New formulas for success are helping farmers to make vital choices

Validated RNRRS Output.

Ugandan extensionists and farmers are finding it easier to identify gaps in market information and skills, as well as options for filling them. Using information generated from farmers' own costs and revenues, they can calculate the initial investments, cash flows, speed of return to capital, risks, market access and environmental impact associated with an enterprise, making informed decisions on the crops to grow, buy or market. Fact sheets synthesizing this information were pre-tested with extension staff and farmer groups. The knowledge is applicable, with little adaptation, across sub-Saharan Africa and South Asia, especially in situations where farmers are in transition between subsistence and market-oriented agriculture.

Project Ref: **CPH33:**
Topic: **5. Rural Development Boosters: Improved Marketing, Processing & Storage**
Lead Organisation: **Natural Resources Institute (NRI), UK**
Source: **Crop Post Harvest Programme**

Research into Use
NR International
Park House
Bradbourne Lane
Aylesford
Kent
ME20 6SN
UK

Geographical regions included:

Uganda,

Target Audiences for this content:

Crop farmers, Processors, Traders,

Document Contents:

Description, Validation, Current Situation, Environmental Impact,

---

Description

CPH33

A.   Description of the research output(s)

1. Working title of output or cluster of outputs.
In addition, you are free to suggest a shorter more imaginative working title/acronym of 20 words or less.

Making informed choices: facilitating farmers' enterprise selection processes

Alternative title:

Gross Margin Analysis and Marketing Fact Sheets for farmer groups and extension staff

2. Name of relevant RNRRS Programme(s) commissioning supporting research and also indicate other funding sources, if applicable.

Crop Post-Harvest Programme

3. Provide relevant R numbers (and/or programme development/dissemination reference numbers covering supporting research) along with the institutional partners (with individual contact persons (if appropriate)) involved in the project activities. As with the question above, this is primarily to allow for the legacy of the RNRRS to be acknowledged during the RIUP activities.

R8421

Project partners were:
- **Barry Pound, Barbara Adolph and Uli Kleih; NRI, UK**
- **Dr Joseph Oryokot, Remigio Achia, Gloria Androa and James Kalange; NAADS, Uganda**

Project collaborators, all in Uganda, included:
- **Benson Taiwo, Geoffrey Okoboi, Emily Arayo and Shaun Ferris; FOODNET**
- **Esther Piracel, CEFORD**
- **Paul Nyende, AFRICA2000 Network**

*4. Describe the RNRRS output or cluster of outputs being proposed and when was it produced? **(max. 400 words)**. This requires a clear and concise description of the output(s) and the problem the output(s) aimed to address. Please incorporate and highlight (in bold) key words that would/could be used to select your output when held in a database.*

The three outputs, all produced in 2005, address the lack of **economic information** and **market information** available to **smallholder farmers** and **farmer groups. This** information is made available in **user-friendly formats** (Fact Sheets). One output (**Gross Margin Analysis** generated from farmer's own costs and revenues) relates to the lack of up-to-date, location-relevant information on the economic viability and risks of smallholder priority enterprises.

The Outputs are:
1. A working paper on the status of **agricultural market information** that brings together reports, manuals, guidelines and field-work on market information provision (Pound B, Adolph B, Kleih U and Manzi J. 2005.

The Status of Agricultural Market Information Provision in Uganda. Chatham: NRI). It identifies gaps in market information and skills, and options for tackling these gaps.

2. Gross Margin Analysis information for enterprises identified as priorities by Ugandan farmers, and training in its use. The Gross Margin data is used in combination with other economic considerations as shown below: This is termed *"Gross Margin Plus".*

GROSS MARGIN PLUS

A) Calculation of material costs and labour costs associated with the enterprise.
B) Calculation of revenues from products of the enterprise. B minus A gives the gross margin, or profit.

Also consider:
- The initial investment to start the enterprise: e.g. bee-hives, pineapple suckers etc
- The cash flow: e.g. dairy gives an even cash flow, while arable crops give one or two income peaks during the year
- Speed of return to capital: e.g. citrus takes several years before providing a return, whereas upland rice gives a return in the first year
- Risk: e.g. drought, pests and diseases are production risks. Market risks include price collapse, consumer rejection
- Market access: e.g. distance to market; ease of entry into the market
- Environmental impact of the enterprise

3. Ten **fact sheets** on different aspects of markets, **marketing and market information for extension staff and farmers**. These were pre-tested with extension staff and farmer groups and feedback incorporated accordingly. The topics covered were:
- **Farmer group organization**
- **Farmer group marketing: Why market together?**
- **Market intelligence**
- **Marketing chain analysis**
- **Market conditions and price determination**
- **Buyers**
- **Grades and standards**
- **Profit analysis**
- **Enterprise selection**
- **Gross margin analysis**

Outputs 2 and 3 are applicable, with minimal adaptation across **sub-Saharan Africa** and **South Asia,** especially in situations where farmers are in transition between subsistence and **market-oriented agriculture**.

5. What is the type of output(s) being described here?
Please tick one or more of the following options.

Product	Technology	Service	Process or Methodology	Policy	Other Please specify
X			X		

6. *What is the main commodity (ies) upon which the output(s) focussed? Could this output be applied to other commodities, if so, please comment*

The outputs are not focussed on any single commodity and can be applied widely across natural resource products (crop, livestock, forestry and non-agricultural products)

7. *What production system(s) does/could the output(s) focus upon?*
Please tick one or more of the following options. Leave blank if not applicable

Semi-Arid	High potential	Hillsides	Forest-Agriculture	Peri-urban	Land water	Tropical moist forest	Cross-cutting
X	X	X	X	X	X	X	

Applicable to all production systems

8. *What farming system(s) does the output(s) focus upon?*
Please tick one or more of the following options (see Annex B for definitions).
Leave blank if not applicable

Smallholder rainfed humid	Irrigated	Wetland rice based	Smallholder rainfed highland	Smallholder rainfed dry/cold	Dualistic	Coastal artisanal fishing
X	X	X	X	X	X	X

The outputs are applicable across farming systems, but are particularly applicable to small-holder farming situations that are making the transition between subsistence and commercial farming.

9. *How could value be added to the output or additional constraints faced by poor people addressed by clustering this output with research outputs from other sources (RNRRS and non RNRRS)? (**max. 300 words**).*

Please specify what other outputs your output(s) could be clustered. At this point you should make reference to the circulated list of RNRRS outputs for which proformas are currently being prepared.

The outputs described here relate to: a) the limited horizon of farmers' knowledge of markets and marketing and their poor access to effective and relevant market information systems, and b) the need to make up-to-date, location-relevant information on the economic viability and risks of different enterprises available to small holder farmers. Excellent complementary work has been done under the RNRRS and other programmes by:

- Uli Kleih on collective marketing and market information systems (e.g. "Advice Manual for the

Organisation of Collective Marketing Activities by Small-scale Farmers" and the "Together to Market" radio programmes)

- FOODNET and others on market information systems and training materials on markets and marketing (e.g. "A Marketing Facilitators Guide to Support Enterprise Development for Smallholder Producers, 2005, by Elly Kaganzi et al – supported by DFID and CIDA).

- Project commissioned by the Socio-economic Methodologies component of the NRSP in 1996 to investigate "Participatory Farm Management"

- The project "Linking demand with supply of agricultural information", which provides a bigger picture of the demand for and supply of information into which market information fits.

- In India the Participatory Market Appraisal Tool work complements these outputs

Projects for clustering include:

a) Linking demand with supply of agricultural information. R8429/R8281 (B Pound, NRI)
b) Market information tools. R8250 (U Kleih, NRI)
c) Market information tools. R7494. (John Orchard, NRI)
d) Participatory Farm Management methods for agricultural research and extension. R6730 (Mark Galpin, Peter Dorward and Derek Shepherd, University of Reading)
e) Participatory Market Appraisal Tool. R8084. (Robert Brook, SAFA, University of Wales and partners in India)
f) Farmers' Access to Markets. R8275. (Dr Andrew Dorward, Wye)
g) Market Information Tools. R7151 (Dr Nigel Poole, Wye)
h) Farmers' Access to Markets. R8274/R8498 (Dr A. Agona, KARI, Uganda)
i) Market Information Tools. R8422. (Mr LTH Nsemwa, UARI, Tanzania)

Validation

B.   *Validation of the research output(s)*

*10**. How** were the output(s) validated and **who** validated them?*

*Please provide brief description of method(s) used and consider application, replication, adaptation and/or adoption in the context of any partner organisation and user groups involved. In addressing the "who" component detail which group(s) did the validation e.g. end users, intermediary organisation, government department, aid organisation, private company etc... This section should also be used to detail, if applicable, to which social group, gender, income category the validation was applied and any increases in productivity observed during validation **(max. 500 words)**.*

The first output of the project was a **working paper** on the status of agricultural market information, with particular reference to Uganda. This drew on international literature and recent experience with different types of agricultural market information (farmer networks, FOODNET market information systems, tele-centres etc). It also drew on project surveys of the status of agricultural market information systems in two pilot Districts of Uganda (Arua and Tororo). Drafts of the paper were commented on by marketing, research and development specialists

from FOODNET, NARO, NAADS, Africa2000Network, APEP and the Ministry of Agriculture. The final paper was validated by the main project partner, the National Agricultural Advisory Service (NAADS).

The paper was also presented and discussed at a **stakeholder workshop** in September 2005 that included the organisations mentioned above, plus private service providers, representatives of farmer groups, radio stations, local government and the private sector. Aspects of the paper were used to identify priorities for addressing the lack of relevant market information for emerging commercial farmers.

The priorities included the need for a practical method for identifying the economic "best-bet" enterprises for farmers. **Gross Margin Analysis** was chosen as it uses information that farmers have readily to hand (costs of production/marketing and revenues from products). The enhanced GMA process (dubbed "Gross Margin Analysis Plus") was validated by NGOs, NAADS and local government staff in two pilot Districts of Uganda. Some 40 GMAs were conducted with farmer groups, using their knowledge to provide all the input data. The method proved robust across different parts of Uganda and across different types of enterprise (crops, livestock, tree nurseries etc). Farmers understood the results and their implications for looking carefully at both costs and revenues in their quest for profit and the sustainability of their farms. Production officers, agricultural extension staff and NGOs found the method to be very useful in providing locally-relevant, up-to-date information that is useful in assisting farmers to choose viable enterprises, and also in developing strategies for profitable production systems in their Districts.

Ten fact sheets on different aspects of Markets, Marketing and Market Information were produced in a partnership between international researchers and local practitioners. The draft fact sheets drew on recently produced manuals and guides. The draft fact sheets were validated by local FOODNET staff through a rigorous process of **testing in workshops** in three pilot Districts with groups of extension staff (private and government), NGOs and representatives of farmer groups.

11. *Where and when* *have the output(s) been validated?*

Please indicate the places(s) and country(ies), any particular social group targeted and also indicate in which production system and farming system, using the options provided in questions 7 and 8 respectively, above ***(max 300 words)****.*

All three outputs have been validated, during 2005, in different locations (Arua, Tororo and Mukono Districts - representing different ecological and institutional situations) in Uganda. The outputs are very robust, and are not specific to farming systems or commodities.

However, they are **targeted to smallholder farmers (men and women; individuals or groups) who are starting on the transition from a mainly subsistence agriculture that is mainly influenced by local commodities and markets, to one that is more influenced by wider market and marketing opportunities.**

In general these are the economically active poor and medium-wealth categories, especially those who can organise themselves into groups to learn from each other and act collectively where there is an advantage to do so.

Current Situation

C.   Current situation

12. ***How and by whom*** *are the outputs currently being used? Please give a brief description **(max. 250 words)**.*

The Ugandan Ministry of Agriculture, Animal Industries and Fisheries (MAAIF) has used the Market Information Working Paper to develop policy within MAAIF (personal communication from Martin Fowler, adviser to MAAIF). In addition, the working paper was copied by MAAIF to various project-related people (e.g. Danida - ASPS). Dr Shaun Ferris (IITA/FOODNET) also used the working paper in a recent MIS consultancy (ASPS funded) to propose a revitalised national Market Information Systems programme for Uganda.

The Gross Margin work is being used by MAAIF as background information and evidence base for the further development of the use of this tool within the regular work of this Ministry in Uganda.

The Ugandan National Agricultural Advisory Services (NAADS) has found that in new Districts and sub counties, the NAADS coordinators do not know what to do in the first year. The approach of farmer demand driven services is still new and therefore they have no experience of how to go about it. The District technical staff and private service providers of NAADS have therefore used the Fact Sheets as a very timely guide.

At farmer enterprise selection, no one previously used Gross Margin Analysis to determine the profitable enterprises. Farmers ranked enterprises based on limited experience. The Fact sheets are being used by service providers to facilitate an informed process with farmers so that they can chose enterprises that are environmentally friendly, economically profitable and carry low market failure risks.

13. ***Where*** *are the outputs currently being used? As with Question 11 please indicate place(s) and countries where the outputs are being used **(max. 250 words).***

The National Agricultural Advisory Service staff at District and sub-county level in several Districts of Uganda use the fact sheets during Farmer Group Development, Enterprise Selection and Group Marketing.

Subject Matter Specialists at District level in Uganda find the Fact Sheets very handy to refer to; they guide them to give informed and appropriate advice to the private sector, investors and businessmen / women who often consult them on the profitability and marketability of various enterprises.

The Private Service Providers and NGOs, who are responsible for facilitating the selection of profitable and marketable enterprises, use the methods given in the Fact Sheets – e.g. to calculate and compare Gross Margins.

The farmers are keen to follow the different types of market information, market chain analysis and how they can compute profit. This helps them to make informed decisions on the enterprises to grow, buy or market.

The above uses of the Fact Sheets and Gross Margin Analysis Plus have been spearheaded in Arua and Tororo

Districts, but are now spreading to other Districts of Uganda.

*14. What is the scale of current use? Indicating how quickly use was established and whether usage is still spreading **(max 250 words).***

The project only finished in December 2005, which is also when the Fact Sheets and the final version of the Gross Margins Plus methodology were published. Both were quickly taken up by the Ministry of Agriculture, Animal Industries and Fisheries, and by NAADS, where they are in use at the field level in several Districts – but also, more importantly, at the policy level. Through influence on decision-makers in both those country-wide institutions it is likely that they will spread quickly within the country.

The Fact Sheets are very useful during the stage of farmer group, parish and sub county level enterprise selection. As soon as they were released in January 2006, copies were circulated to all the relevant Subject Matter Specialists at the District and for personnel at sub county level. In addition, they were published on the NAADS website at http://www.naads.or.ug/publications.php.

The Fact Sheets are widely used; frequent requests are received from farmers for more copies so that they can easily access information for their own use and benefit. There is a great demand from the Sub County Coordinators and Private Service providers. As the number of Farmer groups and participating Sub-Counties increases, the technical staff and personnel will continue to use the guidelines.

*15. In your experience what programmes, platforms, policy, institutional structures exist that have assisted with the promotion and/or adoption of the output(s) proposed here and in terms of capacity strengthening what do you see as the key facts of success? **(max 350 words).***

The project worked in very close partnership with the National Agricultural Advisory Services (NAADS). This is a very influential programme that aims to cover the whole country, and is also the location of the Secretariat of the Sub-Saharan Africa Network for Agricultural Advisory Services (SSANAAS) which has started to be influential in spreading good extension practice throughout sub-Saharan Africa. NAADS has excellent annual review processes, during which good practices are identified and spread throughout the organisation and incorporated into its "Implementation Guidelines". NAADS is thus a powerful platform for promotion and uptake.

Farmer and local government structures at parish and sub county levels have popularised the use of the Outputs. NAADS at National level was supportive in the printing and dissemination of the information.

In addition, the project collaborated with a range of other organisations in the development of the outputs. In particular it worked with two NGOs (CEFORD and Africa2000 Network), Tororo Local Government, private service providers and the market information network FOODNET. The last mentioned, FOODNET, is linked to IITA and works throughout sub-Saharan Africa. Again there is potential for wide promotion.

The main agricultural policy document of the Ugandan government is the Plan for the Modernisation of Agriculture, which sees the commercialisation of agriculture as the engine driving the whole Ugandan economy. Practical methods to assess markets, marketing strategies and the choice of profitable enterprises (the subjects of the Outputs described here) are key to achieving the commercialisation of agriculture.

Workshops were held with service providers, NAADS coordinators and researchers in two Districts of Uganda as part of capacity development carried out by the project. Such workshops, based around the Fact Sheets as simple training guides, need to be replicated widely within Uganda and, with suitable modifications, elsewhere in Africa. The experience of those that have already used the guidelines in practice needs to be incorporated into these training workshops.

Environmental Impact

H.   Environmental impact

24. What are the direct and indirect environmental benefits related to the output(s) and their outcome(s)? **(max 300 words)**. *This could include direct benefits from the application of the technology or policy action with local governments or multinational agencies to create environmentally sound policies or programmes. Any supporting and appropriate evidence can be provided in the form of an annex.*

The Gross Margin Plus output has the potential to assist farmers, extension staff, investors and donors to improve the efficiency of production (and through this the efficiency in use of natural resources) by assisting them to chose viable enterprises. The tool also assists farmers to see where inputs (seed, fertiliser, pesticides, feed etc) can be profitably employed to increase production and net revenues. The correct use of the tool will lead to the efficient, effective and safe use of inputs.

The Gross Margin Plus tool also provides an opportunity to look at the longer term impact of each enterprise on the environment (e.g. what impact does tobacco production have on tree cover in the long term, and how might that impact on the community).

The marketing fact sheets will help farmers to market their produce profitably, encouraging commercial agriculture that allows investment in soil and water conservation and other environmentally beneficial practices. Collective marketing (and input procurement), which is the subject of one of the outputs, uses fossil fuel resources efficiently, reducing impacts on global warming.

25. Are there any adverse environmental impacts related to the output(s) and their outcome(s)? **(max 100 words)**

It is possible that use of the outputs described to improve income and access markets will lead to greater use of agrochemicals that boost productivity and profit, and transport to take surpluses to market. Agrochemical safety issues would then be more acute than at the low levels of use common to most sub-Saharan countries at present, while transport adds to pollution and climate change. These possible adverse impacts are balanced by the greater efficiency of production that the outputs will bring.

26. Do the outputs increase the capacity of poor people to cope with the effects of climate change, reduce the risks of natural disasters and increase their resilience? **(max 200 words)**