Fertilizer

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Presentation Outline

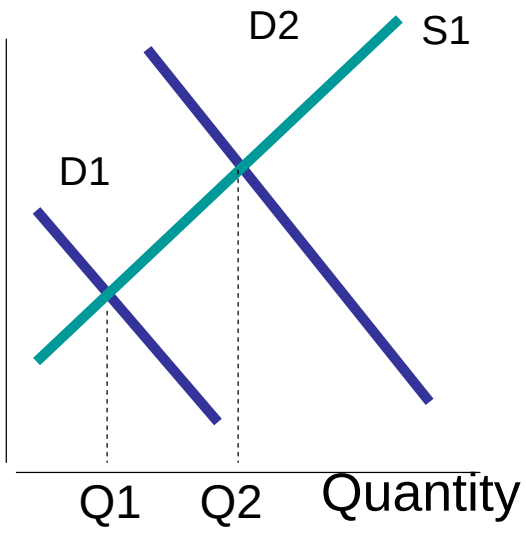
- **Overall objective:**
  To illustrate the wide variety of fertilizer demand constraints in Africa and to identify the many policies and investments available to address them
- **Key topics addressed**
  - Why single out demand?
  - Determinants of demand
  - Use of screening questions to identify constraints
  - Entry points for addressing constraints
- **Key messages to retain**

Why Demand?

- Quantities of fertilizer used are determined by the intersection of the demand and the supply curve
- It is possible to increase consumption by shifting either or both curves
- Slow growth in fertilizer consumption since reforms suggests a need to identify cost-effective demand-pull investments and policy options to complement supply-push initiatives aimed at stimulating supply

Shifts in Both Demand and Supply Increase Consumption

Supply Shifts Out



Demand Shifts Up

Determinants of Demand: The Short Story

- Potential profitability at the farm level
- Farmers' willingness to purchase
- Farmers' ability to purchase

Determinants of Demand: The Longer Story

- **Yield Response is influenced by:**
  - Biophysical environment
  - R&D
  - Extension
- **Input/Output Prices are affected by:**
  - Subsector Structure
  - Basic Services
  - Government policies
- **Farmer Skills and Capacity are shaped by:**
  - Human Capital
  - Financial Capital

Determining Sources of Weak Demand

- The toolkit approach:
- A series of screening questions that help an analyst to look at a wide range of likely demand constraints and identify appropriate solutions
- **Assumes that the analyst has already confirmed that fertilizer use is potentially profitable for crops and zones of interest**

Sources of weak demand

Key Questions	Constraints	Remedies
Does farmer have knowledge of profitable fertilizer recs ?	**•Poor research-extension links • Weak extension**	**Better extension Advertising Demonstrations Basic education**

No

Yes

Does farmer know how to use the inputs? No

Are inputs available? No

Are inputs affordable? No

Is the level of risk acceptable? No

Are inputs the best use of farmer's resources? No

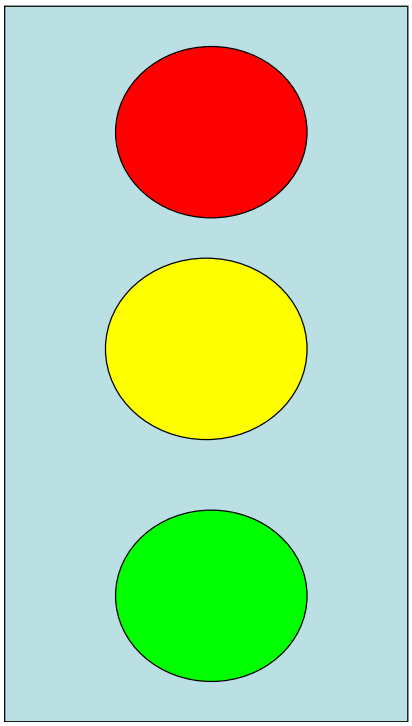
Farmer purchases fertilizer

Key questions	Possible Constraints	Possible remedies
1. Does farmer know about profitable inputs that s/he is not using?	•Poor research-extension linkages •Weak extension services	•Better linked research & extension •On-farm demonstrations • Advertising •Basic education
2. Does farmer have knowledge and skills needed to efficiently use these inputs?		

No

Yes

RWANDA Traffic Light Guide to Profitable Fertilizer Use



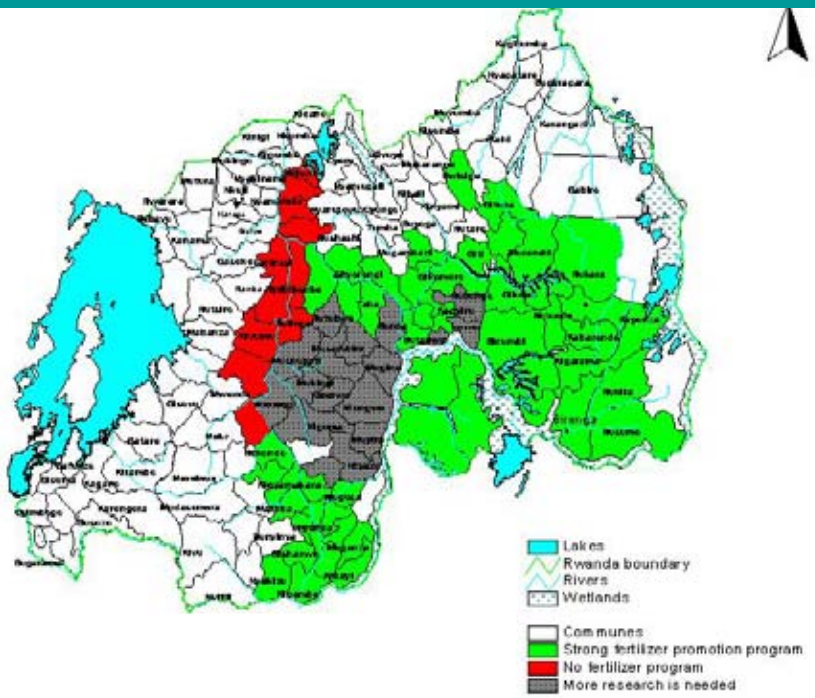
Red indicates that promotion of fertilizer is NOT RECOMMENDED

Yellow indicates that a targeted fertilizer promotion program is RECOMMENDED WITH MONITORING

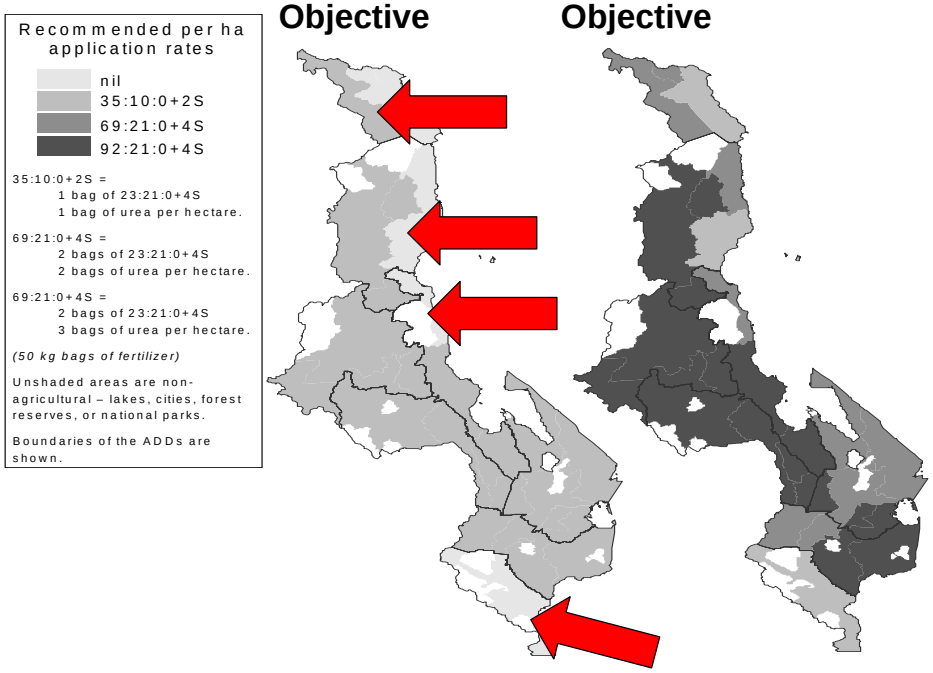
Green indicates that a STRONG FERTILIZER PROMOTION program is recommended

More Research Needed

Sorghum: Recommendations



Malawi Profitability-Based Maize Recommendations



Demonstrations

- **There is growing evidence that demos play a key role in stimulating fertilizer use by smallholders**
  - SCODP/FIPS in Kenya found:
  - 10% adoption in first year followed by 40-60% in second/third years—ALL THROUGH SALES!
- **Good way to promote public private partnerships**
  - FIPS promoting sales of fertilizer small packs with free seed samples provided by seed companies
  - Agricultural fairs expanding in Kenya
  - CNFA in Malawi promoting supplier sponsored demos with extension participation

CNFA PHOTO

Key questions	Possible Constraints	Possible remedies
3. Are these inputs available?	•Unfavorable business environment •Traders have poor knowledge of demand and supply opportunities •Market uncertainty due to government & donor programs	•Improve business environment •Stockist training, market info and surveys •Vouchers redeemable at input shops in lieu of non-commercial distribution

No

Yes

Key questions	Possible Constraints	Possible remedies
4. Are inputs affordable and/or credit available?	•Inappropriate packaging •Weak financial institutions •Information asymmetry limits credit •High costs due to structural problems •Poverty	•Small packs •Incentives to financial institutions •Institutions to reduce asymmetry •Infrastructure investments, transport taxes •Targeted subsidies (starter packs, vouchers)

No

Yes

Key questions	Possible Constraints	Possible remedies
5. Is the level of risk acceptable?	•Volatile output prices •High climatic variability •Large package sizes increase risk for beginners	•Market info, warehouse receipts •SWC research •Weather insurance •Small packs

NO

YES

Ridge Tillage Improves Soil Moisture and Maize Yields in Mali

	W/O	1st year	2nd year	3rd year
Kg/ha	1025	1422	1467	1900
MM Rain	1123	973	1022	779

Key questions	Possible Constraints	Possible remedies
6. Are inputs the best use of the farmer's available resources?	• Extensive production more profitable than intensive • Alternate investments (livestock, children's education) more profitable	• Research to improve fertilizer profitability • Targeted subsidy if economically justified

No

Yes

Yes

Farmer purchases fertilizer

Summary of key points

- Identify binding constraint; it—is not always price
- Consider wide variety of entry points & tools to
  - Reduce knowledge and skill gaps
  - Insure that desired inputs are available
  - Develop improved credit institutions and products
  - Reduce price and production risks
- Recognize that fertilizer may not always be the best solution to rural poverty and income problems, but…..

….when it is there is no denying the benefits

Before Fertilizer & improved seed

After fertilizer & improved seed

FIPS-Africa Photo

The End