

## **THE PERFORMANCE OF THE FERTILISER PROGRAMME (FSP)**

**(09, April, 2009)**

**OVERVIEW:** This note, along with information in Supplements 1 and 2 provides answers to the questions specified below by the Committee on Agriculture and Lands. This work draws on resources and information from ACF/FSRP analysis, and on resource materials from MACO as well as other studies of FSP listed in Supplement 3, and which are downloadable from the FSP Reform Study Tour web posting. (Note this includes a powerpoint presentation of preliminary results from the recent (March 2009) World Bank study of FSP.)

**QUESTION 1. What is the Fertiliser Support Programme?** In 2002 the GRZ introduced the FSP to improve upon prior programmes to assist farmers and private sector firms to improve the use and provisioning of fertilizer and related inputs. The FSP was justified on the grounds that GRZ needed to have direct involvement in managing a transition to build the capacities of both the private sector and small-scale farmers.

**QUESTION 2. What are the objectives of the FSP?** The FSP was aimed at improving household and national food security, incomes, accessibility to agricultural inputs by small-scale farmers through a subsidy, and building the capacity of the private sector to participate in the supply of agricultural inputs. Through the FSP, GRZ also aimed at rebuilding the resource base of the smallholder farmers.

**QUESTION 3. What is the criteria used to identify recipients of the programme, and who identifies these recipients?** The selection criteria for individual farmer beneficiaries for the 2008/09 cropping season (similar to other years), according the MACO is: An individual beneficiary will need to be a member of a registered Co-operative or a Farmer Organization. The farmer will be selected by the Co-operative or Farmer Organization he/she belongs to, guided by the following criteria:

- Small scale farmer and actively involved in farming within the Co-operative coverage area;
- Capacity to grow 1-5 hectares of Maize;
- Capacity to pay 25% of the cost of Inputs;
- Not concurrently benefiting from the Food Security Pack and;
- Not be a defaulter, from Food Reserve Agency and/or any other agricultural credit program whether belonging to an eligible cooperative or not
- The Cooperative Board (CB) of selected co-operatives in conjunction with respective Camp Extension Officer (CEO) will set the date and venue for explaining modalities of prospecting applicants. Village Farmers' Committee (VFC), Village Headmen and other local leadership or their representatives should attend this meeting.
- At this meeting:
  - The CEO and the CB members will explain the rules and modalities governing this program. Each CB will receive applications.
  - and will ascertain that each applicant meets the above criteria.

**QUESTION 4. Is the criteria working well? If not how can it be improved upon?** The assessment conducted by the ACF/FSRP assisted FSP Reform Study Tour identified key findings and stakeholder supported concerns about FSP past and current performance. These include the following:

- Little overall progress in improving productivity on maize, the principal crop targeted in FSP;
- Poor targeting of farmers/beneficiaries to achieve programme food security objectives;

- Fundamental disconnects between improved farmer, extension agent and agro-dealer training, and the distribution of productivity enhancing inputs like fertilizer and improved seed;
- Delays in input distribution beyond recommended application dates which significantly reduces the effectiveness of both seed and fertilizer use;
- Poor fertilizer use efficiency among many targeted farmers due to poor and/or missing crop/agronomic management practices and use of complementary inputs as well as recommended conservation farming practices;
- Inconsistency in FSP policy implementation, especially in reversal of plans to reduce the subsidy level, and to stimulate learning by public sector extension agents as well as private sector agro-dealers;
- Negative FSP impact on achieving a broader private sector participation in input distribution;
- Long-term concerns about the FSP sustainability; and
- Poor monitoring of program effects making it difficult to measure programme achievements against objectives.

**QUESTION 5. What is the source of the fertilizer in question? How is this source determined?**

- Private input importers/suppliers are selected through a National Tender;
- Suppliers position inputs in designated Districts at main depots;
- DACs (District Agricultural Committees) select cooperatives/other farmer organizations.
- Selected Cooperatives /other farmer organizations deposit 25% of the value of inputs;
- Selected Cooperatives/other farmer organizations access inputs;
- DACs, Extension Officers (EOs), local administration, and local NGOs monitor the Programme at the District level.

**QUESTION 6. What is the warehousing of the fertilizer from the warehouse to the intended farmer?** Channels of distribution of the FSP fertilizer are as follows:

- Inputs supplied by traders selected through a National Tender,
- Selected traders deliver inputs up to District level;
- Local distributors, selected by DACs, distribute inputs to satellite depots and issue the same to approved individual farmers through their Co-operatives and other Farmer Organizations;
- The selection criteria of Local Distributors, Co-operatives and beneficiary farmers are described in the MACO FSP Implementation Manual.

**QUESTION 7. What is the movement of the fertiliser from the warehouse to the intended farmer?** The following are the criteria that DACs use to select local input transporters to move fertiliser from the District depots to local distributors, Co-operatives and other farmer organizations:

- Physical presence in the District;
- A track record, credible and demonstrate that they have the financial and transport capacity to provide the services;
- Be registered with the Registrar of companies;
- Sign a MOU to abide by the Programme guidelines to safeguard the interests of all parties; The MOU signed by the DACO on behalf of Government.
- Have the capacity to take inputs to designated areas closer to farmers (satellite depots) and release inputs to identified farmers within their organizations or cooperatives.
- Co-operatives and other Farmer Organizations with the capacity may be engaged as local inputs distributors.

**QUESTION 8. What is the role of the Cooperative Movement in the programme?**

Participating Co-operatives and other Farmer Organizations are the main channel in the distribution of inputs to beneficiary farmers. Other roles are:

- The Cooperative Board (CB) of selected Co-operatives in conjunction with respective Camp Extension Officer (CEO) will set the date and venue for explaining modalities of prospecting applicants. Village Farmers' Committee (VFC), Village Headmen and other local leadership or their representatives should attend this meeting;
- The CEO and the CB members will explain the rules and modalities governing this program. Each CB will receive applications (using standard FSP forms. The CEO and CB will ascertain that each farmer applicant meets the criteria for selection;
- The CEO will sit in the meeting of the CB and be involved in the process of appraising and considering applications;
- Upon counter checking, the CEO will endorse the list of applicants.
- The CB will undertake to ensure that all beneficiaries use the inputs within the stated farming area;
- Finally, the CB will submit the list of applicants to the DACO (on behalf of the DAC) through the CEO.

**QUESTION 9. What constitutes a Cooperative Society and the benchmarks for registering such a society?** The following are the selection criteria for participating co-operatives /other farmer organizations:

- Should have written by-laws to manage their funds and have appropriate accountability mechanisms;
- Have an executive committee structure and should operate a Bank Account.
- Demonstrate the need and ability to use the inputs well;
- be duly registered by the Registrar of Cooperative Societies and/or Registrar of Societies.
- Have no outstanding loans from the past seasons, FRA or any other lending institution.
- Be located in an agricultural area and should be engaged in agricultural activities; Demonstrate knowledge in cooperative and agribusiness management; and
- Each selected Co-operative will be subjected to an inventory before it is approved to participate in the Programme.

**QUESTION 10. What are the mechanisms in place to supervise the formation and operations of Cooperative Societies so as to distinguish genuine societies from other grouping?** The District Agricultural Committee (DAC), are in theory involved in the appraisal of Co-operatives, other Farmer Organization and beneficiaries; DACs may include the following officers for meetings: 1) Block Extension Officers (BEO): 2) Senior District Representative of the FRA appointed Programme Manager. The DAC is suppose to also appraise applications from Co-operatives and other organizations. In addition, the DAC should:

- Ensure process outlined by MACO and other GRZ offices are followed by applicants;
- Ensure inputs are rationally allocated to all participating Cooperatives/other farmer organization in District;
- Ensure total sum of inputs approved does not exceed the District allocation;
- Convey a list of District selections to the PCO for ratification;
- The Co-operative Boards will be informed about the approval of the list by DAC

**QUESTION 11. What is the effectiveness of the supply chain i.e. from the warehouse to the farmer; and also the feedback system that ensures that Headquarters receives information on how the distribution exercise was done?** Many different studies over the past 3-4 years have identified difficulties in the effectiveness of the FSP selection and distribution system. The most recent World Bank assessment summarized difficulties as:

- Total FSP costs were at least K183.7 bn (i.e. 22% more than stated at the start of the season).
- Pack for pack, FSP inputs cost Zambia an average of K245,000 more than private sector benchmark.
- Overall leakage from the system was around 30% (i.e. K55.1 bn or USD 14.3 million).
- Beneficiary selection has been arbitrary and non-transparent.
- At least 70% of inputs received too late.
- FSP produced 70% less maize than predicted by MACO.
- Estimate that FSP has displaced 7-10% of private sector customers

**QUESTION 12. What are the number of farmers who have benefited from the programme since inception?** This is a difficult question to answer with a high degree of certainty due to the weakness of the MACO internal monitoring and evaluation programme for the FSP. From MACO's own self assessment, it was concluded: "FSP was not designed with adequate monitoring and evaluation instruments to ensure that the programme implementation runs according to plan. Hence, there has been ineffective monitoring and evaluation by MACO, and other stakeholders during the implementation of the programme. The budgetary allocation for monitoring and evaluation within the FSP budget is inadequate, making monitoring of the programme not effective enough. What is known with some certainty from MACO programme records is the planned number of farmer beneficiaries and the volume of fertiliser to be distributed. This is show below.

## PERFORMANCE OF FSP - 2002-2008

Season	Budgeted (ZMK billion)	Fertilizer Amount (MT)	Number of Farmers
2002/03	100	48000	120,000
2003/04	114.5	60,000	150,000
2004/05	112.6	50,000	125,000
2005/06	140.0	50,000	125,000
2006/07	252.0	84,000	210,000
2007/08	150.0	50,000	125,000
2008/09	492.0	80,000	200,000
<b>TOTAL</b>	<b>1,361.1</b>	<b>422,000</b>	<b>1,505,000</b>

The following summary of what farmers got in 2008 is from the recent World Bank assessment of FSP.

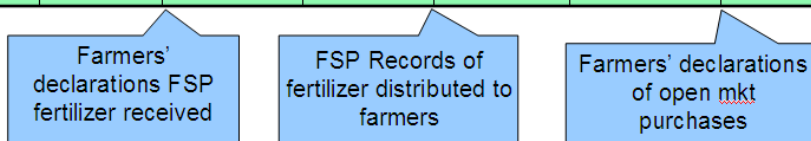
## What did the farmers get and when did they get it?

- **55% of farmers received less than a full 4x4 input pack.**
  - In many cases, this was because they could not afford the subsidized price so decided to share.
  - In other cases, it was because the co-op subscribed too many beneficiaries (after charging K100,000 average for co-op fees).
  - In still other cases, it was because FSP inputs went missing (“leaked out”) before they reached the co-op.
- **Around 70% of inputs arrived too late.**
  - 63% of inputs reached farmers in November.
  - 32% of inputs reached farmers in December.
  - 68% of inputs received after the start of the rains.

The following table summarizes information from CSO/MACO Crop Forecast Surveys and PHS/Supplemental Surveys carried out in selected years. These findings indicate what smallholders themselves reported as receiving/using in terms of fertilizer obtained from FSP as well as commercial/private sources. The main finding of these comparisons is that smallholders report receiving considerable less fertilizer from FSP, as compared to what FSP reports it distributes directly to smallholders.

**Table 6. Comparison of Small & Medium Farm  
Source of Acquisition of Fertilizer - Mostly for Maize**

Year	Crop Forecast Survey/SS – Main Source of Fertilizer Identified as FSP		FSP Data on Program Accomplishments		CFS/SS Main Source –of Fertilizer Identified as Private/Commercial Purchase	
	# Small- holders	Metric Tons Fertilizer	# Small- holders	Metric Tons Fertilizer	# Small -holders	Metric Tons fertilizer
02/03 SS	102,450	28,956	120,000	48,000	207,080	50,476
03/04 SS	101,139	33,034	150,000	60,000	171,274	41,507
03/04 CFS	49,824	13,461	150,000	60,000	131,598	24,937
06/07 SS	164,229	61,248	210,000	84,000	303,697	95,169
07/08 SS	140,612	43,596	125,000	50,000	286,514	89,951
07/08 CFS	56,271	14,706	125,000	50,000	259,717	59,366
08/09 CFS			200,000	80,000		



Finally on the matter of which farmers benefit from FSP, supplemental survey results from 2004 reveal that regardless of the size of area cultivated, households receiving FSP fertilizer were found to have significantly higher assets levels as compared to those actually purchasing fertilizer in open markets from commercial and/or private sources. This shows that the targeting of FSP resources need to be improved to target more small and medium-scale farmers who lack the understanding and ability to utilize fertilizer entirely on their account.

**Table 7. HH Categorisation/Targeting Findings – 2004 SS**

Indicators/Attributes	Means for Household Quintile Categories Ranked by Household Per Capita Farm Size (Cultivated + Fallow)					Overall Small-holders
	1 Low	2.	3. Mid	4.	5. High	
HH PC Land Hold Size ha/hh	.09	.19	.29	.46	1.11	.41 ha/hh
Number of smallholders	263,430	262,862	262,038	250,437	228,378	1,267,145
% smallholders	20.79	20.74	20.68	19.76	18.02	100 %
Average HH Assets ZMK	1,106 k	1,065 k	1,130 k	1,266 k	2,139 k	1,320,334 ZMK
Land size per HH ha/hh	.64	1.24	1.75	2.42	4.11	1.97
FSP As Source of Fertiliser	2,183	3,396	4,406	7,610	11,361	28,956 mt
FSP HHs Value of HH Assets	678 k	2,198 k	2,458 k	2,490 k	8,784 k	2,886,006 ZMK
Commercial Purchase Source	5,344	5,129	11,239	10,315	18,719	50,746 mt
Pur. HHs Value of HH Assets	4,271 k	3,784 k	5,226 k	4,299 k	6,287 k	1,964,370 ZMK
PAM Food Security Pk Source	398	782	1,177	913	1,037	4,307 mt
PAM HH Value of HH Assets	147 k	1,345 k	1,384 k	483 k	3,401 k	1,277,880 ZMK
Non-Fertiliser Users Assets	1,205 k	1,008 k	927 k	955 k	1,038 k	1,030,192 ZMK
Zambia Total Fert. Used mt	9,087	9,506	17,593	18,272	31,948	86,405 mt <sub>12</sub>

**QUESTION 13. What is the strengths and weakness of the programme and suggest how the weaknesses could be removed in order to refine the entire system?** In Question 4 above, the weaknesses of the existing FSR were summarized. To address these, the FSR Reform Study Tour and three recent stakeholder meetings contributed to and endorsed proposed FSP reforms. The following were among the key stakeholder suggestions/endorsement on the proposed reforms:

- In order to improve the FSP's effectiveness and efficiency, the programme should be changed towards a Farmer Input Training Support Programme and be implemented through a Voucher Scheme (smart subsidy) starting in the 2009/2010 agricultural season.
- It is further recommended that MACO draw upon the expertise represented by the study team to help with the guiding of the implementation of the programme.
- Programme should have a foundation of strengthened links to training in order to benefit farmers through upgraded extension services as well as agro-dealer training in yield enhancing technologies such as conservation farming technologies and appropriate input application practices.
- Programme should employ a flexible (electronic) Input Voucher System and its implementation should be immediately (2009/2010 agricultural cropping season).
- Over the longer-run diversify the input pack to include other seed and the pack size should start at ½ hectare and a farmer can access up to two packs. In the first year of

implementation keep the programme as simple as possible by reducing the pack size, restricting to inputs such as fertilizer and seed.

- Selection/targeting of farmers should be done at the community level using the farmer register and MACO camp officers.
- A given beneficiary shall access The Farm Input Training Support Programme for 2 consecutive seasons only, and the subsidy is to start at 50% for first season and reduce to 25% in the second season. New entrants benefiting in subsequent years will follow the same subsidy structure of 50 % in the first year and 25 % in the second year.
- Graduation from the reformed FSP will be assisted by improved farmer knowledge and better payoff to the farmers own investment in improved input use. Linkages are also to be encouraged to Micro Financial Institutions and banks with rural coverage such as ZANACO and Finance Bank. Camp Officer and agro-dealer training of farmers will continue after graduation.
- Improved M/E is needed to determine effects of the support programme and to make mid-course adjustment to better achieve objectives, which has lacked in FSP implementation

The above suggestions and a time table for implementation were prepared by ACF/FSRP and provided to MACO in the form of an ACF Policy Advisory Note, which is reproduced in Supplement 1 to this note. ACF/FSRP and selected stakeholders likewise provided MACO addition information on a Roadmap for the Introduction and Implementation of a “Farmers Input Support and Training Programme” assisted with a voucher. This is reproduced in Supplement 2 to this note.

## **SUPPLEMENT 1. ADDITIONAL INFORMATION:**

### **ACF/FSP Study Team - Policy Advisory Note**

#### **Proposed Reforms for the Zambian Fertilizer Support Programme (FSP)** (27 February 2009)

**Objectives and Assessment Procedures:** Given government and stakeholder concerns about achieving greater effectiveness from GRZ budget allocations to the fertilizer support programme, a representative study team of major agricultural industry players and stakeholders was established by the Ministry of Agriculture and Cooperative (MACO) following a Cabinet directive to review the FSP implementation thus far, and to proceed with a view to coming up with recommendations for improved FSP future implementation, effectiveness and efficiency. Results of this review exercise are summarized in this advisory note.

The study team collected and reviewed numerous assessments of Zambia's experience with FSP, and as well as studies of similar programmes in neighboring countries. The study team organized and conducted careful case review visits to three countries (Kenya, Tanzania and Malawi) and likewise sought-out input from key Zambian stakeholder assessments and relevant on-going agricultural input and productivity enhancement projects.

A draft study tour and review report was developed by the study team, and was subjected to review and debate by stakeholder in two specific review sessions (See Annex 1 for lists of participants in these review sessions.) The full Study Tour Report with detailed recommendations is attached in Annex 2, and contains schedules of all interviews conducted in each country (Study Tour Report Annexes 1 to 3).

**Situational Analysis:** The assessment identified key findings and stakeholder supported concerns about FSP past and current performance. These include the following:

- Little overall progress in improving productivity on maize, the principal crop targeted in FSP;
- Poor targeting of farmers/beneficiaries to achieve programme food security objectives;
- Fundamental disconnects between improved farmer, extension agent and agro-dealer training, and the distribution of productivity enhancing inputs like fertilizer and improved seed;
- Delays in input distribution beyond recommended application dates which significantly reduces the effectiveness of both seed and fertilizer use;
- Poor fertilizer use efficiency among many targeted farmers due to poor and/or missing crop/agronomic management practices and use of complementary inputs as well as recommended conservation farming practices;
- Inconsistency in FSP policy implementation, especially in reversal of plans to reduce the subsidy level, and to stimulate learning by public sector extension agents as well as private sector agro-dealers;
- Negative FSP impact on achieving a broader private sector participation in input distribution;
- Long-term concerns about the FSP sustainability; and
- Poor monitoring of program effects making it difficult to measure programme achievements against objectives.

**Stakeholder Feedback on Proposed Reforms:** Three stakeholder meetings (see Annex 1) contributed to and endorsed the Proposed FSP Reforms. The following were among the key stakeholder feedback on the proposed reforms:

- Change FSP name to Farmer Input Training Support Programme.
- Programme should have a foundation of strengthened links to training in order to benefit farmers through upgraded extension services as well as agro-dealer training in yield enhancing technologies such as conservation farming technologies and appropriate input application practices.
- Programme should employ a flexible (electronic) Input Voucher System and its implementation should be immediately (2009/2010 agricultural cropping season).
- Over the longer-run diversify the input pack to include other seed and the pack size should start at ½ hectare and a farmer can access up to two packs. In the first year of implementation keep the programme as simple as possible by reducing the pack size, restricting to inputs such as fertilizer and seed.
- Selection/targeting of farmers should be done at the community level using the farmer register and MACO camp officers.
- A given beneficiary shall access The Farm Input Training Support Programme for 2 consecutive seasons only, and the subsidy is to start at 50% for first season and reduce to 25% in the second season. New entrants benefiting in subsequent years will follow the same subsidy structure of 50 % in the first year and 25 % in the second year.
- Graduation is assisted by improved farmer knowledge and better payoff to the farmers own investment in improved input use. Linkages are also to be encouraged to Micro Financial Institutions and banks with rural coverage such as ZANACO and Finance Bank. Camp Officer and agro-dealer training of farmers will continue after graduation.
- Improved M/E to determine effects of the support programme and to make mid-course adjustment to better achieve objectives, which has lacked in FSP implementation

**Recommendations:** In order to improve the FSP's effectiveness and efficiency, the programme should be changed towards a **Farmer Input Training Support Programme** and be implemented through a **Voucher Scheme** (smart subsidy) starting in the 2009/2010 agricultural season. It is further recommended that the Ministry draw upon the expertise represented by the study team to help with the guiding of the implementation of the programme.

**Implementation Actions:** In order to implement the above recommendation, the following Actions need to be undertaken:

<b>Actions</b>	<b>Dates</b>
<b>Implementation Actions for the 2009/2010 Agricultural Season</b>	
1. Government to announce the new system and make known the quantities of inputs under the subsidy programme	By March, 2009
2. Camp farmer registers must be completed and submitted to District, province and national level	By 30 <sup>th</sup> April, 2009.
3. Review of the FSP implementation manual	By 31 <sup>st</sup> March 2009.
4. Printing of all programme documentation should be completed	By 1 <sup>st</sup> June 2009.
5. Farmers' selection should be completed	By 1 <sup>st</sup> June 2009
6. Stakeholder sensitization for farmers, suppliers, extension workers, politicians, associations, NGO's	By 31 <sup>st</sup> August 2009
7. Agro dealers should receive vouchers	By 1 <sup>st</sup> November 2009 and redeem them by 30 <sup>th</sup> November 2009.
8. A register of Agro Dealers based at the District completed through the DACO's office	By end of June 2009.
<b>Implementation Actions for the 2010/2011 Agricultural Season</b>	
9. Training of Agro dealers	Ongoing
10. Increase farmers contribution in the second year to 75%	By 2010
11. Diversification of composition of seed.	By 2010

Actions	Dates
12. Enhance number of importers, wholesalers and local manufactures	By 2010
13. Stockiest infrastructure development	By 2010
14. Infrastructure development	By 2010
15. Financial support to Agro Dealers	By 2010
<b>Long Term Actions</b>	
16. In an event that input prices in a given year rise to alarming levels, Government should consider shifting to a general subsidy program which subsidizes the importers and producers of fertilizer.	
17. Government withdrawal from input supply and distribution.	

**Resource Requirements:** In the 2009 National budget, Government allocated significant resources to the FSP. These resources will be used primarily to reimburse agro-dealers whom have redeemed the vouchers from farmer beneficiaries. Government and cooperating partners must partner to assist the FSP implementation office in MACO to undertake a series of start-up planning, organization and training activities. Among others, this will include rapid start efforts to complete a computerized farmer register, rapid development of the voucher programme design/implementation details, and development/printing of farmer and agro-dealer sensitization/training materials.

**Expected Impacts:** The expected impacts of implementing the recommendations in this Advisory Note will be, among others, improved (more productive and profitable) smallholder farmers' use as well as access to improved farm inputs; reduced household-level food insecurity and reduced rural poverty levels; increased national effective demand for fertilizers and related inputs; and increased private sector participation in input and output markets. These recommendations will also increase the potential for foreign exchange earnings from more competitive agricultural exports

**Recommended Minister's Action:** Adoption of the recommendations as raised in this Advisory Note.

**Other Options Considered:** Continuation of the FSP status quo is unlikely to trigger the expected agricultural sector performance increases and will continue inhibiting the availability of affordable and improved use of farm inputs at the farm level. Government will continue incurring large investments on subsidies with limited payoffs, and at the expense of other important developmental works to promote growth in the agricultural sector. Farming inputs distribution and availability will continue to be concentrated along the line of rail.

## **SUPPLEMENT 2. -ADDITIONAL INFORMATION**

### **Roadmap for the Introduction and Implementation of a “Farmer Input Support and Training Program” Assisted With a Voucher**

#### **Introduction**

This note is meant to give useful detailed information about the introduction of an electronic input voucher program in a phased approach to reform the Fertilizer Support Program. It is proposed that the electronic input voucher program now being called the "Farmer Input Support and Training Program" be implemented in two to three provinces in a phased roll out while the traditional FSP be implemented for the last time in six to seven provinces during the 2009/10 cropping season. The voucher program would then be fully rolled out in 2010/11 season while the FSP is completely phased out. This note will answer questions such as how the voucher will improve targeting, where the voucher program will first be introduced and why and the logistics required to implement the program. The note also outlines the level of preparedness of the Ministry of Agriculture and Cooperatives (MACO) and other stakeholders particularly the input suppliers are to implement this program.

#### **1. Why go for vouchers and how will they improve targeting?**

- The dual objectives of smallholder poverty alleviation and market development can be achieved if farmer support programs effectively transfer both extension training assistance and input purchasing power to needy farmers. Vouchers need to be, a strategic component of a set of initiatives to promote sustainable smallholder farmer and input market development. Vouchers' specific role is to provide an effective means of transferring assets to the targeted farmer beneficiaries that will enable them to increase their productivity. At the same time, properly used, vouchers can also provide an incentive for agro-input dealers to develop and expand their businesses.
- Determining which farmers are to be given priority assistance is critical to achieving GRZ development objectives. If GRZ subsidized inputs are given to farmers who would have purchased these inputs anyway with their own funds, government subsidy is simply displacing private investment, and total input use changes little. Likewise, if farmers are not trained to combine subsidized inputs with other productivity enhancing actions (like improved soil and agronomic management practices) experience shows that there will be little change in overall agricultural productivity. Long run productivity improvements are the proven pathway to sustaining the use of purchased inputs and helping farmers to remain competitive in producing for their own consumption and in supplying markets.
- Improved targeting of farmers at the MACO camp-level will be achieved by working from a complete listing (registry) of smallholder farmers and making MACO camp officers and other local representatives responsible for selecting beneficiaries based on agreed program goals and farmer attributes. Criteria for selecting targeted farmers from the completed camp-level lists need to be carefully developed as part of program implementation.
- An e-vouchers will improve accountability and enhance monitoring of the entire program. Each electronic voucher will have a unique number and be allocated to a

unique selected beneficiary in a specific Camp. Building up from the Camp-level, the voucher management system will be implemented by SMS. Computer oversight in District, Provincial and National Offices will enable GRZ to control the use and payment/reimbursement of inputs acquired through a voucher.

- In summary, subsidized seed and fertilizers will yield better results if accompanied by effective extension services and agricultural training as well as monitoring. A beneficiary farmer needs to be a good client of an extension worker in a specific MACO camp area. Integrated into a set of extension agent contacts, a beneficiary will be given an input voucher, which s/he can exchange for inputs from a nearby authorized dealer. To encourage farmer ownership and reduce dependency, farmers are asked to top-up the value of a voucher to cover the total cost of the inputs. Strengthened agro-dealers who redeem the vouchers can also provide training information on effective input use by farmers.

**2. Which Provinces are in Phase I of implementation; why they have been selected? What are the factors that give us comfort that phase I will be successful in these Provinces?**

It is proposed that all Districts in 2-3 of the following Provinces be part of a two-phase approach to implementing an improved “Farmer Input Training Support Program.”

- Southern
- Central
- Copperbelt
- Eastern

*Reasons for choosing and being confident in selecting these areas in the 1<sup>st</sup> phase*

- Commercial distribution networks already exist in these locations and the volume of business they undertake can be expanded most easily with the added and assured demand represented by electronic input vouchers.
- Significant numbers of smallholders are already purchasing inputs in these Provinces and will benefit from improved agro-dealer development and additional competition for their business.
- Maize production is important in these areas and there is a wide range of smallholder farmer conditions present,
- MACO and Cooperating Partners are already working in these Provinces/Districts on training in conservation farming and related productivity enhancements, agro-dealer development and other farmer/agro-dealer development efforts.

*Important Public & NGO sector collaborators working together in these locations*

- Southern: MACO/CASAD, CFU, PROFIT, CARE and C-FAARM in six District,
- Central: MACO/CASAD, CFU, PROFIT, CARE, WV, FAO FF Schools, ASP
- Copperbelt: CARE, WV, PROFIT, ASP
- Eastern: MACO/CASAD, CFU, PROFIT, CARE, LWF, WV, ASP

**3. What is the status of the farmer's registers in these Provinces and how do we envisage the process of issuing vouchers based on these registers?**

*According to MACO informants, efforts to complete farmers’ registers are 70-80 % completed. The maximum coverage of camps by Province is as follows:*

- Southern (214) Camps in 54 Blocks

- Central (176 ) Camps in 44 Blocks
- Copperbelt ( 161 ) Camps in 42 Blocks
- Eastern ( 206 ) Camps in 51 Blocks

*Further steps to be taken to assure completion of the registration process and integration of the registry information into a voucher and training assistance management data base:*

- Begin working with the hard copy registry list in each District/Camp. Verify with local committees that the list represent the farmers in this camp. Determine if the information in the hard copy registry is sufficient to allow the camp officer and local committee to select the farmers to be targeted in Phase I.
- MACO/HQ will draw up the criteria for targeting. See full FSP Reform Study Tour Report for suggestions on this. Want to add statement on importance of information for farmers on improved agronomic and cropping/soil management practices as part of the training message and farmers' willingness to consider/experiment with these practices.
- Camp officer and camp committee will select the beneficiaries at each camp, following the criteria established. In the case of no camp officer then Block Officers and cooperating partners will work together to complete the work.
- Begin working towards inputting into an electronic data base the full registry, starting with the names/information of the selected beneficiaries. Before the next season, the full list of farm households in each camp will be entered into the data base.
- As soon as possible a printout from the data base of the beneficiary list will be sent to each camp officer. The camp officer will contact each farmer on the list to verify that data entered is correct. Any corrections needed are noted and a report is submitted to the District/Province offices for updating of the data base.
- Camp officers will be issued dedicated SMS cell phones to allow them to input farmer NRC and voucher information for voucher start up and validation.

**4. What will be the role of Block Extension Officers, the Block Committee System, etc.?**

- Cover camps where there are no camp officers
- Supervise and verify development of the hard copy lists of beneficiaries, and deliver to District MACO Offices
- Deliver vouchers to camp officers and supervise the distribution via camp officers to farmers
- Committee tasks covered above. Check that the lists are full reflection of farm households in the camp. Also participate in the beneficiary selection process, and verify the distribution of the vouchers.

**5. What can we say about the capacity of the private sector to provide fertilizer in villages in a timely manner?**

- Private input firms at various stages of the input supply value chain are very eager and excited about the potential for growth of input distribution and utilization when the negative spillovers and disincentives from the existing FSP program are no longer present.
- Importers and national-level distributors of fertilizer have responded strongly (see fertilizer firms submissions on commitments to the Minister Dr. Brian Chituwo)

- Wholesale distribution firms have demonstrated capability to distribute to their own depots and to other Provincial/Districts suppliers
- There are existing retail shops and agro-dealers at the BOMA-level in these Provinces, and some below this level. These will be registered and will receive training on the potential of the voucher system and on the need to stock product and respond to opportunities to supply farmers with vouchers.
- Locally selected and trusted mobile agents (those assisted by the Profit Project) are already working in these areas in conjunction with suppliers, agro-dealers and retail/wholesale shops/firms and will be further encouraged and assisted.

**6. Are there things they can learn from seed suppliers, who seem to have better outreach?**

- Strong competition for selling seed to farmers has resulted in significant expansion of distribution networks.
- Seed producers and distributors have benefited from lack of negative spillover and investment disincentives from FSP, which provides an important contrast to conditions facing the fertilizer value chain in Zambia.

**7. How would the electronic voucher process be designed and implemented? What are specific benefits and risks/limitations of vouchers?**

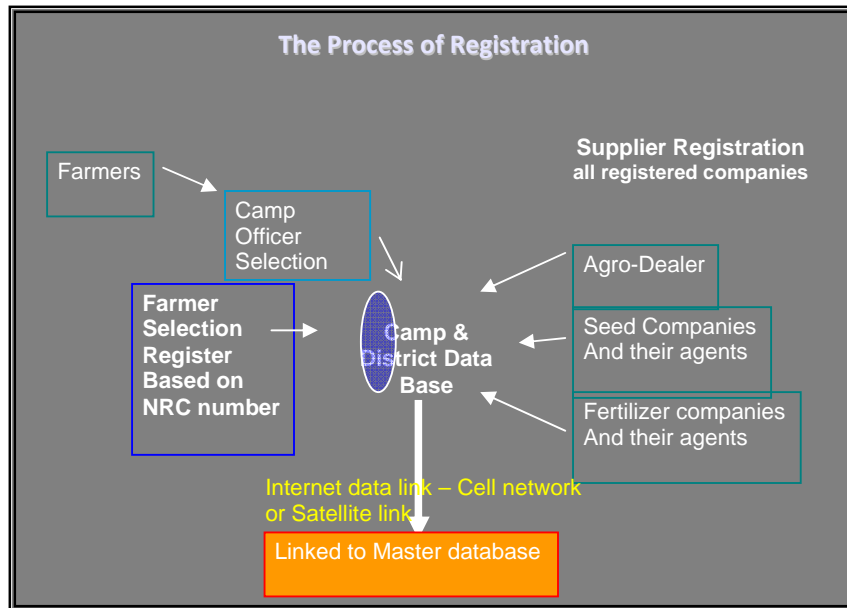
**The e-Voucher Transaction Platform:** This proposed system is built upon an existing technological platform that was designed initially to reduce the very high transaction costs inherent in the payment of large numbers of farmers across the country by cotton out-grower companies. The payment system was piloted in 2007 by a local ICT company, Mobile Transactions Zambia Ltd (MTZL), and has been refined and expanded since then to involve a fully integrated transaction system with full Bank of Zambia approval. It can offer the following services:

- Payment services – the company plans to facilitate over 300,000 payments to over 80,000 cotton farmers in 2009
- Town Transfers – the company plans to facilitate 500 ‘Western Union-style’ town transfers a day by mid-2009
- Transaction Accounts – facilitating an ‘m-banking’ facility for the movement of funds through the use of mobile phones, thus enabling banking for the un-banked.

With relatively little adaptation, the payment platform designed and managed by MTZL can quickly integrate a platform for the management of an electronic voucher system. The company is able to develop such a system, which brings with it significant security controls and auditability, within three months of starting work. It is upon this system that the proposed voucher system as described below would run:

**Registration of Farmers to Receive Voucher** works as follows:

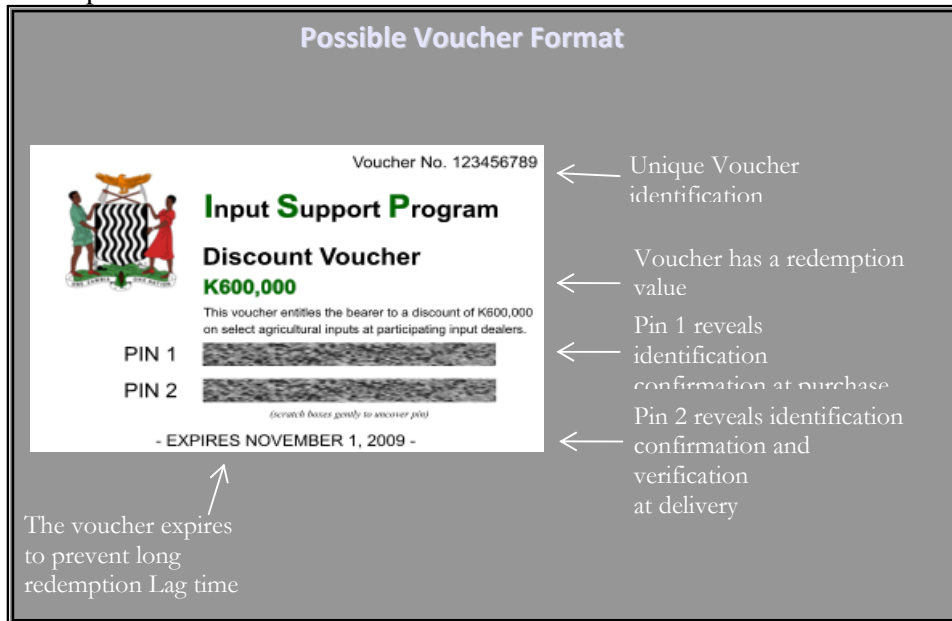
- A targeting mechanism identifies beneficiaries at Camp level.
- Camp and District office feeds the name and NRC number of the beneficiaries into a master database
- At the same time, interested suppliers that conform to a specific list of criteria register, and are allocated ‘transaction accounts’ that facilitate the redemption of vouchers.



**Voucher**

**collection** involves two steps:

- Once a farmer has been selected and registered in the system by the Camp Officer, and vouchers are distributed by MACO to the Province, District and Camp level, the targeted farmer obtains the voucher from the Camp Officer.
- The voucher resembles a mobile phone airtime scratch card (see below) and has a unique number that, on issuance to a farmer, is linked on the system to the farmer’s NRC card and name, thus ‘locking’ that voucher to that individual in a specific camp location.

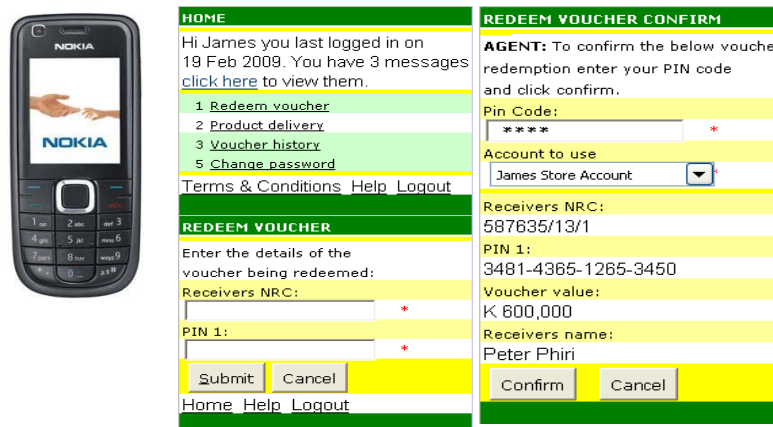


*It is important to note that the voucher constitutes ‘e-cash’ or a discount value and can be redeemed against any seed or fertilizer – not a pre-determined ‘input pack’*

**Voucher redemption:** A farmer could use two types of suppliers to redeem his voucher:

- Registered agro-dealer (shop) which carries stock where a farmer could immediately redeem his voucher as part of an input purchase

- A registered ‘agent’ of a seed or fertilizer company that aggregates orders, cash and vouchers on a pre-paid basis for transmission to the supplier for future delivery – the only major requirement to be an agent is to hold sufficient trust from the community to allow pre-payment in advance of delivery. Such demand aggregation points are critical in Zambia where the network of agro-dealers is sparse, and the model involves no inventory cost or risk to the supplier and can be scaled up rapidly. There are currently over 2,000 individual entrepreneurs providing such services to farming communities in Zambia on behalf of seed and agro-chemical suppliers. Such agents could be:
  - individual entrepreneurs
  - co-operatives
  - farmers’ associations
  - out-grower company sheds/depots
  - church groups - etc.
- All voucher redemption (voucher, NRC and holder validation, and use as discount) would be conducted through an SMS enabled mobile phone (only used for this purpose) by the agro-dealer or agent transmitting data to and receiving data from the system:



The voucher would be redeemed in the following steps:

1. On receipt of the voucher, the farmer goes to a registered supplier
2. He/she buys inputs, using the voucher and the amount of top-up cash required
3. He/she scratches the first foil to reveal a PIN number
4. This pin is used by the supplier to validate the authenticity of the farmer’s voucher, and to notify/certify the receipt of the top-up payment by the agro-dealer. Upon validation, is automatically credited to the supplier’s transaction account from the master ‘subsidy account’
5. Upon delivery (either immediate in the case of an agro-dealer or later in the case of an agent) the farmer scratches the second PIN to confirm delivery and to complete the final authorization, which allows the agro-dealer to actually receive final payment from the master “subsidy account”.

**Benefits:** Operational benefits of the e-voucher system include:

- The technology to implement this system is already in existence and use in Zambia,
- Numerous safeguards prevent duplication and fraud,
- The system rejects any fake voucher,
- Prevents duplicate use, as the voucher becomes invalid once used,
- Targets and tracks individual farmers,

- Locks voucher to NRC and Province/District/Camp,
- Requires/logs in agro-dealer certification of farmer top-up payment,
- Provides proof of redemption and delivery of input to farmer,
- Provides a low cost and rapid transaction route for agro-dealer payment from the subsidy account
- ‘Real-time’ process means no delays in operation,
- Multiple ‘real time’ reporting possibilities allow full control at any point in time
- Fully auditable process

**Benefits:** Developmental benefits of the program include:

- By “crowding in” private input dealers, it increases competition in the system and will, over time, bring down prices as well as the cost of doing business
- The fact that farmers receiving support are clearly identified “at source” through a careful registration system allows targeted and specific training by both public and private sectors actors
- Donor and MACO funding can target these farmers in specific training and productivity enhancement support activities.

**Limitations and Risks with Vouchers:**

- The face value on the voucher should ideally be in monetary terms instead of fixed quantity of inputs, but this valuation determination requires upfront assessments by location and training for farmers and agro-dealers if the face value is allowed to vary by location.
- Timely announcement of the number and value of vouchers to be distributed per District and Camp must be done in order for private fertilizer value chain participants and farmers to plan for a coming season. The risk of late announcement by government can make it difficult for private dealers to procure needed stocks.
- The government master “subsidy account” must be funded and remain liquid as soon as vouchers are issued to farmers so that when they acquire supplies, agro-dealers can quickly deem the vouchers and recover their operating funds for input stock replenishment.
- Paper vouchers are sometimes duplicated, thus facilitating corruption of the system. Fortunately counterfeiting is easily controlled with the electronic voucher since verification is unique to each voucher and individual receiving it, and real-time fraud checks are automatically controlled by built-in data base internal consistency cross-checks.
- Government does not see physical stocks of inputs in warehouses under their control with a voucher system, and may need additional information from private firms that they are carrying necessary inventories or can quickly acquire these to be sold against the vouchers. Fortunately, the information data base to initialize and control the use of voucher can also be used as a management/implementation monitoring system to assure government that voucher use is progressing in a timely fashion, at specific Province, District and Camp levels.

**SUPPLEMENT 3. -ADDITIONAL INFORMATION**  
**BACKGROUND RESOURCES FROM THE ZAMBIA FSP REFORM STUDY TOUR**  
**– ALL DOWNLOADABLE**

**Resource Materials - Zambia Agricultural Fertilizer Programme Study Tour. Gaining Insights From on-going Reforms in Malawi, Kenya and Tanzania. MACO/ACF/FSRP**

Downloadable at : <http://www.aec.msu.edu/fs2/zambia/tour/index.html>

**Study Tour Orientation**

- **Description of Activities**
  - [Fert Study Tour ACF Concept Note 2008](#)
- **Participant List/Contact Information**
  - [Participant List](#)
- **Program Schedule**
  - Jan 14-17 Kenya; Jan 18-21 Tanzania; Jan 22-24 Malawi

**Cross-Country Materials [Top](#)**

- **Policy Briefs**
  - [Fertilizer Subsidies and Sustainable Agricultural Growth in Africa: Current Issues and Empirical Evidence from Malawi, Zambia, and Kenya](#). MSU Policy Synthesis #83, Oct 2008.
  - [FANRPAN Potential For Input Voucher Systems PolicyBrief Nov2007.pdf](#)
  - [WDR 2008](#) - New Approaches to Input Subsidies
  - [AGRA Agro Dealer Development Programme](#)
  - [AGRA Soil Health Programme Africa](#)
- **Papers**
  - [Fertilizer Subsidies and Sustainable Agricultural Growth in Africa: Current Issues and Empirical Evidence from Malawi, Zambia, and Kenya](#). Isaac Minde, T. S. Jayne, Joshua Ariga, Jones Govereh, and Eric Crawford. Report prepared for Re-SAKSS Southern Africa, November 24, 2008..
- **News Reports**
  - [ICRAF Food Crisis Soil Fertility Statement-FINAL](#)
  - [Making Fertilizer Subsidies Work Long Term Tough](#) Dec2007
  - [McPherson Rabbinge Comments Subsidies Abuja 2006](#)
  - [Soil Fertility Futures Agriculture Debate](#)
  - [Soil Fertility Futures Agriculture Debate Draft Summary](#)
- **Tool Kits**
  - WB Fertilizer Toolkit: [http://www.worldbank.org/afr/fertilizer\\_tk/](http://www.worldbank.org/afr/fertilizer_tk/)

**Malawi Materials [Top](#)**

- **Policy Briefs**
  - [NRP 116 Lesson From Malawi Experience](#)
  - [Malawi Two views fertilizer support leisa\\_2008](#)

- [FANRPAN Abstract Malawi Voucher Report 2007](#)
- **Papers**
  - [Evaluation of the 2006/7 Agricultural Input Subsidy Programme, Malawi. Final Report.](#) School of Oriental and African Studies (SOAS), Wadonda Consult, Michigan State University (MSU), Overseas Development Institute (ODI). March 2008.
  - [Social Analysis of Malawi's Maize Marketing Reforms.](#) Final version: December 22, 2008. Report for the World Bank, Malawi by T. S. Jayne, Julius Mangisoni, and Nicholas Sitko
- **Presentations**
  - [Evaluation of the 2006/7 Agricultural Input Supply Programme.](#) Malawi Report conducted for the Ministry of Agriculture and Food Security by School of Oriental & African Studies (SOAS), Wadonda Consult ODI, Michigan State University (MSU). Lilongwe March 2008.
  - [Malawi's Maize Marketing System: A Rapid Appraisal Study.](#) By T.S. Jayne, Julius Mangisoni, Nicholas Sitko for discussion at World Bank Maize Stakeholders Seminar, Lilongwe, Malawi, December 8, 2008
- **News Reports**
  - [President Mutharika On Fert subsidy Aug\\_2008](#)
  - [Nyasa Times Oppositon On Fert Sept\\_2008](#)
  - [The Window on Malawi Food Shortage Oct\\_2008](#)
  - [Malawi AGRA Grant Agro dealers TheDailyTimes](#)

## **Kenya Materials [Top](#)**

- **Policy Briefs**
  - [Can The Market Deliver? Lessons From Kenya's Rising Use Of Fertilizer Following Liberalization.](#) Joshua Ariga and T.S. Jayne. July 2006. KePB 7.
- **Papers**
  - [Trends and Patterns in Fertilizer Use by Smallholder Farmers in Kenya, 1997-2007.](#) Joshua Ariga, T.S. Jayne, Betty Kibaara, and J.K. Nyoro. Draft For Review Working Paper XX/2008. October 2008
  - How High Are Rates of Return to Fertilizer? Evidence from Field Experiments in Kenya. Duflo, Esther, Michael Kremer, and Jonathan Robinson. 2008. AER 98(2):482-488. ( Not downloadable here due to AER property right )
- **Presentations**
  - [Trends and Patterns In Fertilizer Use in Kenya by Smallholder Farmers in Kenya 1997 -2007](#)
- **News Reports**
  - [KENYA Agro Dealer Grant News](#)
  - [Mbendi Japan Fertilizer Grant Kenya Sept\\_2008](#)
  - [KBC Govt fert subsidies next month Oct14 2008](#)
  - [allAfrica Kenya Maize Export Ban Oct2008](#)
  - [allAfrica Kenya Relief Low Fertiliser Costs Oct14 08](#)

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- **Policy Briefs**
  - [TAIP Brief](#)
- **Papers**
  - [TAIP Strategy 22 9 07 2](#)

- [tap conceptnote](#)
- **News Reports**
  - [CNFA Tanzania Agrodealer Strengthening Program \(TASP\)](#)
  - [ACT Press Release President Kikwete GreenRevolution](#)
  - [TAP Partnership web page](#)
  - [Agricultural Council of Tanzania - Web Page Home](#)

## **Zambia Fertilizer Materials [Top](#)**

- **Policy Briefs**
  - [MS Zambia Newsletter October 2008](#) - Fertilizer support is a subsidy disaster by Michael Muleba, Executive Director, Farmers Organization Support Program (FOSUP)
- **Papers**
  - [Agricultural Consultative Forum \(ACF\) Advisory Note on proposed reforms for the Zambian Fertilizer Support Programme.](#) 27 Feb, 2009
  - [FSP Internal Evaluation 2008](#)
  - [Fertiliser Report 4-08 CFU ZNFU](#)
  - [Chipata District Farmers Report on Findings of the Findings of the 2007/08 Fertilizer Support Programme](#)
  - [Fertilizer Support Assessment CSPR 2005](#)
  - [CFU Low Yields ZF 20.10.07](#)
  - [CFU Faidherbia Trials ZF 20 2.08](#)
- **Presentations**
  - [Empirical Information on Smallholder Maize Production and Fertilizer Use In Zambia.](#) Presentation at Fertilizer Support Programme Evaluation Kick-Off Workshop. Protea Safari Lodge, Zambia. June 25-26, 2008
  - [Impact Assessment Zambia Fertilizer Support Program](#) (FSP Briefing on Main Results World Bank Country Office, Lusaka. 23 March 2009.
  - [Fertiliser Support Programme: Implementation Manual for the S008/2009 Farming Season.](#) MACO
- **News Reports**
  - [Fertilizer Programme Difficulties News Clipping 2008/2009](#)

## **Zambia Smallholder Material [Top](#)**

- **Presentations**
  - [Targeting Challenges : Using Zambian Rural Household Data Sets to Inform The Process of Categorisation of Resource Poor Smallholder Farmers.](#) By the Food Security Research Project, Kafue Gorge ACF Sponsored Workshop, Aug 20-22, 2008.