

Ex Ante Institutional Assessment of the
proposed Agricultural Credit Subsidy
Program of MAFC



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GISAIA/Tanzania project

- Guiding Investments in Sustainable Agricultural Intensification in Africa
 - Funded by BMGF
 - Collaborative research between MSU or Purdue and local universities in 7 African countries
- GISAIA/Tanzania
 - Collaborative research & policy outreach by MSU & SUA faculty
 - MSU Ag Policy Advisor (Dr. David Nyange) embedded in DPP/MAFC to provide demand driven policy analysis, capacity building and policy coordination

Outline

- Background to assessment
- Goals of this assessment
- Problem NAIVS was designed to address
- Goals of NAIVS
- Problem ACSP is designed to address..?
- Goals of ACSP
- Assumptions made by ACSP
- Remaining & Emerging Challenges Post-NAIVS

Motivation for this assessment

- Interest from MAFC in external assessment of proposed pilot Ag Credit Subsidy Program (ASCP)
 - Meeting with Dr. Mshindo Msolla (Inputs) & Dr. Teresia Msaki (DPP) in Pretoria, March 2013
 - Isaac Minde, David Mather, Daniel Ndyetabula
 - Meeting with Dr. Mshindo Msolla (AFAP) at AFAP (July 2013)
 - Isaac Minde, Anna Temu, David Mather
 - Meeting with Mr. Canuth Komba (Inputs) at MAFC (July 2013)
 - Isaac Minde, Anna Temu, David Mather

Goals of MSU-SUA assessment of proposed ACSP

#1) Outline in detail our understanding of the program design & key actors involved in ACSP

- Program design document written by the Agricultural Inputs division (MAFC, 2013)
- In-person interviews with Dr. Msolla and Mr. Komba

Goals of MSU-SUA assessment of proposed ACSP (2)

#2) Provide our assessment of the conditions under which these assumptions may be met (or not)

- Our knowledge/experience with credit and marketing constraints for various kinds of crops within the Tanzania context
- Expectations of the behavior of each of the different kinds of actors that might be involved (based on theoretical and empirical economics)
- Lessons learned from agricultural credit subsidy programs using a similar design from other African countries

Goals of MSU-SUA assessment of proposed ACSP (3)

#3) Based on 1) and 2), we assess strengths, weaknesses, and key challenges facing:

- Proposed program design;
- The underlying assumptions made about each actor in the credit supply chain;
- The likely overall program performance (rate of loan repayment by farmers)

The problem NAIVS was designed to address

- Underlying problem for which NAIVS was designed to address:
 - Low smallholder maize/rice yields are attributed to very low % of smallholders applying fertilizer or improved seed to maize/rice
- What is the underlying problem which ACSP is intended to address..??

The design and goals of NAIVS

- Tool: NAIVS (input subsidy program)
- NAIVS Goals:
 - improve smallholder maize/rice producer's access to fertilizer & improved seed
 - Reduce credit constraint
 - Provide smallholders with chance to gain experience with returns to these inputs
 - Provide private sector fertilizer/seed supply chain actors with opportunity to make investments, build relationships, and assess demand for commercial fertilizer/seed

NAIVS succeeded in two main ways

- Improved smallholder maize/rice producer access to fertilizer & improved seed
 - KEY → using private sector to import/wholesale & retail fertilizer led to investment in the fertilizer & seed supply chains
- Provided learning experience for farmers
 - Many smallholder maize/rice producers with opportunity to experiment with fertilizer & improved seed for 1st time
 - KEY → using targeting criteria
- Provided learning experience for private sector input distribution system

The goals of ACSP

#1) Reach farmers not reached by NAIVS (who felt discriminated against)

- Which farmers precisely???

#2) Farmers wanted assistance in acquiring fertilizer and seed for more than one acre

- If so.. this is no longer a 'learning' experience

#3) Late distribution of NAIVS vouchers

- MAFC still needs to prepare for ACSP so as to let farmers know which groups will be included, which not
- Why would MAFC assume that preparation will be faster with ACSP?

The goals of ACSP (2)

#4) Lack of close follow-up which led to rent seeking in various levels

- In other words, opportunistic behavior is difficult to prevent
- There is very little that MAFC or TFC can do to ensure that loan recipients actually sell their maize/rice to NFRA
- Lessons from MANY similar ag input loan programs in Africa from 1970s to 1990s show:
 - HIGH levels of default for food crops
 - Repayment rates are ONLY consistently good for non-food crops with limited buyers (coffee, tobacco, tea, etc)

The goals of ACSP (3)

#5) GoT failed to provide payment on time to agro-dealers who had redeemed NAIVS vouchers that season

- Why will GoT be better able to provide 20% payment to participating banks or importers (TFC) this season as compared with repaying importers for redeemed NAIVS vouchers?

The assumptions made by ACSP

#1) GoT provides availability of funds well in advance

- Under NAIVS, MAFC sometimes was slow to distribute vouchers (late input distribution and thus inefficient fertilizer use)
- At least with NAIVS, GoT delay in payment did not result in late delivery of inputs
- If GoT is delayed in funding ACSP.. the program will NOT work at all as farmers who get fertilizer too late will not good returns

The assumptions made by ACSP (2)

#2) All participants in the program are prepared well in advance

- The Minister of Ag said in May that the plans for ACSP were not adequately prepared
- What has changed between his statement in May and June/July when this program went forward?
- Other than importers & banks, were other stakeholders consulted about the program design?
 - Some of the problems with NAIVS could have been avoided had MAFC involved farmer groups in each region with decisions regarding the subsidy package

The assumptions made by ACSP (3)

#3) Contracts exist between farmers and output buyers & #6) District councils work together with farmers group to make sure that they pay back the loans

- Do these groups have a 'contract' with NFRA?
- Even if they do, does NFRA have the ability to enforce these contracts?
- Does NFRA have the funds to buy ALL the surplus production from ACSP?
- Lessons from MANY similar ag input loan programs in Africa from 1970s to 1990s show HIGH levels of default for food crops

The assumptions made by ACSP (4)

#5) District councils will campaign widely to make sure that farmers get inputs on time and to strengthen extension services to farmers

- How will politicians talking about extension improve low capacity of agents and serious shortage of transportation & fuel for agents?
- MAFC has only recently begun updating zonal soil testing and fertilizer recommendations for maize and rice
- Why not take funds you would spend on ACSP and transfer it to Ag Research & Development and extension..??

The assumptions made by ACSP (6)

Are you intending to reach the same kind of farmers (smallholders with 1 ha or less of maize/rice)?

- What kind of farmers are targeted with the TFC-ASCP program?
- Farmer groups of maize/rice growers are likely to be very new..?? If yes, then potential for group pressure (social ties) to enforce repayment may be low
- Is this program with TWhy not take funds you would spend on ACSP and transfer it to Ag Research & Development and extension..??

Conditions for continued smallholder demand & supply

- Depends on profitability of fertilizer and improved seed use
- Value Cost Ratio (VCR) =
(Maize-fertilizer response rate*Maize price/kg) /
Fertilizer price/kg
- NAIVS provided:
 - Opportunity for farmers to learn about their household-specific Maize or Rice-fertilizer response rate... lowered input prices, eased credit constraint
 - Opportunity for private sector supply chain to learn about farmers' commercial demand
 - Profitable in some areas, not profitable in others

Conditions for continued smallholder demand & supply (2)

□ 2) Output price is function of:

- Market access: road infrastructure to village
- Market access: trader/wholesaler behavior
- Government trade and marketing policy in this year and in previous years (expectations of farmers and traders about maize/rice prices)
- Access to storage
 - Ability to wait for higher price (easier with rice)

□ 3) Access to cash/finance for inputs

- Growing high-value crops
- Livestock
- High-return non-farm earnings

Post-NAIVS strategies to improve smallholder maize/rice productivity

- No NAIVS for 2014/15, and it will likely not return in 2015/16
- MAFC considering an Agricultural Credit Subsidy Program (ACSP)
- However, there are many challenges other than the price of fertilizer or credit
 - Unpredictable maize/rice trade policy
 - Poor market access for many villages
 - Need to improve assurance of seed quality
 - Many other factors that affect smallholder maize/rice yields apart from fertilizer use

Remaining challenges to increase smallholder maize/rice productivity

1a) Unpredictable GOT trade/marketing policy → unpredictable output market environment for maize

- Case 1-A: Surplus maize in Ruvuma not marketed..?
 - No traders showed up
 - Due to poor market access only, or also lag effect of maize export ban, lack of export permits, lack of credit for exports..??

POLICY IMPLICATION: Programs with goal of increasing production must also reduce output market constraints

Remaining challenges to increase smallholder maize/rice productivity

1b) Unpredictable GOT trade/marketing policy → unpredictable market environment for rice output

- Case 1-B: Unpredictable, *ad hoc* removal of rice import tariffs
 - Changing 'rules of the game' unpredictably creates HUGE losses in short-term
 - Creates environment not conducive to:
 - future investment in input & output distribution
 - Maintain smallholder demand for inputs

POLICY IMPLICATION: GoT must maintain stable, predictable, and rules-based trade & marketing policy

Remaining challenges to increase smallholder maize/rice productivity

#2) Poor market access in many villages → use of improved inputs on maize may not be profitable

- Case 2-A: Marketing surplus maize in Mbeya and Mbozi (contrasting cases)
- POLICY IMPLICATION: Urgent need for increased investment in rural roads
- Benefits of better roads for smallholders:
 - lower input prices
 - higher output prices via better access all year
 - Input use more likely profitable

Remaining challenges to increase smallholder maize/rice productivity

#3) Cost of fertilizer at rural retail level

- 60-70% rural DAP price is external
- Yet 30% of the cost is domestic; Tanzanian port & transport rates higher than in Kenya
- DAP price comparison (IFDC, 2012):
 - Kenya: \$US 40 per 50 kg (Nairobi)
 - internal transport \$0.07/km
 - Tanzania: \$US 48 per 50 kg (Mbeya)
 - internal transport \$0.11/km
- POLICY IMPLICATION: Investments in port (more berths) & railways & rural roads can significantly lower rural retail input prices

Remaining challenges to increase smallholder maize/rice productivity

#4) Assurance of maize seed quality

- Germination rates not good in some areas
- Fertilizer response rate is function use of good seed, among many other factors
- Need for research to understand effectiveness of current regulatory regime

#5) Potential lack of smallholder understanding of importance of improved seed

- **POLICY IMPLICATION:** Need for public/private extension efforts targeted to benefits of seed

Remaining challenges to increase smallholder maize/rice productivity

#6) There are many determinants of maize/rice yield – not simply fertilizer rate

- Existing studies demonstrate that grain-fertilizer response rates vary by use complementary inputs & practices
- On-going research on how grain-fertilizer response rates vary by:
 - Appropriate fertilizer by area/zone
 - Timing of fertilizer application
 - Dosage
 - Use improved seed
 - Timely weeding

Remaining challenges to increase smallholder maize/rice productivity

#6) There are many determinants of maize/rice yield – not simply fertilizer rate

POLICY IMPLICATION: Urgent need for more holistic public and private approach to helping smallholders increase maize/rice yield

- Fertilizer & seed importers/companies have taken initiative to train agro-dealers & extension agents
- Need for GoT initiative to ensure that public extension system has appropriate messages for farmers (by zone) and sufficient resources for extension system

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