

NGS Task Force

Sub Saharan Africa Challenge Programme (SSA CP) for Integrated Agricultural Research for Development (IAR4D)

**Title of project:
Multi Stakeholder Approach to Linking Technical
Options, Policy, and
Market Access for Improved Land Productivity in
the Northern Guinea Savannah Zone**



**Third Quarterly
NGS Report on the Implementation,
July 1st to September 30th, 2008**



**An International Center for Soil Fertility
and Agricultural Development**

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ACRONYMS

ABU	Ahmadu Bello University in Zaria
ADP	Agricultural Development Programme
CEC:	Cooperative Extension Centre of Makurdi University
FARA:	Forum for Agricultural Research in Africa
FEPSAN:	Fertiliser Producers and Suppliers Association of Nigeria
IAR:	Institute for Agricultural Research
IAR4D:	Integrated agricultural research for development
ICRA:	International Centre for Development Orientated Research in Agriculture
IFDC:	International Centre for Soil Fertility and Agricultural Development
IP	Innovation Platform
ISFM:	Integrated Soil Fertility Management
KKM PLS:	Kano-Katsina-Maradi Pilot Learning Site
LGC:	Local Government Council
M&E	Monitoring and Evaluation
NAERLS:	National Agricultural Extension Research Liaison Services
NAPRI:	National Animal Production Research
NGO:	Non Government Organisation
NGS:	Northern Guinean Savannah
OM	Organic Manure
PLAR	Participatory Learning and Action Research
PMEILAC	Participatory Monitoring & Evaluation, Institutional Learning and Attitude Change
RAAKS:	Rapid Appraisal for Agricultural Knowledge Systems
RP	Rock Phosphate

SSA-CP: Sub Saharan Africa Challenge Programme

TF: Task Force

TSBF-CIAT: Tropical Soil Biology and Fertility Institute of the International
Centre for Tropical Agriculture

UAM University of Agriculture Makurdi

Summary

This report highlights activities carried out by the NGS Task Force (TF) during the third quarter (1st July to 30th September) of 2008. The major activities concerned the continuation of the identification of potential actors at the grassroots level for the four IPs. Maize and legume, rice, Fadama vegetables and livestock are ongoing. Community analysis in vegetables and IAR4D villages has been conducted. The baseline study at household and village levels is completed. Training is organised for implementing actors in Participatory Learning and Action Research (PLAR) processes. Skills developed are used to conduct PLAR activities in the fields. Five experiments were set up for the maize IP, five for the rice IP and agronomic monitoring is going on. Farmer skills in soil fertility and integrated crop management are strengthened through specific training and mutual learning in the field especially for maize and legume and rice IPs. Appropriate tools have been developed to jointly monitor on farm experiments with farmers. Contracts with all partner institutions are signed and efforts during the next quarter will focus on training about the learning cycle in IAR4D and participatory value chain analysis for the implementing actors. We have realised that many researchers urgently need more skills in the IAR4D learning cycle to work effectively in the IPs. The skills will be used to immediately implement research activities. A particular emphasis will be put on the official setting up of the four IPs and their description.

I. Activities planned and results expected by the end of the reporting period

The table below synthesises the activities planned and results expected by the end of the reporting period;

Table 1: Activities planned and results expected for the reporting period

Outputs	Activities planned	Expected results
1. Models for implementing IAR4D	<ul style="list-style-type: none"> Diagnosis of socioeconomic settings and networking for setting up innovation platforms (IP) 	<ul style="list-style-type: none"> Potential actors for the different IPs revisited
	<ul style="list-style-type: none"> Develop a mechanism to facilitate the functioning of the IP for increased knowledge generation, sharing and application 	<ul style="list-style-type: none"> Draft paper
	<ul style="list-style-type: none"> Assess learning needs of IP actors (implementing partners) to support collective action 	<ul style="list-style-type: none"> Report on training needs assessment
	<ul style="list-style-type: none"> Develop guides for Participatory Monitoring & Evaluation, Institutional Learning and Attitude Change (PMEILAC) 	<ul style="list-style-type: none"> Tools and methods for PMEILAC
2. Innovations on interventions to improve crop and livestock systems based on IAR4D principles achieved	<ul style="list-style-type: none"> Inventory of soil, water and crop management technologies, and germplasm (Technical workshop to finalize identification of concrete research area in the communities for Fadama vegetables IP only) 	<ul style="list-style-type: none"> Report on available options for soil, water and crop management technologies, documented Mini workshop report complete and check list of methodology available
	<ul style="list-style-type: none"> Development of framework for Participatory Action research with the IPs 	<ul style="list-style-type: none"> Draft paper

	<ul style="list-style-type: none"> Participatory action research to develop integrated innovations for improved production and incomes for Fadama rice farmers (Carry out participatory diagnosis with rice farmers, set up adaptive trials). 	<ul style="list-style-type: none"> Report on the participatory diagnosis at community level completed Report on participatory experimentation design with rice farmers completed
	<ul style="list-style-type: none"> Participatory action research to develop integrated innovations for improved production and incomes for Fadama vegetables farmers (Carry out participatory diagnosis with vegetables farmers) 	<ul style="list-style-type: none"> Report on the participatory diagnosis at vegetables farmers community level drafted
	<ul style="list-style-type: none"> Participatory action research to develop integrated innovations for improved production and incomes for maize and legumes farmers (Carry out participatory diagnosis with maize and legumes farmers, set up adaptive trials). 	<ul style="list-style-type: none"> Report on the participatory diagnosis at maize and legume farmers community level completed Report on participatory experimentation design with maize and legume farmers completed
	<ul style="list-style-type: none"> Participatory action research to develop integrated innovations for improved feeding systems and incomes for livestock farmers (Carry out participatory diagnosis with livestock farmers) 	<ul style="list-style-type: none"> Report on the participatory diagnosis at livestock farmers community level
	<ul style="list-style-type: none"> Development of methodology for inputs and outputs market studies 	<ul style="list-style-type: none"> Methodology document available
3. Effect of IAR4D on development impact relative to conventional ARD approaches established	<ul style="list-style-type: none"> Carry out baseline studies to measure the pre implementation status of key project indicators 	<ul style="list-style-type: none"> Household and plot levels data collection completed
	<ul style="list-style-type: none"> Develop a methodology (including impact pathway) to conduct an <i>ex-ante</i> analysis of the potential impacts of IAR4D in project area 	<ul style="list-style-type: none"> Methodology document available
	<ul style="list-style-type: none"> Monitor key indicators to assess the effects of IAR4D 	<ul style="list-style-type: none"> Detailed guides for regular monitoring developed

II. Research and project management activities carried out during the reporting period

NGS TF has implemented several activities as planned during the third quarter of this year;

Administrative and Coordination Activities

- NGS has furnished the office obtained from IAR and the facilities enabled IP actors to have a common meeting point to facilitate the coordination of research activities
- The leading institution of NGS TF has finalised the sub agreements with ILRI, TSBF CIAT, IAR, NAPRI, CEC UAM, ADP Kaduna and ADP Katsina. All the contracts are signed and fist instalment transferred to all these partners
- Discussion was made with ICRA (our TF member) so that they will contribute to skills development of the implementing actors in IAR4D learning cycles. Skills acquired will be used to facilitate the functioning of the 4 IPs

- The 'sensitisation' of the Chairmen of the Local Governments where our IPs are operational has started aiming at enabling them to play their policy role as members of our IPs and to facilitate project activities at the grassroots level

Research Activities and Workshops

As explained in the previous quarterly report, field activities with farmers in the IAR4D villages have coincided with administrative arrangements for project start up. The NGS TF has given priority to the activities that led to participatory action research with farmers in maize and legume and rice IAR4D villages. The intention was not to lose the rainy season for these crops. Paralleling this activity, potential actors for the different IPs were revisited. The community analysis and on farm experiments were necessary for the refinement of our IPs and to bring in farmer organisations at the grassroots level who are aware of what issue is at stake through their participation in the action research trials.

The next step is to organise a workshop of all potential actors to set up the Innovation Platform. At this occasion the farmers with whom the problem situation (soil fertility problems related to maize, rice, etc.) was made visible through the PLAR processes will be in a better position to discuss with the other actors at the workshop. It is also the occasion to define clear outcome challenges for farmers, input dealers (eg, FEPSAN), traders (market opportunities) seed companies, implementing actors. Progress markers of the outcome challenges will be set up to monitor the contribution of each actor at the IP level through time.

The NGS TF has designed a strategy to effectively monitor in a participatory way, the experimentation with farmers. Participatory Learning and Action Research (PLAR) training workshop was organised and a total of 29 participants from IAR ABU, NAPRI, NAERLS, ADP Katsina and ADP Kaduna were involved. At the level of the participatory trials shown in the tables below, the capacity of farmers was strengthened using the modules learned from the PLAR training.

Table 2: Modules introduced through maize and legumes action research trials

Participatory action research trials on Maize and Legume established in the IAR4D villages, Ikara LGA	Highlight methodology	Number of villages where the trials are established	Number of participating farmers	Modules introduced in the PLAR processes
1. Site specific fertiliser recommendations	<ul style="list-style-type: none"> • Nutrients omissions trials • Diagnosis of current farming practices 	3 3	30 30	<ul style="list-style-type: none"> • Farmer training workshop in fertiliser types identification in the maize and legume IAR4D villages
2. Selection of P sources for efficient legumes production	<ul style="list-style-type: none"> • Comparison of 4 P sources: Rock Phosphate (RP), TSP, SSP and DAP 	3	30	
3. Contour Ridging for sustainable maize and cowpea production	<ul style="list-style-type: none"> • Comparing contour ridging and farmers practices under maize and cowpeas and soyabeans 	4	10	

4. Deployment of sustainable <i>Striga</i> and soil management technologies: Variety & fertilisation management options	<ul style="list-style-type: none"> • Farmers' Variety + OM +MF • Tolerant Variety + OM +MF • Farmers' Variety +MF • Tolerant Variety +MF 	3	25	<ul style="list-style-type: none"> • Joint monitoring of maize crop performance with farmers using forms that are accessible for farmers
5. Intercropping for sustainable trigger and green water management	<ul style="list-style-type: none"> • Farmer maize variety intercropped with cowpea • <i>Striga</i> tolerant maize variety intercropped with cowpeas • Sole farmers maize variety • Sole <i>Striga</i> tolerant maize 	3	25	<ul style="list-style-type: none"> • Farmer training workshop farmers on <i>Striga</i> which is a serious problem in maize and legume IAR4D villages

OM = Organic Manure; MF = Mineral Fertiliser

Table 3: Rice action research trials

Participatory action research trials in (Fadama & Upland) Rice established in the IAR4D villages, Dandume LGA	Highlight methodology	Number of villages where the trials are established	Number of participating farmers	Modules introduced in the PLAR processes
1. Site specific fertiliser recommendations	<ul style="list-style-type: none"> • Fadama (seasonally flooded lowland) and upland soils • Nutrients omissions trials • Diagnosis of current farming practices 	3	58	<ul style="list-style-type: none"> • Farmer training workshop in Fertiliser types identification in the rice IAR4D villages
2. Participatory evaluation of contour ridging for sustainable rice production	<ul style="list-style-type: none"> • Comparing contour ridging and farmers practices under upland rice 	2	3	
3. Participatory evaluation of integrated weed management	<ul style="list-style-type: none"> • Pre emergence Oxadiazon fb post emergence • Pre-emergence Pendanitoolin fb post emergence • Hand hoe or cultivator • Farmer practices 	3	26	
4. Participatory evaluation of upland and Fadama rice varieties	<ul style="list-style-type: none"> • Fadama local varieties compared to improved Fadama improved varieties • Upland local varieties compared to improved Upland rice varieties 	3	7	<ul style="list-style-type: none"> • Joint monitoring of rice crop performance with farmers using forms that are accessible for farmers
5. Participatory evaluation of sowing methods	<ul style="list-style-type: none"> • Broadcast • Drill • Row planting 	4	7	

III. Results achieved during the reporting period

Results achieved during this reporting period are:

- Sub agreements with implementing actors completed and the first instalments of their respective budgets are already sent
- Community analysis completed in Fadama vegetables IAR4D villages (five villages) and the same activity is planned for the five livestock IAR4D villages for early October
- Capacity of implementing actors strengthened in PLAR processes and the skills are used by farmers to monitor the participatory experiments in the maize and legumes and rice IAR4D villages
- PM&E forms developed and used by participating farmers to effectively observe plant growth and monitor the experiments in rice and maize and legumes in the IAR4D villages (**see annex**)
- The baseline studies at household and village level completed and organisational set up to compute this data is going on

IV. Challenges and lessons learned during the period and risks that may affect future implementation of the project

- The third quarter coincided with the holiday period (July to August) for many partner institutions. As a consequence, our expectations and the volume of activities that were executed were not satisfactory
- Due to the high demand of staff to effectively monitor activities in the four IPs, the arrangement for providing Nationally Recruited Staff (NRS) must be accelerated. These staff should be available also for running IP activities but not only restricted to proof of concept. Baseline data computing will also start very soon

V. Actions taken or to be taken to resolve the challenges and risks

- Rigorous planning of activities is done to complete all the activities required before the end of the first year of the project
- The NGS TF will put emphasis on the mobilisation of actors like LG councils, farmer groups and associations, input dealers and traders associations to support innovation

processes in the IAR4D villages. An IP actors workshop will be organised before the end of this year

VI. Resources used during the period of reporting

See financial report

VII. Activities planned for the next quarter: 1st October to 31st December 2008)

Activities planned for the next quarter are synthesised in Table 4 below. According to the roles agreed upon, scientists will continue the documentation and the development of frameworks and methodologies for the research. Some other urgent activities that need to be completed are:

- At the output 1 level: Workshops will be organised with potential actors to set up the different IPs and to define outcome challenges (contribution of the different actors in the IPs). Training needs assessment will be done and the mechanism to facilitate the functioning of the IP will be developed
- At the output 2 level, participatory diagnosis for the Livestock IP will be completed. IP level market assessment and value chain analysis for targeted commodities will be done. Some of the RAAKS methodology will be used to do the market assessment
- At the output 3 level, IP description will be completed and the M&E plan implemented and shared with all the implementing actors

Table 4: Activities planned and results expected for the next quarter

Outputs	Activities planned	Expected results
1. Models for implementing IAR4D	<ul style="list-style-type: none"> • Diagnosis of socioeconomic settings and networking for setting up innovation platforms (IP) 	<ul style="list-style-type: none"> • Potential actors for the different IPs revisited
	<ul style="list-style-type: none"> • Develop a mechanism to facilitate the functioning of the IP for increased knowledge generation, sharing and application 	<ul style="list-style-type: none"> • Draft paper
	<ul style="list-style-type: none"> • Assess learning needs of IP actors (implementing partners) to support collective action 	<ul style="list-style-type: none"> • Report on training need assessment
	<ul style="list-style-type: none"> • Develop guides for Participatory Monitoring & Evaluation, Institutional Learning and Attitude Change (PMEILAC) 	<ul style="list-style-type: none"> • Tools and methods for PMEILAC
2. Innovations on interventions to improve crop and livestock systems based on IAR4D principles	<ul style="list-style-type: none"> • Inventory of soil, water and crop management technologies, and germplasm and livestock feeding strategies (Technical workshop to finalise identification of concrete research area in the communities for Fadama vegetables and Livestock IPs) 	<ul style="list-style-type: none"> • Report on available options for soil, water and crop management technologies, documented • Mini workshop report complete and check list of methodology available

achieved	<ul style="list-style-type: none"> • Development of framework for Participatory Action research with the IPs 	<ul style="list-style-type: none"> • Draft paper
	<ul style="list-style-type: none"> • Participatory action research to develop integrated innovations for improved production and incomes for Fadama rice farmers (Carry out participatory diagnosis with rice farmers, set up adaptive trials). 	<ul style="list-style-type: none"> • Report on the participatory diagnosis at community level completed • Report on participatory experimentation design with rice farmers completed
	<ul style="list-style-type: none"> • Participatory action research to develop integrated innovations for improved production and incomes for Fadama vegetables farmers (Carry out participatory diagnosis with vegetables farmers) 	<ul style="list-style-type: none"> • Report on the participatory diagnosis at vegetables farmers community level drafted
	<ul style="list-style-type: none"> • Participatory action research to develop integrated innovations for improved production and incomes for maize and legumes farmers (Carry out participatory diagnosis with maize and legumes farmers, set up adaptive trials). 	<ul style="list-style-type: none"> • Report on the participatory diagnosis at maize and legume farmers community level completed • Report on participatory experimentation design with maize and legume farmers completed
	<ul style="list-style-type: none"> • Participatory action research to develop integrated innovations for improved feeding systems and incomes for livestock farmers (Carry out participatory diagnosis with livestock farmers) 	<ul style="list-style-type: none"> • Report on the participatory diagnosis at livestock farmers community level
	<ul style="list-style-type: none"> • Development of methodology for inputs and outputs market studies 	<ul style="list-style-type: none"> • Draft methodology document available
4. Effect of IAR4D on development impact relative to conventional ARD approaches established	<ul style="list-style-type: none"> • Carry out baseline studies to measure the pre implementation status of key project indicators 	<ul style="list-style-type: none"> • IP characterisation completed
	<ul style="list-style-type: none"> • Monitor key indicators to assess the effects of IAR4D 	<ul style="list-style-type: none"> • Indicators of M&E plan implemented

VIII. Acknowledgement of SSA CP donors and FARA

The contribution of FARA and its donors including the EU, DFID, the Italian government, and Norway is acknowledged hereby.

ANNEXES

PARTICIPATORY OBSERVATION FORM FOR RICE ON NUTRIENT OMISSION TRIAL: "QUESTIONING THE SOIL"

Date:.....

Village:..... Farmer's Name:

System (Fadama/Upland):..... Soil type:












Glad
Murna



Indifferent
Damadama



Sad
Bakin Ciki






INDICATORS Manu niya	SYMBOL Alama	Zero N Ba Uriya 	Zero P Ba Supa 	Zero K Ba taki ice 	NPK Akwai duka 	Control Ba taki 
Height Tsawo						
Vigor Kauri						
Leaf color Katar gaaye						
Panicles load Daukar nauyi						
TOTAL JIMILLA						

PARTICIPATORY EVALUATION FORM FOR RICE ON NUTRIENT OMISSION TRIAL: "QUESTIONING THE SOIL"

Date:.....

Village:..... Farmer's Name:

System (Fadama/Upland):..... Soil type:

	Zero N Ba Uriya 	Zero P Ba Supa 	Zero K Ba taki ice 	NPK Akwai duka 	Control Ba taki 
Evaluator 1					
Evaluator 2					
Evaluator 3					
Evaluator 4					
Evaluator 5					
Total					
Rank					

