Agricultural Research and Extension Network

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From the AgREN Coordinator

The Future of AgREN

As most Newsletter readers will know, AgREN must find alternative sources of funding if it is to continue. The UK Department for International Development (DFID), which has generously supported AgREN and its predecessors, was unable to fund a proposal for a further three years of operation. This is a great disappointment, but it should not detract from the recognition that DFID has assumed the leadership in many activities for pro-poor rural development, and will certainly continue to do so. Donor priorities and management are always subject to change, and programmes and projects must accept this uncertainty.

Whether or not this is the last issue of AgREN will depend on our ability to identify alternative sources of funding. New support would have to be identified quite quickly if we are to maintain AgREN's publication schedule. But failure to publish at the end of 2005 would not necessarily spell the end of AgREN. The list of AgREN members is compiled and distributed every two years and the most recent edition has recently been sent out. This will help maintain contacts within the network for the near future. In addition, the tradition and formats of AgREN's papers and newsletter are widely recognised and it would be possible to revive them fairly quickly. However, we must be aware that even a brief pause will significantly affect the chances of AgREN's ultimate survival.

It is worth reflecting on the special qualities of AgREN (which can trace its lineage to predecessor networks stretching back to 1976.) In a world of development fads and sound-bite prescriptions, where the challenges of natural resource-based rural development are increasingly discussed in theoretical rather than practical terms, AgREN provides an important channel of communication for rural development practitioners. AgREN papers are an outlet for information that is too detailed (and insufficiently 'promotional') for most magazines and websites on rural development; and too practical (and cautious of theoretical statements) to be acceptable in most academic publications. The only bias of AgREN papers is towards the value of field-level information; the papers represent an eclectic range of viewpoints and ideologies, but the AgREN 'brand' is associated with honest, objective reflection on rural development experience.

AgREN has continued to distribute papers in hardcopy because many rural development practitioners still do not have adequate access to electronic media. The papers are individually bound (rather than being in a journal format) to encourage sharing according to varying interests. The newsletter focuses on brief reports of work in progress and announcements of events, websites and publications. The AgREN e-mail discussions have provided opportunities for an exchange of viewpoints on important rural development issues and have allowed members to participate in synthesising this information.

We must also be aware that the future of AgREN depends not only on financial support for the network's activities, but also on the contributions of its members. Rural development practitioners work under difficult conditions and face many pressures. There is often little time for writing, reading and reflection. When such opportunities arise, there are good arguments for devoting time to project reports, advocacy material for securing future funding, or academic journals, rather than writing for AgREN. For this reason, AgREN's strategy has become increasingly proactive in helping members identify and develop contributions for the network. But this strategy is only worth supporting if a significant number of practitioners are willing to analyse their experiences and write about them, and if others find this type of analysis a useful contribution to making their own rural development activities more effective.

As this newsletter goes to press, AgREN comprises a group of dedicated practitioners and nearly 30 years of experience in applying independent and objective analysis to the conduct of rural development. But at this point there is no clear way for continuing this experience. AgREN requires a champion, and the search for new sources of support may well involve some rethinking of AgREN strategies. But the basic dedication of AgREN remains to foster an exchange of open-minded reflection on field experience among practitioners. Of course such exchange exists without AgREN, but the network has made a significant contribution to strengthening these lines of communication. Thus whether AgREN's current funding situation represents a minor change of course or a significant impasse, it is inappropriate to make any farewells. As long as the type of dedication to responsible rural development practice evidenced by AgREN's members continues, then AgREN can legitimately claim a continuing presence.

Contributions from members

LearningWheel© – creating common frameworks for joint learning, action and knowledge management

'Lesson learning' has become a common practice to capture experiences in implementing projects and programmes. However, the lessons often end up not being used outside the interventions from which they emerged. In response to that gap, the LearningWheel methodology has been developed and tested in numerous cases over the last four years. It suggests a way to organise experiences and lessons in conceptual and operational frameworks which enable a wide-spread use of the conceptualised knowledge. The development of LearningWheels is a rapid way to tap and build on the knowledge and experience base of multi-stakeholder groups in workshops and create a common understanding of complex process-oriented development interventions.

Developing LearningWheels: From Practice to Concept

The LearningWheel methodology generates experience-based conceptual frameworks from practice, building on the lessons and success factors of practical case examples in an analytical and appreciative manner. In several analytical steps, workshop participants distil the success factors which were central to generate successes in different cases and experiences. Failure factors are equally considered. These are clustered into 'cornerstones' and systematised into a LearningWheel framework.

There are numerous initiatives where this methodology has been applied and guides have been written. Some examples of the application of the methodology include:

- Guide to Rural Economic and Enterprise Development (REED), a multi-donor initiative: http://www.gtz.de/agro-based-development,
- The INRM initiative of CGIAR: http://www.icarda.cgiar.org/INRM/INRM4_Site/INRM_All%20_2002.pdf),
- Guide to strategic planning in CGIAR: (http://www.worldfishcenter.org/Pubs/corporate/muddy_waters/muddywaters.htm),
- Guide to reform of rural/agricultural services: (http://www.gtz.de/agriservice/resources/topics/snrd_june2000.pdf).

The **'cornerstones'** of the LearningWheel frame are fundamentals of successful interventions which are in systemic interaction with the other fundamentals. Based on 'systemic intervention', each of the cornerstones need to be addressed as otherwise the weakest one becomes a threat to the whole approach. This does not mean that they all have to be actively addressed at the same time; some of them might be in place anyway, others which are identified as gaps can be addressed through linkages and partnerships. In this sense, the LearningWheel serves as a checklist which can also be used for self-reflection and evaluation of initiatives and for the design of new initiatives.

Each cornerstone is processed further in terms of its **'elements'**, **'key strategies & processes'**, and **'possible ways to implement'** within these strategies. These components are also distilled from different participants' experiences, which are often limited to some cornerstones, but the totality of participants enables the development of a table as a comprehensive frame. Possible links to available experiences and websites describing them help to make the whole framework an open-ended 'learning frame' for knowledge management in multi-stakeholder initiatives.

The participatory process of developing the LearningWheel is logically structured in an analytical manner. Often, individual cases have only lessons, success factors and promising strategies in some areas, but when analysing a variety of different experiences or cases together, a comprehensive framework can be developed.

Application of the LearningWheel: from concept back to practice

The utility of the conceptualised experiences is in its application to enhance better practice and learning. Some of the options where the LearningWheel framework have been successfully applied in practice are:

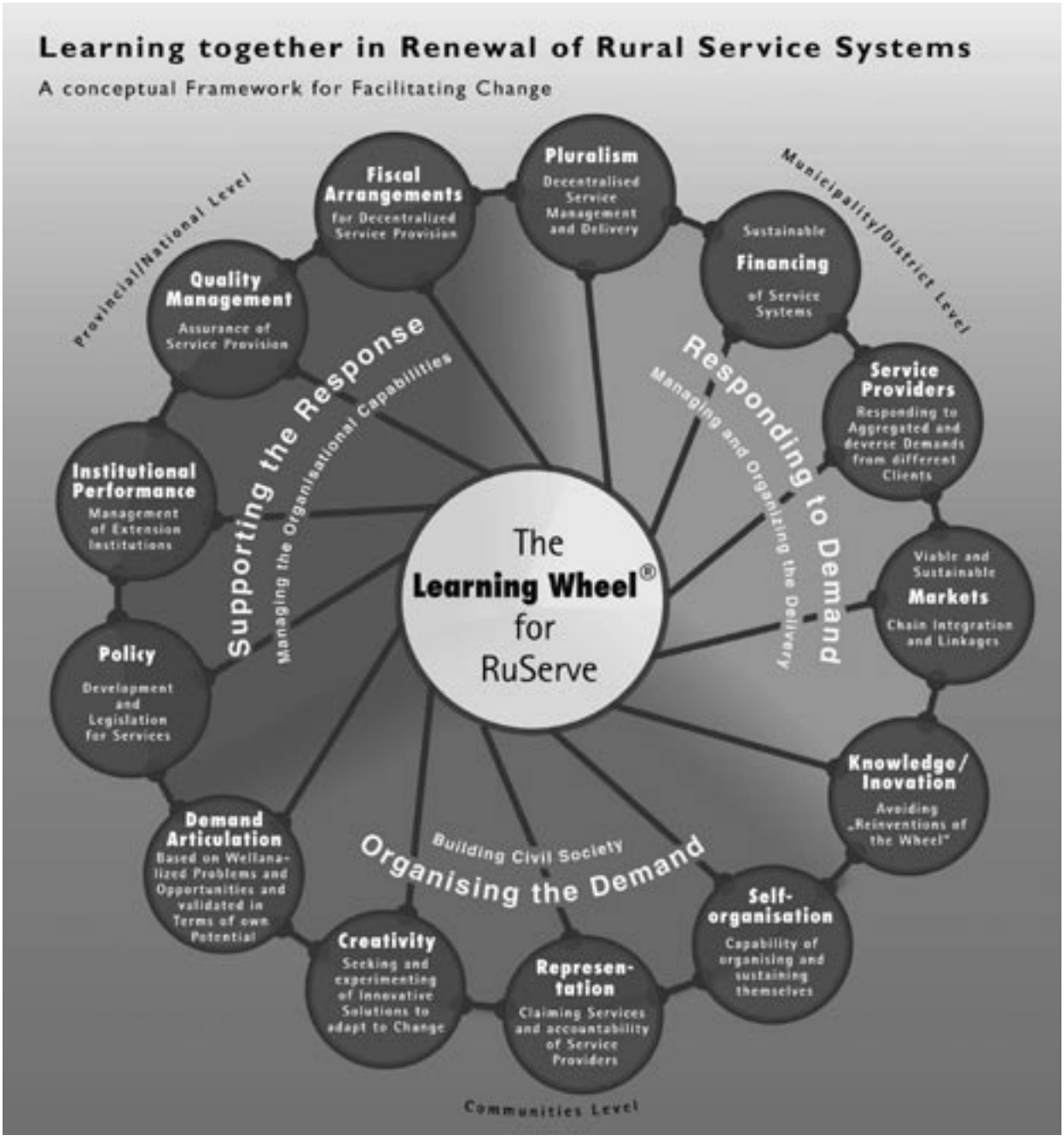
- **As a frame to design new programmes.** In setting up new programmes, the context can be analysed along the cornerstones together with the main stakeholders and the main areas of interventions of the projects can be defined on the basis of the joint analysis (e.g.: what exactly do we mean by this cornerstone, why is it important? is that cornerstone really in place?, how do we know?, if not, is it a hindrance now?, what do we need to do to avoid it becoming a barrier or to overcome the gap?).
- **As a frame to monitor and evaluate on-going programmes in a strategic way.** Implementation teams can use the frame to reflect on their intervention and analyse the state of the art for each cornerstone in regular self-reflection sessions. This helps them to reach a common perspective on where they are now, what they consider success and what the knowledge and design gaps are in their existing intervention.

- **As a knowledge management tool.** The lessons, experiences, methodologies and tools used to enhance each of these cornerstones can be collected, synthesised across programmes and put back into the framework (the tables) and developed a into a multi-stakeholder knowledge management system (e.g through interactive websites). It fosters an analysis of lessons and methodological knowledge within programmes and across agencies.
- **As a tool to create a common understanding and vision** of the way to implement certain types of interventions among a diverse range of stakeholders and partners involved in the implementation teams. A particular benefit is the creation of a common understanding of an implementation process as a result of the joint analysis on the basis of the cornerstones in the different contexts described above. It helps to learn together and to recognise the complexity and get a grasp of how to handle it.

Ultimately it does not matter at what stage of a programme or initiative the analysis based on the LearningWheel is carried out. Interventions or initiatives are considered as on-going learning processes among stakeholders who continuously try to improve their effectiveness. Regular reflections with the partners on the basis of the framework help to strengthen a dynamic problem and opportunity analysis. The flexible frame is a simple tool to help operationalisation of process and systemic intervention together with multiple stakeholders.

Example of LearningWheel for REED -Rural Economic and Enterprise Development
see http://www.gtz.de/agro-based-development

Example of the learningwheel for Rural Services Reform (Hagmann, forthcoming)



Further information

For more information about this methodology, contact the author of this article, **Dr. Jürgen Hagmann**, Organisational Development Consultant and Facilitator for Innovation / Change processes JHagmann@aol.com

The LearningSystem© – an alternative way of managing complex and dynamic development processes

The LearningSystem is an outcome-based planning and management system for innovation processes. It was experientially developed in a number of initiatives over the past four years, as a response to a lack of tools and methods to manage process-type interventions with an adequate quality and stakeholder involvement without being boxed and stifled by rigid linear thinking in logframes. Often 'process' and 'participation' have been used more as an excuse for weak planning and implementation and non-accountability for weak results, rather than meaning a true commitment to engage stakeholders in quality learning processes which enhance performance and outcomes. LearningSystem attempts to address these flaws through

- creating a strong vision/outcome/impact orientation (rather than results and activities) which serves as a reference frame for learning, reflecting and 'navigating' by implementing teams and stakeholders on their effectiveness;
- integrating planning and conceptual/approach development together with stakeholders into a coherent 'joint learning' approach towards impact and effectiveness;
- generating flexible conceptual frameworks (LearningWheels) with stakeholders for steering and monitoring of initiatives rather than through pre-defined results;
- integrating strategic monitoring, self-evaluation and knowledge management together with stakeholders as central elements of process management and continuous improvement of performance.

LearningSystem is grounded on two theoretical foundations. The first is systems thinking and systemic intervention which is reflected in the LearningWheel©. The second foundation is action learning through iterative cycles of action and reflection in implementation. While the LearningWheel provides the systemic frame within which the intervention navigates (the map), the action learning is a navigation instrument which enables one to explore the system (the compass).

The major steps of the LearningSystem methodology are:

1. *Development of a vision of the outcomes in terms of the desired changes in behaviour of the main players* (ultimately it is the actors themselves who make the development process work and the outside intervention can only trigger changes in the behaviour within the system)
2. *Clarifying the strategy to create the behavioural changes and the products, which are required to influence, and achieving the desired outcomes* (e.g. new approaches, best practices, successful cases etc.)
3. *Development of conceptual frameworks (LearningWheels) for the main products / approaches including the main learning / research questions* for which one is looking for an answer
4. *Setting up a consistent process documentation, monitoring and learning system,* which allows a quality systematisation and conceptualisation of the lessons and insights together with stakeholders and to assess impacts and outcomes
5. *Organising the implementation through structures /teams following the functional, integration and capacity requirements* (rather than starting from institutional or political requirements)

It is evident that this process management system is a tool to manage complex, knowledge-based interventions and innovation processes among stakeholders. It is not designed to plan and manage linear, hardware projects (e.g. like road construction, logistics etc).

LearningSystem was applied in a range of development programmes and also in research projects. It was facilitated in a flexible and adaptive way in order to take account of the specific requirements of different situations and contexts. Its major impact has been that programmes integrated more conceptual thinking in the way they steered their interventions towards impact and the quality of learning process implementation has increased. An important contribution of LearningSystem methodology is a set of commonly agreed quality criteria for assessing process-oriented projects in terms of inputs and outputs.

Further information

For more information about this methodology, contact the author of this article, **Dr. Jürgen Hagmann**, Organisational Development Consultant and Facilitator for Innovation / Change processes JHagmann@aol.com

Yam production: A promising sustainable livelihood among the elderly

In the Philippines, the Luzon Yam Network is promoting the production and processing of purple yam (*Dioscorea alata*) as part of a crop diversification strategy, especially recommended in resource-poor upland systems and among cash-constrained farmers. Yam is a traditional crop planted in the uplands, mostly as an intercrop with rice, bananas, fruit trees and other root and vegetable crops. It is regarded as a secondary crop but is an important source of cash as well as a snack food for the farm families. Furthermore, cakes and candies made from purple yam are also a delicacy among the Filipinos. Purple yam is used by household enterprises selling take-home regional food specialties, ice cream manufacturers for the domestic as well as export market, and instant food processors who cater to the growing demand of Filipino migrants. Processing companies' demand for purple yam is still growing and the market can still be expanded.

A husband and wife team carry out yam production in their backyard.

Among the Luzon Yam Network members who immediately implemented their action plans is the group of farmer settlers (Samahang Maghahalaman ng Kanlurang Poblasyon) in Pantabangan, Nueva Ecija coordinated by the Office of the Municipal Agrarian Reform. These are the families who were relocated in the early seventies when their old town gave way to the Pantabangan Hydroelectric Dam. Most of the original heads of families are now over the age of 50, but they enthusiastically embraced yam growing, initially as a backyard crop or an intercrop in their tree farms, and as a household hobby. Training and clean planting materials (pre-sprouted yam sets) were provided to each beneficiary. The Don Mariano Marcos Memorial State University provided training as part of the package of planting materials bought from them.

After the first year, some farmers had expanded to planting yam in their swiddens, forest or tree farms and two of them also ventured into compost-making. (The compost is expected to be sold to the other yam growers.) None of the farmers had planned to sell all their harvest. The majority of the harvested tubers were pre-sprouted as sets for planting in their own farms, and the rest were sold to the Casecnan Power Corporation, to be distributed to another group of farmer-growers. The proceeds from the sale of the yam sets will serve as the initial capital share in a cooperative undertaking of the first group of yam growers. The availability of the planting materials, the low labour and cash input requirement for the crop, the shared management experience in getting a high yield, and promising market offers were the factors that encouraged the group members to sustain or expand production.

Based on the crop performance and management experiences of some of the group members, the farmers had harvested an average of 2.67 kg of tubers per hill; they also harvested aerial tubers that they consumed or re-planted. Very few of these farmers hired labour. On average, production required 136 person-hours to dig, plant, take care and harvest 100 hills of yam. The majority used dried or composted leaves or cow manure as fertiliser, with some of them adding a little 14-14-14 NPK. The farmers may not get rich from taking care of the few yam plants, but the additional cash and food is more than enough reward for the extra-time spent in yam growing.

Further information

Betty Gayao
Root Crops Center
Benguet State University
La Trinidad, Benguet
Email: btgayao@mozcom.com

Video self-training methods: Its effectiveness in disseminating agricultural information to rural farmers in southwest Nigeria

Video as a medium of disseminating agricultural information for the purpose of training, entertaining, educating, situation analysis and advertising has been practiced in many developing countries in Latin America, Asia and Africa. In Nigeria video has been used by some extension organisations to stimulate the adoption of technologies by farmers. The video self-training method is innovative and cost-effective method of training many farmers quickly with minimal distortion of facts. This method involves packaging agricultural information in videocassette in a culture-specific, farmer-participatory and farmer-friendly way.

The agricultural information could be presented in varying styles such as demonstration, interviews, documentary, discussion, or real-life events. The video cassette is sent to the farmer-groups that watch the farm practice on the television in a video-viewing centre. In the absence of the extension agent, the farmers (who have been trained) operate the video cassette player and television, and generate discussion about the subject matter they had watched. Feedback is received by the extension organisation via audio cassette or by personal contact when the extension agent pays his regular visit.

The method is a form of distance learning technique. Communication may be through computers, print media, teleconferencing, television broadcast or video.

A study was carried out in Southwest Nigeria to examine the effectiveness of this method and the perception of the farmers and extension agents. The rationale for introducing the video self-training method is the low extension agent to farm family ratio in Nigeria, low funding and inadequate disbursement of allocated resources to the extension service, the field and low level of technical competence of the extension agents in some states.

Quasi-experimental pre-test/post test control group design was used in examining the effectiveness of the method. Sixty farmers each were selected from four states in Southwest Nigeria. They were split in three groups – video-taught, extension-taught, and no instruction.

Three agricultural practices were taught in the local language-Yoruba. They were construction of vegetable beds, transplanting of ornamental plants and spraying insecticides with knapsack sprayer. The scores showed that there was no significant difference in the performance of the video-taught and extension agent-taught groups.

A questionnaire found out that farmers have favourable perception about the video self-training method of disseminating agricultural information, while the extension agent were not favourable disposed to the method.

In the past five years, a series of research studies has been carried out on the video self-training method in teaching students in the school system in Lagos State, at varying levels primary, secondary and tertiary. Similar results were found. The group taught by the teacher performed equally as well as those taught via the video self-training method.

It was recommended that the local government should set up video viewing centres in each community for farmer groups to receive agricultural instruction and other information. The farmers should manage the centre. Special training should be given in maintaining and operating the electronic equipment. A video production/editing centre should be established at the state headquarters where high quality messages can be packaged in collaboration with the specialists from various disciplines, extension agents and farmers.

Private sector participation is also suggested in view of the commercialization and privatisation of government agencies progress in Nigeria. The production of extension videos could be an income generation strategy.

In conclusion, extensive application of the video self-training method in the extension system in Nigeria will go a long way in reaching many more farmers with undistorted agricultural messages. It involves less extension personnel and it is sustainable since the end users are willing to be financially and morally committed to it.

Further information

Akin Omotayo, Professor, Department of Agricultural Extension and Rural Development, University of Agriculture, P.M.B. 2240, Abeokuta, NIGERIA. *Tel*: 234 8037223311
and
Isiaka B.T., Senior Lecturer, Department of Agricultural Education, Adeniran Ogunsanya College of Education. Otto/Ijanikin, P.M.B. 007, Festac Town Lagos State, NIGERIA.

Participatory Cocoa Video Project Ghana

Since mid-2003, the publicly and privately funded Sustainable Tree Crops Programme (STCP) and national partners have been developing a capacity to conduct cocoa Farmer Field Schools (FFS) in West Africa (including Ghana). The FFS activities help farmers base their actions on observations made directly in the cocoa farm. By acquiring an understanding of the interaction of environmental factors, pests and beneficial insects, farmers can avoid misuse of pesticides and exploit better pruning, shade and other non-chemical measures to ensure healthy trees.

However, it is time consuming and costly to provide the intensive training needed to implement a FFS programme on a wide scale. It costs money to provide close follow-up to FFS graduate farmers to consolidate their own knowledge and build their capacity to share this new knowledge with other farmers. How can the benefits of FFS be shared more effectively with farmers who have not attended FFS?

Visual media, particularly video or film, have the potential to reach many thousands of viewers. But visual media are not yet widely exploited as a means to provide farmers with trustworthy, detailed information about how other farmers have learned alternative ways to grow cocoa. It was decided to use the participatory video approach and engage farmers in their own communication process as a way to complement the cocoa FFS programme.

In 2004, in collaboration with local partners, a team including local media professionals, Cocoa Research Institute Ghana (CRIG), and STCP was assembled with the objective of assisting farmers from the pilot FFS to transmit their own messages and experiences to other farmers in the form of video.

The objectives of the project, which is financed by the industry and DFID, are:

- To identify, validate and screen farmer priority topics as pilot video episodes in a collaborative process between cocoa farmers and support organisations and media networks.
- To compare the impact of participatory video in reinforcing farmers' discovery learning of cocoa production topics and discovery learning principles with other information delivery and training methods.

In November 2004, following an inception meeting, a farmers' video crew was selected by other villagers at a former FFS village. In March 2005 the crew underwent training in making and editing video. Using their knowledge on what aspects could be filmed at that time of the year, the farmers' video crew selected pruning of old cocoa trees as the subject of the first video. This is an important core topic in the cocoa FFS. The crew shot sequences, recorded other farmers' testimonials, and edited the first rough version of their film.

Summary of recent progress

The farmers' five person video production crew (two women, three men) from Gyeninso in Amansie West near Kumasi, have shown dedication, enthusiasm and skill. Following their initial training in camera handling and video planning, they have worked quickly to capture footage and edit a 12 minute digital video on the topic of pruning of old cocoa trees for improved yield. The language is Twi, understood by a majority of cocoa farmers in Ghana, whilst an English script is also available. The production crew have been assisted by ANS Media of Kumasi and StratComm Africa of Accra, whilst contact with the farmers and access to the FFS curriculum has been facilitated by staff of the STCP pilot project.

A pre-test of the video, organised in the home village of the farmer video crew, was attended by the media companies, CABI, the farmers' video crew and other cocoa farmers. The video, in DVD format, was shown in the village church on equipment powered by a generator and owned by a local entrepreneur who shows entertainment films in the local villages. The rough edited version was also viewed by scientific staff at CRIG and by STCP project staff. Following this review of the video, a final version of the film will be ready by the end June 2005, incorporating changes and improvements suggested by viewers' comments.

The video work continues under DFID funding through a recent extension to the Cocoa IPM West Africa project (CPP/DFID). Additional videos on other cocoa related topics will be produced by the farmer team, a video utilisation strategy will be elaborated and, towards the end of the year, the impact on other farmers will be assessed.

Perspectives

Visual media such as video, particularly when made by farmers, are exciting and attract attention. The social and technical contexts that have inspired and informed the videos, the videos themselves, and the participatory nature of their production, all form an excellent point of departure for reflection not only on immediate agricultural practice but also on development communication, policy issues and potential solutions. As the cocoa videos develop, attention will be given to opportunities and options to use participatory video approaches as an important catalyst for dialogue around issues of sustainable cocoa production.

Further information

N Q Nathaniels
c/o CABI Bioscience, UK Centre, Bakeham Lane, Egham Surrey, TW20 9TY, UK. *Tel*: 44 (0) 1491 829000, *Fax*: 44 (0) 1491 829100, *Email*: n.nathaniels@cabi.org or ntavala2000@yahoo.

Reviving a forest-based enterprise: Promotion of lac cultivation in Madhya Pradesh

Much of India's rural population faces poverty and an eroding natural resource base. Despite the best intentions of initiatives such as Agenda 21 of the 1992 Earth Summit, very little has been done to protect or enhance the livelihoods of those people who depend on natural resources. The situation of many forest-dependant indigenous groups in the state of Madhya Pradesh (MP) is particularly challenging. Their rain-fed farming often fails to produce enough food to meet annual household requirements, forcing them into seasonal migration and the unsustainable exploitation of forest resources.

A recent initiative to revive a traditional natural resource-based enterprise in Shahdol District of MP offers an example of an appropriate intervention to build sustainable livelihoods. The initiative involves the cultivation of the minute insect (*Kerria lacca*) that produces lac, a resinous secretion used in the manufacture of shellac. The insect feeds on the sap of specific host trees and secrets a resin that can be collected and processed. Tribal communities in Shahdol have practised lac cultivation for centuries. Originally the lac was traded over considerable distances, but in 1903 the local Rewa Shellac factory was established, where 40 ovens were kept on for 24 hours a day to purify raw lac and manufacture shellac. The factory employed hundreds of workers. The increasing availability of synthetic substitutes led to the decline of the local industry and the closure of the factory in 1961.

Disappointed at failing to convince farmers in Antara village to give up the felling of Palas trees (*Butea monosperma*), the matter was discussed with the late Ram Manohar Patel, a villager in his nineties. Patel suggested the promotion of Lac cultivation on Palas trees to check its felling. Brood lac was then brought from neighbouring Chhattisgarh State of India to establish in Shahdol.

Lac production is a complex process, involving considerable local organisation and knowledge. The host trees must be carefully pruned each year to obtain the maximum number of succulent branches. In previous times, an official known as the lac *Mukkadum* had responsibility for clusters of five or six villages and reported anyone damaging Palas trees. The *Mukkadum* was also responsible for coordinating the inoculation process, where the crawling insect larvae are introduced to the branches of the host tree; these brood lac are raised in a separate nursery. The crude harvest must be properly dried and then sold as raw lac to agents who in turn sell it to shellac factories. All of these skills and connections had to be revived if the local lac industry was to recover.

The Shahdol KVK initiated intensive training in lac production, with input from the Indian Lac Research Institute (ILRI), Ranchi. A major challenge for effective training was the fact that activities organised at district headquarters were out of reach for most resource-poor villagers, who had to walk long distances. Thus collaboration was initiated with local government and civil society organisations to establish village-level training activities. Other activities were supported, such as farmer fairs, workshops, and visits by farmers to lac-growing areas to encourage diffusion of the enterprise. Many of these activities were supported by a range of grassroots institutions, watershed projects, middle schools, and government departments, who saw the promotion of lac cultivation as an important contribution to rural livelihoods. Progress was enhanced by a decision of the Shahdol District Planning Committee (DPC) to include support for lac cultivation among its development priorities.

The development of backward and forward links is also crucial. The provision of brood lac is an important consideration, and initially contacts had to be made for supply of brood lac from distant sources. As experience grew, certain groups began to establish their own brood lac nurseries that could serve local producers. Another important consideration is the marketing of the raw lac. The increased local production has led to the emergence of groups who buy raw lac for sale to shellac factories in Maharashtra and West Bengal.

The success of the endeavour has spread far beyond Shahdol to include 19 districts in MP. In August 2004 various local lac-producing groups formed the Central Indian Lac Growers Federation. The reinvigoration of lac production in MP has been accompanied by a significant increase in raw lac prices (from Rs35 per kg in 2000 to Rs110 in 2004). Signs of increasing prosperity from participation in lac cultivation can be seen in the increased well-being of lac growers and the growth of entrepreneurial skills.

Further Information

Dr Moni Thomas
Krishi Vigyan Kendra
Shahdol 484001
Madhya Pradesh
INDIA
Email: moni_thomas@rediffmail.com

A homegrown cure for malaria. Curing malaria using a special variety of the annual shrub, *Artemisia annua*

The World Health Organization (WHO) recently ranked Artemisinin-based drugs as the top defense against malaria, an illness that claims millions of lives each year. Although highly effective, these treatments remain too expensive for many who live in the tropics, where malaria is endemic.

Luckily, there is a powerful natural alternative. Published scientific studies show that the levels of artemisinin derivatives in the blood are high enough after drinking artemisia tea to treat malaria. Another recent study found that the plant's flavonoids enhance artimisinin activity, making the tea sometimes more effective than conventional drugs and decreasing the chances of drug resistance.

Ms Helen Meyer, a nurse operating nine mobile health clinics in rural Mozambique, is using the bitter tea made from the dried leaves of Artemisia annua. Even in treating drug resistant malaria, she has found the artemisia tea effective, "If you drink the tea, you feel better after the first day. Other medicines take a few days."

The World Agroforestry Centre (ICRAF), recognising potential problems with Artemisia monotherapies, is working to combine it with indigenous herbal remedies made from other anti-malarial trees to produce an herbal combination therapy (HCT).

Making medicine using vegetative propagation

Establishing cultivation of the highly coveted woody shrub on small-scale farms to satisfy home use and market needs is critical.

Two years ago, ICRAF began growing a special hybrid of Artemisia, A-3, with seed provided by the Pressure Group on Action for Natural Medicines (Anamed).

A-3 is adapted for warmer climes. Where, as wild varieties of Artemisia remain small in the tropics, A-3 can reach heights of 3m and contains 20 times more artemisinin.

ICRAF is facilitating the broad propagation of A-3 by teaching thousands of farmers how to cultivate Artemisia from stem cuttings. The programme has extended to four districts in Tete Province – Angonia, Moatise, Tsangano and Makanga – located in North Western Mozambique.

Dubbed vegetative propagation, this technique is favoured because of the difficulty in growing plants from the tiny seeds. Just one gram of seed contains an estimated 12,000 seeds, each seed weighing a scant 0.07mg.

Dozens of Artemisia plants can be propagated from a single stem cutting. This makes for a lot of cheap and effective medicine – according to Anamed trials, one plant can cure up to six malaria patients.

Saved income and fresh funds

In addition to curing malaria at home, Artemisia treatments create big savings at the pharmacy for cash-strapped farmers and generate much needed income from selling Artemisia home remedies.

Harvesting and air drying the leaves, as well as the production of medicines is a straight forward, non-labour intensive project. Even after three-years, dried leaves retain practically 100 percent of their artemisinin content, suggesting that under proper conditions Artemisia medicines can be stored for a long time.

For both the practitioners of traditional medicine and the pharmaceutical companies, access to the plants is the biggest barrier to using Artemisia to cure malaria. When asked about the scale of Artemisia farming in Mozambique, Dr Patrick Matakala, Director of the ICRAF Southern Africa Regional Programme, replies, "I wouldn't call it large scale production for profit yet."

But for the ambitious farmer, there will certainly be a market. WHO estimates that of the 40 countries – 20 in Africa – using Artemisinin-based drugs, five are expected to have shortages due to lack of raw plant extracts, including Mozambique.

In the meantime, this remarkable shrub is saving the lives of those most vulnerable to malaria and promises to provide income through the sale of medicines in local communities.

Further information

Rachel Rumley
Communications Unit
The World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES
PO Box 30677-00100
Nairobi
KENYA
Tel: 254 20 722 4130 (Direct), 254 20 722 4000 (Operator),
Fax: 254 20 722 4001
Email: r.rumley@cgiar.org
Website: www.worldagroforestry.org

New partnerships for agricultural innovation: Fostering win-win relationships between agribusiness and family farms in West Africa

The Sahel and West Africa Club (SWAC) is attached to the Organisation for Economic Co-operation and Development (OECD) and has a Secretariat based in Paris. It plays a bridging role between West Africa and OECD Member countries on priority issues facing the region in four core areas of which one is agricultural transformation and sustainable development. It works with a wide range of West African actors to increase awareness of dynamics of change and drivers of change for medium- and long term development of the region. The SWAC's work covers the 15 members of ECOWAS, Mauritania, Chad and Cameroon and aims to address the following overarching question: *Where and how will the 430 million West Africans live in 2020?* (see http://www.oecd.org/sah)

Agricultural innovation is essential for West African agriculture to respond to the need for increased agricultural production, productivity and incomes for the region's growing population. In 2003, at the request of West African partners, the SWAC Secretariat initiated a process of analysis, networking and strategic thinking on new partnerships to foster access to agricultural innovation in an initiative coordinated at the regional level by Dr. Zoundi of INERA, Burkina Faso. The Initiative has built on earlier work on the transformation of West African agriculture and the role of family farms. Case studies, workshop reports and other outputs from this initiative along with the SWAC's overall work programme are available at: www.oecd.org/sah/agritransformation

The initiative has focused on access to innovation for vulnerable producers (i.e. small family farms poorly connected to markets, migrants, youth and women): *How can access to innovation be strengthened in order to improve livelihoods for vulnerable producers as well as create opportunities to add value in agriculture?*

Results have highlighted that win-win partnerships between family farms and agribusiness, supported by producer organisations, non-governmental organisations (NGOs) and an appropriate policy framework, can play key roles in fostering increased access to agricultural innovation. It provides case studies of the results of a number of such partnerships in West Africa, showing that in the context of state withdrawal from service provision, closer links with agribusiness companies can help small farmers improve incomes and livelihoods through:

- access to upstream and downstream services (e.g. training on new technologies, and practices, marketing networks);
- access to new high-yielding varieties and information on new techniques and practices required;
- access to credit and inputs (e.g. new varieties, fertiliser, pesticides, planting equipment, finance etc.);
- increased area of land under cultivation;
- access to markets; and
- acquiring new farm management techniques (e.g. basic accounting).

At the same time, by adopting a partnership approach, these companies benefit from more secure lines of supply in agricultural commodities and products and, they can reduce the direct costs associated with expanding production themselves.

The examples below provide evidence of such win-win partnerships in West Africa.

- In Burkina Faso, contracts between small-scale maize producers and the Feppa-Si organisation in the Sissili region and a brewery in Ouagadougou were incentives for the adoption of new maize varieties. Through these contracts, small farmers were able to get new planting material in order to increase their production and revenue. This partnership was fostered by Sasakawa Global 2000, which played a role of interface between producers and the brewery. This NGO provided information to both parties and helped negotiating fair prices of maize.
- In Ghana, 30 large-scale out-growers of pineapples belonging to the Horticulturalists Association of Ghana (HAG) supplied inputs and guaranteed a market for 600 family farms. HAG obtains information and trains producers in the use of new technologies (e.g. conditioning) in collaboration with agribusiness. HAG also asked the State to allow the use of the Export Development and Investment Fund (EDIF) to import new varieties of pineapples (high-yielding varieties that are sweeter than local varieties). Small farmers were thus able to obtain new varieties and improve both the quantity and quality of pineapple to meet market demand.
- In Nigeria, the Okomu Oil Palm Company Plc developed a partnership with family farms which has facilitated the supply of high yielding varieties of oil palm to small farmers and access to technical and financial support. For example, the company negotiates credit lines for family farmers with local financial institutions. Similar experiences were observed in Mali regarding the production and marketing of millet and sorghum; and in Nigeria regarding the production and marketing of cocoa.
- A regional alliance to promote cassava production and processing and maximise the potential and opportunities of Africa's key food crop has been established by NEPAD in partnership with the International Institute of Tropical Agriculture (IITA): the NEPAD Pan-African Cassava Initiative. This explicitly brings

together policy-makers, agricultural research centres, agribusiness and small-scale producers.

In these cases the innovation process has been based on demand-driven market-based approaches, drawing on the complementarities between actors in the value chain. By adopting this approach, agribusiness can reduce their costs of expanding production, secure supply, and increase profitability while small farmers generally improve their livelihood opportunities: a win–win partnership where all actors stand to gain.

Efficient agribusiness-family farm partnerships are complex institutional arrangements that require support from producer organisations and policymakers. For example, it would have been difficult for agribusiness to import huge quantities of pineapple planting equipment if the EDIF had not been available. Producer organisations and NGOs also play vital roles as interface between decision-makers, agribusiness and family farms. They facilitate the negotiation of partnerships to ensure a better distribution of gains and avoid exploitative links. In Thailand, for example, a study showed that a partnership between agribusiness and small farms for poultry production led to an increase in poverty among smaller farmers who were unable to reimburse credit provided by agribusiness. To address this, participants at the SWAC Workshop on agricultural innovation hosted by the West African Economic and Monetary Union in Ouagadougou in June 2004 placed special emphasis on the role of the State in accompanying partnerships between actors.

Finally, three strategic questions that merit further attention have emerged from regional consultations on agricultural innovation:

(i) In fostering partnerships between actors, what actions are needed to ensure that agribusiness provides high quality services and a fair division of profits to family farms?

(ii) What processes are required to develop *regional* strategies concerning the regulation and use of new technologies such as agricultural biotechnologies? How can it be ensured that small farmers access and benefit from these technologies while safeguarding access to indigenous varieties?

(iii) Which strategic agricultural commodities with a regional scope could most benefit from agribusiness-family farm partnerships and what mechanisms could support their development?

Further information

Léonidas Hitimana (leonidas.hitimana@oecd.org)

Karim Hussein (SWAC). Principal Adminisatrator, OECD. Formerly, Head - Agricultural Transformation and Sustainable Development Unit, Sahel and West Africa Club OECD.
Jean Sibiri Zoundi (INERA). Head of Research and Development Linkage Service, INERA, Burkina Faso.
Leonidas Hitimana (SWAC), Agricultural Economist, ATSD Unit, Sahel and West Africa Club/OECD.

Note that this article is submitted by the individual authors and does not necessarily reflect the opinions of SWAC, OECD or INERA.

Announcements

New book on low external input agriculture.

The subject of low external input agriculture has attracted considerable attention in recent years, but there are relatively few objective analyses of the performance of this technology in farmers' fields. A new book describes case studies in Honduras, Kenya and Sri Lanka that examine the degree of technology adoption, adaptation, abandonment, and transmission in the context of successful projects in low external input agriculture. The studies also examine the extent to which participation in such projects leads to changes in human and social capital. *Self-Sufficient Agriculture: Labour and Knowledge in Small-Scale Farming* by Robert Tripp will be published by Earthscan later this year. Twenty-five copies of the book will be available to AgREN members working in the South. If you would like a copy, please send a letter or email to AgREN (give address). If more than 25 requests are received before November 15, recipients will be selected by a random draw.

Participatory Livestock Research: A Guide. Czech Conroy

Aimed at readers involved in livestock research and workers and researchers interested in wider agricultural develpment issues, this book:

- shows how to undertake needs assessment using participatory approaches;
- shows how to avoid the problems associated with on-farm livestock experiments;
- shows how a participatory approach to technology development can be successful.

This book is the first to offer an introduction to participatory research for livestock development. Despite the attention paid to participatory research methodologies in other areas of agricultural development, participatory livestock work has been relatively neglected despite the evident relevance of and demand for such approaches. It will bring livestock researchers and practitioners up to date with the latest and best practice in participatory research. ISBN: 1 85339 577 3 paperback, GBP 16.95 / USDollars 29.95, ITDG Publishing.

Guidelines for contributions to AgREN publications

AgREN members and others are encouraged to submit material for publication in both the Newsletter and as Network Papers. The type of material that is most suitable for submission is described below. Articles submitted as potential Network Papers will be assessed by an Editorial Committee and, where necessary, guidance will be given to authors in revising their papers for publication.

a) Newsletter Contributions: AgREN welcomes news from members that describes their work relating to the development of small-scale agriculture and sustainable rural livelihoods. AgREN would particularly like to hear about specific, on-going projects which are particularly innovative or other activities of interest to AgREN members. Contributions to the newsletter should be no more than 800 words, and may include photographs or illustrations. Shorter contributions are also appropriate. Please note that articles may be edited prior to publication.

***b) Network Papers*:** AgREN Papers are broadly concerned with the design and promotion of appropriate agricultural technologies, with specific attention focused on the methods, processes, institutions and policies that promote pro-poor technical change and support equitable improvements in agriculture for developing countries. The principal focus of AgREN Papers should be adaptive research, extension or supporting mechanisms such as credit, marketing and producer organisations. Network Papers should seek to explore and promote the role of increasing agricultural productivity, resource conservation and farmer empowerment in the context of diversified rural livelihoods.

Content:

- Papers should focus on practical experience in research and extension methods as well as innovations in the public or private provision of other agricultural services.
- Papers may make reference to current theoretical issues in the field of rural development, but their principal focus should be on the provision of well-written descriptions of practical and innovative experience that will be of use to other practitioners.
- Although AgREN has an interest in novel diagnostic and evaluation methods that help practitioners understand farmers' priorities and contexts, papers that follow through on such diagnosis and illustrate applications and outcomes are particularly welcome.
- Papers may be based on a broad range of sectors relating to agriculture, e.g. crop and livestock production, aquaculture, agroforestry, extension, natural resource use, environmental management, credit supply and marketing.
- Most AgREN papers describe an experience from a particular time and location, but they are written in such a way that practitioners on other areas can draw useful implications.

Word length and referencing:

Network Papers should be between 6,000 and 12,000 words long, and include an abstract of 500–750 words highlighting research findings and policy implications. References should follow the examples below.

Books:

Carney, D. (1998) *Sustainable rural livelihoods: What contribution can we make?* London: DFID.

Journal articles:

Sanchez, P.A. (1995) 'Science in agroforestry'. *Agroforestry Systems,* No. 30, pp. 5–55.

Other information:

- Material submitted to the Network will be considered for publication on the understanding that is has not been submitted elsewhere.
- Material published by AgREN may, with acknowledgement to ODI, subsequently be published elsewhere.
- Contributors will be asked to sign a form transferring copyright for published material to ODI. This enables us to give others permission to photocopy Network material.
- Newsletter items may be submitted to the Network at any time. If it is not possible to include an item in the next newsletter it may be held over for use in a subsequent edition.
- Photographs may be submitted to accompany newsletter items. These should have a minimum resolution of 200 dpi.
- Papers should be submitted both in hard copy and on 3½" disk, CD, or by email, in one of the widely used word-processing packages.
- All material should be submitted to the Network Coordinator at the address given below:

Agricultural Research and Extension Network, ODI,
111 Westminster Bridge Road, London SE1 7JD, UK. *Email*: agren@odi.org.uk

Papers with this issue