Locally Generated Printed Materials in Agriculture: Experience from Uganda and Ghana - Education Research Paper No. 31, 1999, 132 p.

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EDUCATION RESEARCH

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Appendices

List of acronyms

ACDEP	Association of Church Development Projects
ADRA	Adventist Development and Relief Agency
AFFA	Akwapim Fish Farmers Association
ALIN	Arid Lands Information Network
ARIS	Agricultural Research Information System
BIGA	Bio Intensive Gardeners Association
CARD	Community Association for Rural Development
CBO	Community Based Organisation
DENIVA	Development Network of Indigenous Voluntary Associations
DW	German Adult Education Association
ECASARD	Ecumenical Association for Sustainable Agriculture and Rural Development
EDYM	Environmental Development Youth Movement
FLS	Front line staff
FURA	Fellowship for Urban and Rural Assistance
GAS	Garu Agricultural Station
GDO	Grassroots Development Organisation
GhRRM	Ghana Rural Reconstruction Movement
GILLBT	Ghana Institute of Linguistics, Literacy and Bible Translation
GLOHFA	Green Leaves of Hope Farmers Association
GO	Government organisation
IIRR	International Institute of Rural Reconstruction
JSS	Junior Secondary School
KIIRA	Adult Education Association of Uganda
LABE	Literacy and Adult Basic Education

LAEDA	Literacy and Adult Education for Development Association
LC	Local Council
LGM	Locally generated materials
MCAI	Modern Campaign against Illiteracy
MMM	Mission Moving Mountains
MTEA	Multi-Purpose Training and Employment Association of Uganda
NAEAU	National Adult Education Association of Uganda
NFED	Non Formal Education Division
NGO	Non Governmental Organisation
OBAFA	Osupunu Banks Agroforestry Farmer's Association
RAAKS	Rapid Appraisal of Agricultural Knowledge Systems
RC	Resistance Council
RPA	Rural People's Association
RUDAS	Rural Development Advisory Services
SSS	Senior Secondary School
SWO	Supportive Women's Organisation
TA	Technical Assistant
UCAA	Uganda Change Agent Training Programme
UES	Unified Extension Service
UNFA	Uganda National Farmers' Association

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1. Executive summary

1.1 Background

The research explored in detail the sources and types of information accessed by grassroots farmers. Printed information about sustainable agriculture is a much neglected area. It is widely assumed that many grassroots farmers are non-literate and that print is an ineffective medium of communication with this target audience. What little printed information that is produced on agriculture is usually aimed at resource rich, commercial farmers.

This research sought to establish the viewpoints and priorities both of grassroots farmers in Uganda and Ghana and of organisations producing printed information in developing countries. The research comprised a postal survey of nearly 200 organisations, in-depth research with 75 autonomous farmer groups in Uganda and Ghana and an overview of 95 organisations sharing agricultural information in Uganda and Ghana.

1.2 Results

Findings confirmed a considerable shortage of printed agricultural information that might prove of relevance to grassroots farmers. Even where such materials were available, distribution networks were inadequate. Few of the larger organisations visited, gave priority to meeting the needs of grassroots farmers for printed information. Instead their efforts were directed towards networking with similar organisations largely through newsletters. Those organisations who saw this area as a matter of concern tended to be smaller, poorly funded, national organisations where limited resources prevented them from producing more printed information. Key information sources for all organisations producing agricultural information were books and

newsletters.

Recording health th rough the year - Dzigbodi Women's Group.

The research found that many farmer groups were well established, highly motivated and had clear objectives. Lack of access to useful agricultural information was usually a considerable source of frustration to members of the groups. Though literacy levels were often low, the desire for printed information was high, revealing that one or two individuals within a group were adequate for the whole group to access such information. Such access indeed is often most beneficial given the well organised nature of most groups and the priority given to sharing and discussing new ideas within meetings. Animators were noted within most successful ongoing groups; people with enthusiasm, motivation, openness to new ideas and the ability to inspire other members to take action. Animators usually had higher levels of literacy and often proved a key focus for the dissemination of new information, both from indigenous and from modern scientific knowledge.

1.3 Conclusions

Group support was revealed to be very important, providing a safety net allowing members to share, experiment and try out new ideas. Animators were often a major factor in the success of groups and enhanced the flow of new ideas in agriculture. Altruistic principles of caring and support proved an important motivation for most animators. Animators were commonly people who 'read for the group', indicating that group literacy rather than individual literacy provided access to printed information.

Clear linkages could be established between access to information and the development of empowerment within farmer groups. Good access to information was a contributory factor in the growth of confidence in group knowledge and understanding, which led some groups to share agricultural information outside the group and some to produce locally generated materials on agriculture.

Whole group visits to centres of excellence proved of considerable benefit, both in the rapid uptake of new ideas and in enhancing group relationships.

There is an enormous, un-met desire for printed agricultural information and a need to coordinate skills and resources in meeting this need.

1.4 Recommendations

The potential for supporting extension services, NGOs, mass media services, farmers, animators and literacy services in the generation and production of agricultural information in local languages, aimed at group usage is considerable. It would have benefits not only in sharing useful agricultural information, but also in enhancing literacy work by providing reading materials for newly literate people.

Tina Benlu and David Owusu, the Ghanaian research assistants, writing up the day's notes.

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2. Background to research

This research sought to examine the sources, types and impact of agricultural information available to groups of grassroots farmers in developing countries with particular reference to the role of printed information. It combined an investigation of available information sources from the perspective of grassroots farmers in Uganda and Ghana, with an examination of the resource base and policies of organisations and groups producing printed information for farmers. The relevance and potential of locally generated materials, often in local languages, was of particular interest.

2.1 Origin of research

Against the background of a considerable shortage of all kinds of written materials suitable for newly literate people in most developing countries, the research sought to examine whether the coordination of literacy services with health care and agricultural services, could provide 'real' materials appropriate for new readers. The availability of all kinds of written materials which might enable adults to pursue new ideas and information, is very limited. Little research has been carried out to investigate the priorities, motivation, source of materials and limiting factors of those who continue to produce printed information aimed at grassroots level in developing countries despite resource constraints. In addition, there is also a need to understand the access, priorities and design preferences of their target audiences for printed information.

The research originated from the response to a readership survey of the newsletter *Footsteps* published by Tearfund UK, carried out in 1993, which indicated a surprising level of adaptation, translation and use of *Footsteps* articles by readers. *Footsteps* aims to support the work of development workers promoting grassroots community development in developing countries. It is available on a quarterly basis in four international languages; English, French, Spanish and Portuguese, with an overall mailing of 35,000 and a world-wide distribution. The content is aimed at national readers who are usually reading in a second language, so language is kept clear,

straightforward and jargon-free. Articles in *Footsteps* assume that most readers have little access to resources or funding, so content is very practical and easy to implement. Ideas and information are shared and readers encouraged to question, experiment and discuss attitudes, practices and innovations which may be of benefit to them. Sample pages from *Footsteps* are included in Appendix A.

The readership survey revealed that over three quarters (78%) of survey respondents were using, adapting or translating material from *Footsteps* for training others. Some examples are given in Appendix B. Copies were being photocopied, used for workshops, made into charts or posters, used to provoke discussions, used as radio scripts and translated for post-literacy work or for use in locally distributed newsletters. Of particular interest was the finding that articles were being used as source material for training groups, radio broadcasts, local newspapers and post-literacy materials. There is a steady flow of requests from groups seeking permission to translate and print *Footsteps* articles. It was hoped that the present research would indicate whether information from *Footsteps* acts as a catalyst for such adaptation or is merely incidental to an ongoing process and, in addition, would assess the significance of the role played by relevant newsletters in enhancing information flow.

Members of CARD, Iganga, Uganda - an example of a group which passes on information from Footsteps.

This research used the *Footsteps* mailing list as an initial entry point for reaching both organisations producing printed information and recipients of such printed information. Growth in circulation of *Footsteps* has been largely by word of mouth resulting in an unusually diverse spread of readers world-wide working in church, non-governmental and governmental organisations, a variety of educational establishments and with a high proportion of national (in contrast to expatriate) readers. There is no doubt that the opportunity afforded by use of the *Footsteps* mailing list provided a unique entry point and explanation for the research. It helped ensure a good response to the postal survey. It opened doors which may have proved hard for a researcher without such a link. The degree of warmth, hospitality, acceptance and openness afforded to the researcher was a privilege which helped establish good rapport between local facilitators, research assistants and group members.

2.2 Focus of research

The research focused on the information needs of farmers operating at grassroots level in developing countries who represent the single largest employment category comprising 49% of the workforce world-wide and 66% within Sub-Saharan Africa (UNDP, 1997). The term grassroots is used to indicate farmers living at or near subsistence level on low income. Agricultural information materials appropriate for low

external input, sustainable agriculture, in contrast to materials aimed at high input agriculture, would be most likely to meet their information needs.

The research sought to discover, from a sample of farmer groups in Uganda and Ghana, whether farmers would value printed agricultural information if it were relevant, in their own language and appropriate for their situation. It reviewed farmers present access to materials and the level of individual or group literacy required to access such information. It questioned the extent to which farmers' needs are taken into consideration and whether they are directly involved in the production of such material through sharing their own indigenous knowledge and experiences.

Most of the research which has been done in this area with an agricultural perspective, has examined the uptake of new ideas from individual sources of information, such as research stations, extension services or various media such as radio or video (Kebede et al, 1990; Rogers, 1995; McCorkle, 1994). Since *Footsteps* is sent directly to individuals, groups and organisations on request, the mailing list provided access to a wide variety of organisations and groups without the need to go first through 'official' channels, with the subsequent likelihood of influencing both the choice of farmer groups and the views of respondents.

2.3 Key definitions

A simple division between 'producers of information' and 'recipients of information' was not adequate to explain the diversity of roles encountered as the research progressed. Three distinct subdivisions of key groups were therefore made when analysing the postal survey findings and maintained during the in-depth research. These divisions were found useful in broadly classifying their aims, resource base and access to information sources.

2.3.1 Government Organisations (GOs) and Non-Government Organisations (NGOs)

This sub-division comprises larger organisations, including most government departments, training institutes, nearly all radio broadcasters and literacy programmes and many religious and development based NGOs with an annual income of over US $50,000. Some organisations are international, some national and some regional in focus. The term NGO is used for such a huge variety of organisations that it really requires further definition to be useful (Korten, 1990; Carroll, 1992; Suzuki, 1998). However, since ultimately the typology of NGOs is not the main focus of this research, the term NGO will be used for both religious and development NGOs, though wherever relevant the religious basis will be noted. The term GO will be used for government

organisations.

2.3.2 Grassroots Development Organisations (GDOs)

Clark (1991) defines GDOs as 'organisations that are locally-based Southern NGOs whose members are the poor and oppressed themselves and which attempt to shape a popular development process'. Most are membership organisations and all work at grassroots level. Though some of these small organisations had an office within a town, their members were usually rural farmers. Few had enough funding for employing staff, hence work in the small offices established was usually voluntary and by members. In this research, this sub-division included small NGOs and some church based groups with a low annual income from between US $1,500 to US $50,000, which was in some cases enough to provide a salary for one or two individuals and fund a small office. These were normally registered with the government as an organisation. They differed from GOs and NGOs in terms of their income, the fact that they were all local and often indigenous in origin, and that all focused on improving the well being of local people.

2.3.3 Rural People's Associations (RPAs)

This sub-division includes local people's associations with few or no facilities, low or no income (less than US $1500 pa) and usually informal or unregistered. All of them were membership groups at grassroots level. The terms Community Based Organisations and Rural People's Organisations have been used by other researchers (Garforth and Munro, 1995; Winter, 1997). However, many of the farmer groups visited were neither registered formally as organisations nor community based. They were voluntary membership groups with no budget aside from members' contributions. The term 'Rural People's Associations' (RPAs) will therefore be used throughout as a more accurate descriptive term for these groups.

Office view -FURA- a GDO in Uganda.

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3. Theoretical issues concerning information flow among grassroots farmers

The ultimate focus of the research is on just one of many possible sources of agricultural information for grassroots farmers; that of printed information. This may include a variety of forms; posters, leaflets, newsletters, booklets, newspapers or books, all directed towards communicating agricultural information in a semi-permanent form. Since there is a severe paucity of printed information targeted directly at grassroots farmers (Bhola, 1994; Chambers, 1993; Garforth and Lawrence, 1997), the research places the actual and potential role of print within an overall assessment of information sources. Information and networks aimed directly to communicate Primary Health Care principles and provide support at grassroots level are in most instances more effective than comparable farmer information systems.[1]

[1] UCBHCA (Uganda Community Based Health Care Association) based in Entebbe, have numerous examples of excellent resource materials for health workers and their trainers.

The research impinges on three major areas of inter-relationship:

Firstly, there are the relationships between the potential providers of printed information, such as NGOs and government departments and those who receive printed information, in particular farmers and GDOs. Changing policies concerning development, extension, literacy and language will have a considerable impact upon this relationship.

Secondly, there is the more practical relationship between the type of farmer and their location and their access to printed information. This raises issues of distribution, availability, comprehension, cultural appropriateness and the use of mass media.

Thirdly, there is the relationship between farmers and other farmers in terms of how new information is shared and the factors which influence this.

3.1 Policies influencing the provision of information services for farmers

Despite a growing proliferation of both academic and popular books and papers about the situation of farmers in developing countries and the best methods of meeting their needs, printed information which is specifically for grassroots farmers, for their own use, fails to attract similar interest. The following statement points to the heart of this research:

'If you give printed information to rural farmers, they will just throw it on the ground and let their children tear it up.'[2]

> [2] Personal interview (name withheld). Social and Economic Department of the Catholic Secretariat, Accra, Ghana February 1997.

Few officials in GOs and NGOs would state their views as bluntly. Nonetheless by their policies and practice, either deliberately or by default, many are silently in agreement with the general view that grassroots farmers in developing countries are largely non-literate. Further, they see that the most appropriate methods of meeting grassroots farmers' information needs is by oral means through intermediaries such as extension agents, development workers and trainers or by radio.

The following short story serves is an example of many that could be recounted during some 15 years of work experience in providing information services to farmers in developing countries by the researcher which results in a rather different outlook to that of the Ghanaian official quoted above. Whilst there is a considerable shortage of relevant printed materials aimed at grassroots farmers, rather than this being reinforced by farmer indifference to printed information, there may exist a considerable and unmet demand for printed information seen as relevant to them.

Jotend Pur (Farmer Support) Training 1986, Saradidi Rural Health Project, W Kenya

After spending several hours visiting Peter's farm with the opportunity to examine various new ideas with which he was experimenting, he took us home for refreshments. As we talked about the farmer group he belonged to, he stood up and took down a parcel from the top shelf. He carefully removed a thick outer plastic bag, untied the string which was holding a thick layer of newspaper and finally from within another plastic bag he removed a bundle of loose papers. These, he explained were his notes from agricultural training some 20 years earlier, which he had struggled to protect from termite and dust in his thatch and mud house. Whenever other farmers asked questions he could not answer or when he needed to remember details about crop spacing or pests, he would consult his notes, certainly every few weeks. They were his only source of written information and, as we watched the care with which he re-wrapped the package, obviously a much treasured possession

3.1.1 Development policies

Recent decades have seen a general trend in policies concerning all aspects of development work away from earlier top-down, technology transfer methods towards more flexible and participatory bottom-up process approaches.

In 1963, Nyerere asserted that 'people cannot be developed, they can only develop themselves'. He continued by stating that people develop themselves through making their own decisions, increasing their understanding of what they are doing, by increasing their own knowledge and ability and through their full participation, as equals in the life of their community (Nyerere, 1974). His far sighted comments are now confirmed by a great weight of research and evidence in a number of different disciplines. For example, Srivastva (1978, p2) observes that, *'the wisdom and capacity of simple but very intelligent village people is often not used in plans for improving their welfare or health status... Development activities are run by those who do not have their roots in the village, and who do not directly understand the needs of the villagers.'* And Taylor and Mackenzie (1992, p 257) observe that, *'the human potential, basic wisdom and knowledge of Africa's local people have been seriously underestimated.'*

The most outsiders can do, suggests Carmen (1996), is to create favourable conditions for development through organising, guiding and helping so that people can 'discern' their own development needs rather than others trying to analyse needs on their behalf and initiate development projects 'for them'. A viewpoint which respects the knowledge of grassroots farmers and their ability to identify their own needs is key to establishing dialogue and a two-way exchange of information.

3.1.2 Inter-relationships with literacy policies and development

Over the colonial period as a whole there was minimal nation-wide promotion of literacy. This changed following Anderson's research (1966) which claimed that a 40% rate of literacy was a necessary threshold before economic development could take place. As Watson (1993) highlights, Anderson's findings had a huge political impact with the result that during the 1960s and 1970s, UNESCO poured billions of dollars into mass literacy campaigns throughout developing countries. The premise that productivity and profits could be raised if literacy levels were raised, persuaded both donor governments and multi-national companies to invest in functional adult literacy campaigns designed to pass on necessary literacy and numeracy skills to adults. Newly independent countries were keen to take education and literacy 'to the masses' and welcomed support for both education and adult literacy work.

Literacy rates have indeed risen in many countries in recent decades, rising from 31% to 51% between 1970 and 1995 in the 44 countries classified by the UNDP as within the category of 'low human development' (UNDP, 1998). However, with the number of non-literate people in the world now over one billion, considerable progress is still necessary with 60% of the adult population of the poorest 20 countries in the world, still estimated to be non-literate (UNDP, 1998). Early thinking was that once a proportion of adults had become literate, the emergence of primary schooling for all would render such campaigns unnecessary. However, a consequence of structural adjustment programmes and international debt repayments among other factors, has been a decline in the expenditure on education throughout many developing countries, despite substantial increases in the number of school age children. Teacher salaries in many parts of Sub-Saharan Africa have fallen to such a level that it is no longer possible to support a family without resorting to other sources of income, with severe consequences on the standard of schooling provided (Allsop and Brock, 1993).

In the 1960s literacy was thus seen as an essential component of development. However, as literacy rates rose, albeit often slowly, the anticipated corresponding rise in economic development failed to materialise in any significant manner (Watson, 1993). Few literacy campaigns proved sustainable in the long term. From the early 1970s onward, attitudes began to change when it was observed that many self help activities could be run with only a handful of literate members. Literacy was no longer seen by many as 'essential' for development but as having an important role to play. Street (1990) is well known for his examination of this issue and the remarkable changes in perceptions of literacy in development. Bhola (1994) still believes that literacy is a prerequisite for development, not simply for the skills it imparts, but because it allows individuals to use their minds in new and different ways bringing a new sense of freedom. Many others, however, (Alam, 1989; Walker, 1996) believe that literacy only plays a supporting role in development. Friere (1972) was an early and

vehement critic of traditional primer based adult literacy work which aimed to simply transfer skills from teacher to learner - the 'banking concept' of education. His once revolutionary concept of using generative words and themes to encourage discussion and exploration of the learners societal situation, is now widely adopted. Innovative literacy programmes are now rarely simply equated with 'literacy to get things done' but rather as a stepping stone to a heightened awareness of social issues. Walker (1996) stresses that it is the approach to literacy teaching which is of most relevance. If literacy is indeed to encourage development, then each society needs to adapt literacy practices to meet the unique needs of their own community. Archer (1994) believes that failure to stimulate dialogue and awareness in literacy classes, contributed to the 88% drop-out or failure rate noted in a World Bank discussion paper (Abadzi, 1994).

African society is bound closely by kinship, family and friendship ties. The presence of some literate individuals within a group may provide a means of access to new innovations and developments for other group members who themselves lack literacy. Illiteracy may not necessarily be a barrier for the sharing of recent news from the newspaper or indeed of all kinds of information between friends or within a close group. Useful and relevant printed information may be widely shared and discussed between literate and non-literate. Nowadays, reading is seen as a solitary pursuit in industrialised countries and yet this was not the case in previous centuries.

The desire to achieve literacy may be hindered not only by apprehension of the effort and difficulty involved and the likelihood of being made to feel inadequate, but may also be considerably influenced by the amount of reading material available of interest (Gfeller, 1997). Maintaining and enhancing literacy skills can only be encouraged if there is reading material available, preferably in local languages, and which is accessible, relevant and of interest (Rogers, 1995).

3.1.3 Language policies and development

There are over a thousand local languages spoken in Sub-Saharan Africa (Roy-Campbell, 1990) with 400 languages in Nigeria and 230 in Cameroon alone (Robinson, 1990). The European colonialists' answer to this complex situation was simply to introduce their own languages as the means of communication. Africa now has a legacy of education and administration systems based on 'foreign' international languages and models. Out of over 50 African states, only nine - Somalia, Botswana, Lesotho, Swaziland, Madagascar, Rwanda, Seychelles, Mauritius and Burundi - have a common official African language spoken by over 90% of the population (Bamgbose, 1991). Language choice is therefore often a highly sensitive political as well as a social issue since, as Mackey (1989) notes, the majority of African people have no knowledge of the official language of their country, despite the fact that this is the means of communication between the government and its citizens.

In most African countries children begin primary schooling using their local language where they then learn to read and write in the official language. At secondary school they are then taught in this official language. In nearly all cases, pupils receive education in a language which is at best a second language and often a foreign language (Robinson, 1994; Fordham, 1994; Baker et al, 1996).

Although at national level governments have often adopted a 'laissez-faire' attitude towards their support of local languages, informed choices at community level, especially in rural areas, will always be debated in the local language. Jenkins (1981) believes that discussion in one's first language in which all participants are comfortable and articulate, is usually essential if a significant change in attitudes or practices is to take place. Informed debate and discussion leading to changes in behaviour and attitude might be enhanced if grassroots development literature were available in the local language.

3.1.4 Inter-relationships between extension policies and farmers

Extension practice has undergone significant changes in the past few decades. Early practice aimed to increase agricultural productivity largely through the adoption of new, 'scientific' technologies and methods. Extension agents were taught 'improved' modern practices and provided with back-up from research stations and support services. A typical approach was the Training and Visit' system given considerable support by the World Bank. Here, the role of extension agents was clear; they were to tell farmers about the improved new methods of crop and livestock husbandry. Such transfer of technology approaches were directive and linear (Tillman et al, 1991). They involved the transfer of knowledge based on a top down hierarchical model (Rogers, 1993). More marginal farmers (by far the majority) often found little of relevance in the particular technologies being extended. The experience of farmers was given little credence. Farmers who did not participate were regarded as 'laggards' rather than people who may have made quite rational decisions not to adopt certain technologies. In addition women were often regarded as 'gardeners' and therefore invisible to extension services (Warren, 1991). Though largely discredited in terms of their effectiveness, approaches based on the World Bank's Training and Visit system of extension are still in operation today, and in some areas extension agents are still trained in linear approaches (Purcell and Anderson, 1997). Gradually though these are being superseded by 'Farmer First' approaches.

The Farmer First model, which takes the farmer's own needs and priorities as its starting point, is sometimes referred to as 'second generation extension'. Researchers and practitioners such as Chambers (1983), Havelock (1973) and Bunch (1985) have played an important role in pioneering these concepts. In this approach the farmer is regarded as having considerable experience and understanding and research is more

often located on farms than on research stations. Communication has sought to be two way. Farmers' needs are identified and the role of the extension agent becomes one of communicating these needs to researchers and decision makers. They will then transfer a package of knowledge and advice to farmers to meet these needs. In practice, however, this approach has also proved top-down. The extension agent and researcher have still been regarded as having all the answers. Farmers are generally not encouraged to find their own solutions. In addition, farmer to farmer communication is frequently ignored (McCorkle and MacClure, 1995). All too often, as Chambers (1994, pxiii) comments, *'the Farmer-First label and the rhetoric of participation have been adopted without the substance'*.

Rogers (1993) describes a third approach to extension policy, which he has called 'third generation' or a 'farmer-led' approach. This is built on two premises - firstly that knowledge cannot be transferred since individuals need to create their own knowledge (echoing Freire's (1972) comments on education), and secondly, that learning is a lifelong process in which farmers are already involved, solving their own problems, often with considerable skill and expertise. Third generation approaches to extension seek to reduce farmer dependency on extension agents, encouraging farmers instead to question, analyse and experiment themselves with information available to them. The decentralisation of extension services in many countries has often eased the transition towards a more interactive relationship with farmers. These approaches demand significant changes in the role and attitudes of extension agents. Their role should become one of facilitators assisting farmers in finding appropriate solutions rather than of trainers passing on knowledge.

Integral within farmer-led approaches is the importance of farmer to farmer communication. 'Farmer-to-farmer extension' is defined by Scarborough et al (1997, p5) as *'the emergence of a movement initiated and sustained by farmers where most innovations are generated by farmers themselves, with occasional external support and provision of training by farmers, to farmers, often through the creation of a structure of farmer-promoters and farmer-trainers'*. The best and most widely occurring example of this is the *campesino-a-campesino* movement within South America, where farmers not only initiate the process but in addition manage the exchange of information between farmers.

These Farmer-led approaches echo the general shift in development paradigms; that for genuine progress it is the farmers themselves who are most likely to initiate and sustain improvements in agriculture, given awareness of new ideas and given that advice is available when requested (Tillman et al, 1991). Even the word 'extension' is now rejected by many who oppose the 'extension' of any one ' correct message or technology in one direction, preferring an ongoing communication between farmer, researcher and trainer. New terms, more in keeping with changes in approach are heeded, such as facilitators. However, norms and attitudes acquired over a lifetime of work experience

and set within institutional and organisational culture, cannot be easily reversed, whether of extension workers, managers and policy makers or, indeed, of farmers.

Much of the printed information distributed by extension services still 'tells' farmers the correct methods to use in crop or animal husbandry, rather than giving value to local practice, encouraging discussion and experimentation with alternative techniques (Scarborough et al, 1997).

3.1.5 Recognition of indigenous knowledge within extension services

At the heart of the changes in extension policies lies a fundamental change in attitudes towards indigenous knowledge. Approaches that assume that documented and statistically valid scientific knowledge will provide the only correct answer, tend to be linear and top-down with little or no room for adaptation. As awareness and respect for indigenous knowledge has grown, so the need for a two-way flow of information has increased.

Indigenous knowledge is the knowledge of local people which may be unique to their culture or locality. It may be acquired through the sharing of cultural beliefs, through observation and experience and through an intimate knowledge of their surroundings. Warren et al (1995, p426) define it as *'the local knowledge that is unique to a given culture or society'*. This knowledge has accumulated over many centuries and often includes very detailed and sophisticated knowledge of local fauna and flora. Traditionally such knowledge may be encoded within rituals, dances or poetry, for example, to enable its accurate transmission to new generations.

Until recently, indigenous knowledge was rarely valued by researchers and extension agents. Indeed it was often viewed as something of a handicap, preventing the more rapid uptake of new innovations (Rogers and Shoemaker, 1971). Jiggins (1989) highlights two reasons as to why indigenous knowledge among farmers in developing countries has been so little regarded by research stations and agricultural departments. She comments that the establishment of expatriate plantations during colonial times for cash crops grown largely outside their country of origin, meant that there was no 'in situ' indigenous knowledge to draw upon for these crops. In addition the *'very speed of acquisition'* of African territory by European powers *'tended to reinforce belief in the superior values and knowledge of the appropriators'*, thus further reinforcing a lack of confidence in indigenous knowledge (Jiggins, 1989,p71).

The research stations and associated extension services built up to service plantation farmers and larger commercial farmers in particular, saw little reason to question the superiority of the 'scientific knowledge' systems of the Western world. Other knowledge systems were either unacknowledged or seen as incompatible. However, as

Mundy and Compton (1995) point out, growing numbers of scientists and development professionals now realise the value of incorporating indigenous knowledge into development efforts. Such knowledge can provide low cost, locally adapted, targeted and sustainable solutions to development problems. Practices of local farmers, once regarded as 'primitive' or 'old fashioned' are now being re-evaluated as highly appropriate, sustainable and environmentally sound, such as inter-cropping, low tillage and seed selection. Both knowledge systems are now widely acknowledged to have validity, but those best placed to make value judgements in situ are likely to be those who have access to and experience of both.

3.2 Farmer access to information provision

Though in short supply, some printed agricultural information targeted at grassroots farmers may be available. However, numerous factors may influence its accessibility to farmers and few of them have the opportunity to actively choose between a variety of sources of printed information.

3.2.1 Distribution and communication networks

Current trends in world communication leave people, notably the poorest, in many rural areas of developing countries at a considerable disadvantage in receiving and exchanging information with others outside their immediate community. Outside the capital and major cities, inhabitants of smaller towns and rural areas of developing countries generally lack good access to electricity and telephones. In the least developed countries (UNDP, 1998) there are just three telephone lines for every 1,000 people and in most rural areas there is less than one telephone for every 1,000 people (Hamelink, 1995). Postal services and newspaper deliveries may be hampered by poor transport. UNDP (1997) reports an average of one newspaper copy per 1,000 people in Sub-Saharan Africa; this is likely to be lower still in rural areas. There are few outlets for the sale or distribution of printed agricultural information outside capital cities or major cities. Trade fairs may provide an outlet for such materials to farmers, but generally not the poorest.

The Internet continues to bring astounding leaps in communication throughout industrial countries. Many have assumed that Internet access will ease the information shortages within developing countries. Undoubtedly, considerable benefits are already resulting to well equipped and funded GOs and NGOs with access to the Internet, though old and unstable telephone lines may make data transmission very slow and correspondingly expensive. However, information is rarely available on the Internet in anything but the major international languages, presenting another barrier to wider access. In rural areas, direct access to the Internet is likely to remain limited for some considerable time. Information gained through Internet access will therefore need to be

passed on either orally or through print (Richardson, 1997).

In all aspects of communication networking, isolated rural areas are likely to be disadvantaged. Radio broadcasts, particularly using local languages, are one means of sharing information. They are, however, more suitable for building awareness than for conveying detailed information. The postal network remains one of the few - usually reliable, if slow-methods of sharing and exchanging information in such areas.

3.2.2 Comprehension and cultural appropriateness

Further limitations to information access arise through barriers to comprehension. The combination of education, literacy and language policies result in many farmers having literacy skills that may not be adequate to fully comprehend technical publications, particularly when these are in the official language, rather than a local language. The need for the use of straightforward and plain language is not always appreciated by those producing publications. Secondary school agricultural textbooks may meet this need, though these will always be in the official language. Extension service publications may range from simple booklets, conveying little detailed information, to technical reports. The need for the authors of such material to co-operate with personnel with an understanding of literacy skills, may not always be appreciated (Gfeller, 1997; Langdon, 1997).

In a situation of scarcity, where demand for printed information is high, there may be little opportunity for farmers to express preferences both in language usage and design of materials. However, it could be argued that where there is such scarcity and shortage of resources, there is an even greater need to ensure materials are as appropriate and relevant to their target audience as possible. There is a need for the more common 'top down' approach of development training materials to change to encourage farmer to farmer sharing, local experimentation and the use of relevant indigenous knowledge (Scarborough et al, 1997).

3.3 Farmer-to-farmer sharing of information

3.3.1 Collective action and decision making

Eyben and Ladbury (1995) comment on how 'classic development theory' has centred around community action in small-scale traditional village society where homogeneity of common interest is assumed, together with the community's willingness to co-operate in implementing development projects. However, this idealised notion of community may prove a real barrier to understanding the nature of participation. Within

any village there will be different groupings based on gender, skills and livelihood, wealth, caste, age, land ownership, ethnic groupings, educational status and access to influence and political power, not to mention more personal linkages through character, kinship and friendship.

Oakley and Winder (1981) discovered in all the participatory projects they studied in India and Latin America that effective social development work was based upon group as opposed to village or community development. Burkey (1993) suggests the formation of clearly defined groups may reflect a dissatisfaction with the practice of community or village focused development. Though social groupings have always existed, there is evidence of a rapid growth in the number of social groups in the past two decades noted by Melucci (1992) and Forsyth (1983). This process is perceived to bring benefits not just to those who are members through the social and practical progress they may bring, but also to outside agencies who see them as a cost-effective and convenient entry point for reaching larger numbers of people to provide support or training.

Whilst groups may take longer to assess the value of new ideas in agriculture than individual 'contact farmers or innovators', ultimately they may prove of far greater significance in the effective introduction, flow and application of useful exogenous information. A relaxed group situation with open discussion may allow some members to experiment without the fear of ridicule from other members. The process of translating and discussing printed information within a group setting may lead to a deeper knowledge and fuller understanding (Langdon, 1997). However, information shared through translation will only be useful if the translator's understanding and linguistic skills are adequate.

The subsequent openness of group members to new ideas and their support of members who implement or adapt such information, may well be substantially enhanced. Garforth and Munro (1995, p 13) comment that through association, people *'find a strength, an ability to generate change that they could never achieve on their own.* 'People may be better able and inclined to take more risk as a collective unit than as individuals. Members who meet together over a number of years may do much to encourage each other, to build up trust, share skills and increase their confidence, both as individuals and as a unit. But as Rowlands (1995) observes, even to participate in a group, you require a minimal sense of your own abilities and worth, and you need to overcome the major obstacle of finding time to participate. It may be difficult for the poorest and least confident members of a community to become involved in groups.

3.3.2 Information channels

A study in Mali (Simpson, 1994), found that farmers were over five times as likely to

get information on agricultural innovations through 'informal' channels than from those of the formal research and extension systems. Women were more than twice as likely as men to receive their information from such informal information sources. For men, kinship sources were closely followed in importance by friends, neighbours and persons in the market place. Women, with less free time for socialising, received most of their information through kinship ties and also members of their various work groups. Farmers participating in organised efforts to promote farmer to farmer exchanges reported immediate benefits in terms of increased knowledge of new varieties and, more importantly, observed a rise in self-confidence and curiosity (Simpson, 1994).

Ramirez's (1997) recent research in the Philippines, Ethiopia and Peru studied communication linkages between researchers, the extension services, local providers of information and farmers using the Rapid Appraisal of Agricultural Knowledge Systems (RAAKS) methodology developed by Engel et al (1997). Strong horizontal linkages were revealed within the separate groupings of farmers, extension staff and researchers but the vertical linkages between these different groups were very weak, confirming Simpson's findings.

Brown (1991) suggests that gauging information flow could provide a meaningful and less subjective indicator of social development than present methods used to examine the degree of empowerment within communities. The flow of such information should include not only the exogenous information systems available to local people, but also a wide range of indigenous sources of information. He suggests several key indicators of social development, including the diversity and range of information flows, the permeability and diffusion of information and the relationship between information flows and decision-making.

This research has drawn on Brown's suggestion of examining information flow, highlighting printed information as just one element of an overall flow of information for grassroots farmers.

3.3.3 Gender influences in information flow

It is estimated that women typically carry out 70% of agricultural activity in developing countries, that 40 to 50% of households are female headed, and that in a third of households, women provide the main income (Creevey, 1996). Attitudes which marginalise women clearly make little sense. However, extension services often direct much of their information sharing role towards men. The assumption that information delivered to male farmers will be passed on to their wives is largely incorrect and demeaning. Research in Nepal by Subedi et al (1996) illustrates this point. It revealed strong horizontal communication patterns between males, but very weak communication patterns between males and females.

Research carried out among rural women in Nigeria by Eboh (1993) found that their access to information via extension agents was minimal and 75% of those interviewed either did not know or had never benefited in any way from their extension agent. Their major source of information was from farmers' organisations, either through membership or through friends who were members. Husbands were also a source of information but of much less significance. The lack of access to, and poor quality of education for girls continues to inhibit their awareness and confidence. Women may choose collective action in women-only groups to provide them with the confidence, opportunities and influence in decision-making that their individual situations deny them.

3.4 Definition of locally generated materials

Locally generated materials (LGM) are of particular interest in this research in that they may have great potential to meet the needs of grassroots farmers for information.

Rogers (1993) lists locally generated materials as having a number of benefits, however poorly produced:

- They add to the motivation of those who use the materials.
- The contents are relevant to the local situation.
- Producing the materials itself promotes further learning.
- The processes involved lead to great increases in confidence building and empowerment.
- They encourage the use of literacy skills.

Rogers does not define the term 'local' and indeed it is hard to give categorical definitions. However, for the purpose of this study, 'local' will refer either to a clearly defined section of population (eg: all farmers reached through a district extension office) or else to an ethnic grouping, usually defined by language usage, in a distinct regional area. Few indigenous

African languages are used as official languages, some exceptions being Kinyrwanda and KiSwahili (which is not a true indigenous language and covers many ethnic groups), so this definition would rarely extend to a whole country. In many cases, locally generated materials will refer to small scale, low cost materials. However, if use of a distinct language for a large ethnic group is included in the definition, this will occasionally cover a much larger target group and may include materials produced and translated outside the target audience area.

Such materials need not be printed information, they can also include posters, hand written notes or duplicated news sheets. Their actual production may be viewed as a measure of empowerment, but it is also likely that their usage may encourage the empowerment of rural people's associations who benefit from them. At their best, locally generated materials may incorporate the use of local languages, the support of adult education and literacy promotion in the local languages and the promotion of a sense of pride in people's indigenous culture and traditions.

Training courses and adequate books and manuals on the production of locally generated materials are extremely scarce. This is an area which does not fit comfortably into any one neat definition or subject heading. It has links with post-literacy materials, the promotion of indigenous knowledge, the promotion of local languages and with non-formal adult education. The networking of individuals producing locally generated materials and the sharing of their insights, skills and experience is piecemeal and fragmented, if indeed it takes place at all. Even though such groups may work in local languages there will be some individuals able to communicate within international languages with others both within and outside their countries, thereby enhancing the sharing of experiences and useful subject materials.

The distribution of information in local languages may not guarantee the survival of minority languages. However, if there is a desire to share information in local languages within viable language groupings, and this is backed up by a genuine demand for such information, then the propagation of such information may well enhance cultural identity and empowerment.

Materials which may be used as information sources may include technical information from Departments of Agriculture, cultural stories and proverbs, indigenous knowledge, newsletters both local and international, textbooks and case studies. One major hurdle for those involved in the production of locally generated materials to overcome, is in their perception of the abilities of the target audience. Many rural farmers may have lacked the opportunity for much exposure to formal education. There is a delicate balance between writing simply for people in ways which patronise the readers, and alternatively writing in a straightforward manner for people who have to overcome the barriers of poor literacy levels, comprehension in a second or third language and without the benefits of formal education.

3.5 Summary: Knowledge is power

Hamelink (1993) summarises and combines the 1966 UNESCO declaration of the principles of international cultural co-operation with the International Bill of Human Rights, to describe an 'international human right to knowledge'. He argues that

everyone has the right to knowledge and to have access to knowledge. No one should arbitrarily be deprived of sources of knowledge. The right to knowledge should imply due recognition and respect for the rights and freedoms of others. All peoples and all nations have the duty to share with one another their knowledge. The right to knowledge from this perspective includes the right to participate in public decision-making on the development and utilisation of knowledge.

Hamelink makes no distinction between knowledge and information and the above might read more accurately if information was substituted for knowledge in most cases. However in his assertions of the right to knowledge (ie: information), the point made by cleverly making the link with the Bill of Human Rights is a striking one.

Present reality, Hamelink concludes, falls far short of this ideal and the information sources available to two individuals in different settings provide an indication of the information gap.

3.5.1 An example of differing access to information

Consider the relative situation of innovative farmers in industrial and developing countries who are troubled by an unknown crop disease. Angus, based near York, UK, has many reference books and periodicals in his office, telephone and Email access to a number of experts and diagnosis laboratories, not just within the UK but further afield, a University reference library within 10 miles and immediate access to agricultural suppliers who can deliver chemicals. Within 24 hours Angus can obtain several expert viewpoints both of the disease and its treatment and take action as he deems fit.

Margaret is based in Rwancereere, S W Uganda. She is able to consult other local farmers who may be equally at a loss. She can send a message to an extension agent via someone who is travelling to Kabale in several days time, knowing that the agent may not visit for several months, especially if their fuel supplies are already allocated for that quarter's budget. She has no books, simply some out of date diploma notes from a nearby farmer which make no reference to this disease. There is no reference library except in the capital city's university, Makerere, 300 miles away, to which she could not obtain access. Her choices are limited to experimenting with local remedies found to be effective against other diseases and asking any visitors who may pass through the area. An accurate diagnosis and the appropriate treatment may be found within one, maybe two years with the subsequent loss of intervening crops to this disease.

Will the assurance that her indigenous knowledge is of value be enough to enable her to make valid choices in such a vacuum? Angus, in contrast, can place his own knowledge and experience alongside a wide variety of viewpoints and solutions. (Based on personal interviews with these two individuals, 1996)

People will struggle to gain more knowledge if they are denied access to relevant information for whatever reason, whether through policy, language ability or lack of funding. Awareness grows with the ability to make choices. Enabling farmers to make their own choices with the support of access to useful printed information may prove empowering.

Design preferences - Bulange Women's Association, Uganda.

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4. Methodology

In order to site the research within the reality both of those providing printed information and those on the receiving end, differing samples were selected for study in three phases:

Phase I A world-wide postal survey of organisations and groups that had previously indicated their provision of grassroots information in developing countries, that were accessed through the *Footsteps* mailing list.

Phase II In-depth qualitative research using participatory techniques and observation with a sample of autonomous farmer groups in Uganda and Ghana, investigating their access to agricultural information sources.

Phase III Informal visits to a sample of organisations in Uganda and Ghana providing printed agricultural information.

The postal survey was designed to examine a number of factors in information access and to reveal details of how information is shared through a variety of methods across a broad geographical distribution. Research with farmer groups both validated information gathered through the postal survey and investigated in more depth, not only issues arising from the survey, but also the formation, goals and operation of farmer groups and their access to agricultural information. Participatory research techniques were used with all groups to analyse the views and experiences of group members. An overview of organisations within the same geographical areas as the farmer groups,

actually sharing or producing agricultural information, helped to reveal the effectiveness of distribution systems and information sharing.

Observations and qualitative data were, whenever possible, codified to enable ease of comparison between different farmer groups. Detailed observations both of physical and socio-cultural factors and of the interpersonal interactions within groups were made.

4.1 Research questions

To understand the actual and potential availability of printed materials for grassroots farmers in developing countries, the following research questions were addressed:

- What sources of agricultural information, including printed material (eg: newsletters, books, etc) and verbal information (information transferred through extension officers, NGO, health workers, etc) are accessible to rural people's associations?

- In what ways do rural people's associations identify and meet farmers' needs for information and skills?

- What is the nature of information flow within rural people's associations and how does it vary according to the nature and structure of associations?

A further set of research questions related to the production of printed agricultural information:

- What is the extent of the role of printed information on grassroots development within rural people's associations?

- What are the key production stages, motivation and source materials employed by organisations producing printed agricultural materials for grassroots farmers?

- Whose agendas are met by locally generated materials; those resourcing them, those writing and producing them or those of the intended recipients?

- To what extent can locally generated materials promote and enhance

literacy skills, particularly within isolated farmer groups?

- What are the key limiting factors in the production of locally generated materials?

4.2 Factors influencing the choice of methodologies used

Every farmer, no matter how remote their situation, is exposed to agricultural information from many different sources. Studying the attitude of farmers to printed information would be of little practical benefit unless this was done as part of an overall assessment of their sources of new information and their preferences. Also of relevance are the factors influencing organisations with the objective of enhancing the sharing of agricultural information through print. The research included a study of such organisations; their motivation, priorities and limitations and how the laws of supply and demand affect the production and distribution of their materials.

4.2.1 Group emphasis

The postal survey and in-depth research focused on examining the work of groups rather than individuals. The postal survey, usually sent to an organisation or group, asked for several people to answer jointly, allowing discussion of the answers. In-depth research selected only groups of farmers. The word 'group' requires clarification. For the purpose of this research, it is used initially as an all-encompassing term for people collaborating towards a common purpose. It thus incorporates teams within a large organisation or government department, small organisations and informal groupings of people.

Initially this focus on studying collective action was selected to investigate the flow of information among farmers and examine the potential of autonomous farmer groups. Later other benefits emerged: farmer groups enabled participatory research exercises to take place with ease as members of well established groups in Uganda and Ghana had few inhibitions about correcting or challenging a statement they did not agree with. They were quick to point out inconsistencies or to confer about an answer, providing validation for information given. It led to fascinating and unexpected details emerging on the social relationships and functioning of farmer groups which have a large bearing on agricultural information flow. Group interviews also allowed a much larger sample population to be incorporated in the research.

4.3 Phase I: Postal survey

A 7 page postal survey was sent to 414 addresses world-wide in 1996, comprising:

- 264 respondents from the 1993 survey who had indicated their adaptation of information from *Footsteps*
- 77 readers who had indicated their involvement in adapting and sharing information through recent correspondence
- 73 *Footsteps* readers selected at random from the mailing list as a control group.

Groups rather than individuals were selected. Only English speaking respondents were included in the survey and only addresses within developing countries selected.[3]

[3] There were a few exceptions when an address used was for convenience, such as mail for Haiti routed through USA and material for broadcasting by FEBA radio in Southern Africa being sent via UK.

4.4 Phase II: In-depth research with farmer groups

Some clear trends emerged from the postal survey indicating areas of interest for further investigation. Postal surveys are unlikely to reveal the delicate interplay of factors which might explain why some groups either ignore or accept and adopt outside information whilst others pass on selected information, and still others take a step further in making the information their own, adapting it to fit their own needs and, in the process, sometimes producing locally generated materials. The second phase of research examined the perspectives of recipients of information rather than those providing information. The second phase:

- explored in depth the sources and types of information accessed by grassroots farmers
- identified the characteristics of individuals and groups who effectively access, use and sometimes share a variety of different forms of information.

The findings of the postal survey influenced the choice of countries for Phases II and III. Survey findings indicated that the situation for available reading materials and

sources of agricultural information was worse in Africa than for the survey respondents as a whole. In addition, Africa is the destination of the majority of *Footsteps* copies. Two countries in Africa were selected both for the in-depth research and the examination of organisations producing agricultural information; Uganda in East Africa and Ghana in West Africa. Both - countries receive a similar number of *Footsteps* copies, both have groups known to be adapting *Footsteps* information and both have English as the official language.

Ghana was selected as an example of a country:

- which has benefited from relative political stability for more than two decades

- where the national literacy programme has received considerable financial aid from the World Bank, DFID and other sources in recent years

- where the Ministry of Education has encouraged the production of local language newspapers and post-literacy readers through training in silk screen duplicators and other methods

- where large areas of the north are more isolated in terms of communication and resource availability.

Uganda was selected for a number of reasons:

- Political and economic instability during the period 1972 to 1986 has resulted in an interesting mix of educational background relating to age within Uganda and led to widespread disruption to adult education of all forms.

- The national literacy programme has been nonfunctional until 1992, without government support for post-literacy materials or local newspapers.

- Parts of N and E Uganda are still quite isolated in terms of communication and resource availability.

Both were relatively stable politically, enabling the research to proceed. In addition personal contacts and invitations to carry out research were available in both.

4.4.1 Variables within farmer groups

The in-depth research investigated a sample of farmer groups, with a wide geographical distribution including the remoter parts of each country where lack of access to information might be more apparent. It provided opportunity to investigate the work, role and influence of group members, the flow and processing of information and the development and use of any locally generated materials. Considerable effort was made to avoid bias. The location of groups was varied within several geographical areas of each country. Many were relatively inaccessible, up to 70km from urban centres, sometimes without any vehicular access. Several were urban or semi-urban, the majority rural. Visits took place throughout the farming year.

The research was ethnographic to the extent that farmer groups were met in their normal surroundings and meeting places and detailed observations made of socio-cultural factors and interpersonal behaviour of group members both within and outside meetings. The researcher has many years of experience in rural Africa and research assistants and translators were all comfortable with rural customs and perceptive of both verbal and non-verbal communication among participants.

The difficulty of attempting to control the number of variables within farmer groups was considerable. However, the number of groups visited was large enough to balance to some extent the natural variations encountered and to make comparisons on key variables which become apparent during the research. Data concerning facilities, economic status of community and agricultural productivity were recorded with extensive use of unobtrusive observations.

4.4.2 Selection of groups within Uganda and Ghana

Groups selected for visits had to meet specified criteria, allowing some control of variation and permitting meaningful comparisons to be made to examine and test the research questions. The following criteria for selecting farmer groups were followed as closely as possible:

- Groups should be autonomous and largely self-regulated (ie: not controlled by a larger organisation).

- Groups should be taken from a wide geographical distribution within the country thereby including different ethnic categories.

- Groups should be more than a comfortable day's journey from the capital city to prevent including 'over-visited' groups.

- Groups should have agriculture as their main focus.

- Groups should have been meeting together for two or more years.

- No attempt should be made to determine whether groups were 'successful' beforehand.

The last criterion was of course extremely difficult to monitor and undoubtedly more 'successful groups' than otherwise were included, if only because these were the ones outsiders were aware of. However, some groups visited were certainly failing or struggling, thus giving some balance in this dimension.

Unless the group name specified they were Women's Groups, it was impossible to know in advance the gender balance of groups. No special emphasis was thus given to gender in the selection of groups. However, emphasis on participatory research techniques ensured that the views of female members within mixed gender groups were heard.

4.5 Research techniques for in-depth research

Research visits of between 2 to 4 weeks were based at either one or two centres in a given geographical location, allowing for several groups to be visited around each centre. Within each geographical region, a contact person able to coordinate and facilitate visits with nearby groups was appointed.

Visits to farmer groups comprised four sections:

- Welcome and introductions with an explanation of the objectives of the visit
- Gaining an understanding of membership, aims, and history of the group
- Transect walks, incorporating some of the members' farms
- Participatory research exercises and group questions.

4.5.1 Group interviews

The initial meeting comprised introductions and explanations. Members were encouraged to relax and to allow everyone the opportunity to participate. Often members showed examples of their work achievements and occasionally performed

dramas or songs. During this meeting the following information was determined through semi-structured interviewing and observation:

- the make up and range of membership
- the role of chairperson and other leaders
- the identity of individuals who played a key role in the group
- relationships and social interactions between group members
- ease with which group members participated in the discussions
- decision making and power structures within the group
- the subject matter and content of typical meetings
- the frequency and siting of meetings
- gender balance.

Opportunity to spend time in farm walks and the timing of a further visit to carry out participatory research exercises were arranged during this initial meeting. The average mean contact time spent with groups in Uganda was 6.7 hours and 3.7 in Ghana, not including travel time and preparatory meetings. The discrepancy in time is largely due to the initial visit in northern Ghana coinciding with the high temperatures at the end of the dry season. The searing heat and the lack of crop growth meant that farm walks were usually omitted.

4.5.2 Participatory research exercises

SEASONAL CALENDAR

This was used as an introductory exercise. As well as providing important background information, the exercise helped members to relax and actively participate. Members were asked to place beans on a seasonal calendar. Three topics were examined: ill-health, farmwork load and income from farming.

INFORMATION SOURCES

The exercise relating to sources of agricultural information was probably the most crucial component of the research. Group members were asked to consider all the different ways in which they gained new ideas about agriculture. Some prompting was given to encourage people to consider every possible angle. Large cards were prepared which gave a visual picture of the information source and the name in the appropriate local language. Ideas proposed by other groups were suggested and members could agree or disagree with these and add any of their own. Agreement had to be reached before any source was added. One person could not impose their ideas on the group.

Once ideas were exhausted, members were then asked to rank the sources, firstly in order of the frequency with which they used them, and secondly in order of their trust in the source. Only five sources could be selected for this final ranking. Respondents were often asked to clarify their choices and any apparent inconsistencies. The exercise engendered considerable debate, lively arguments and much considered thought in the ranking.

INFORMATION FLOW

Following the thought-provoking discussion on information sources, groups were asked to consider one or two new ideas in agriculture previously introduced by a group member. Once an idea was agreed, members were asked to think back and consider where the idea had come from, who had tried it out first, with what consequences and resultant sharing within the group.

TIME LINE

A time line was used to gain an insight into how members perceived their past and present situation in relation to security within the country and their own economic situation. Four to five key periods during their country's history (coups, famines, change of government or drought, for example) were considered, beginning with independence. This information provided background information about significant changes in their communities and invariably led to discussion about the aims, progress (or otherwise) of their group.

4.5.3 Quantitative measures

LITERACY AND EDUCATION LEVELS

An attempt to gauge literacy and educational levels was probably the most intrusive component of the research. In consequence it tended to be done toward the end of the exercises, when people were most relaxed. Answers were indicated by show of hands. Questions were asked about the educational experience of members, their literacy in both local and national language, their access to radios and newspapers and their ownership of printed materials in agriculture. The level of education reached was established by asking firstly, how many had attended primary school and, secondly, how many had attended at least two years of high schooling. The measure of literacy used assumed someone could both read and write a letter in the language. Members were quick to validate responses, making sure that reticent members were included. Results were worked out as a percentage of the members actually present at the time of questioning.

ACCESS TO MASS MEDIA SOURCES

Similar questions were also asked by show of hands, concerning the access of the members to radios, newspapers, and any sources of printed information on agriculture. Members who owned printed agricultural information were asked for further details about the nature of the information, whether it was a leaflet, booklet, newsletter or book, allowing further analysis of these results.

DESIGN EXERCISE

This exercise asked group members to consider a number of page design layouts. Material used had been taken from *Footsteps* and sample pages were reformatted to provide a range of typeface sizes in conjunction with a range of design layouts including blank text, boxes, illustrations and cartoons. Appendix F shows some sample pages. Participants were asked for preferences concerning text size, page layout, use or otherwise of illustrations and cartoons. Finally an overall preference was requested. This exercise was carried out only with groups who indicated their access to some sources of printed information as it required some familiarity with reading. In practice it proved very hard to prevent people reading the information instead of providing a quick overall impression.

4.5.4 Use of participatory approaches

The use of participatory techniques proved enjoyable, stimulating and thought provoking for those taking part. Both participants and research team members expressed appreciation and enjoyment of the time spent in research exercises. Participants were offered no tangible reward other than feedback from the research findings. Further appreciation was provided through the subsequent provision of relevant information, the sending of group photos and informal networking with other groups or relevant NGOs. It may be of interest to note that such was the enjoyment of participants that several farmer groups wrote letters of thanks for allowing them to participate.

4.6 Phase III: Regional overview of organisations sharing agricultural information

A number of organisations producing printed agricultural information in Uganda and Ghana were visited, in order that the access indicated by farmer groups to printed agricultural information could be compared with the reality of what was actually

available in their country.

No attempt was made to make an exhaustive search for every possible organisation, but rather to cover a representative sample. Particular emphasis was given to sources mentioned by farmer groups from Phase II. The extent of their activities was examined, together with information about any kind of locally generated materials, and the reference materials they had access to. In Uganda these regional locations were Lira (N Uganda), Iganga (E Uganda) and Mbarara (SW Uganda). In Ghana they included Wa (NW Ghana), Wenchi (Central) and Ho (East).

Organisations visited included national and regional government departments for agriculture, forestry or extension work, research stations, a wide range of both national and international NGOs, church development agencies, newspapers, radio stations, adult education organisations, printing presses, credit organisations, literacy and environmental groups. Visits were informal as the intention was to discover the types of agricultural information they were making available to farmers. It was felt that a relaxed visit to minor officials, who often made an unfruitful search for any kind of previously published material, would provide a more honest appraisal of the actual availability of materials for farmers. Official pre-arranged visits in the capacity of an expatriate editor might well have yielded more impressive results, but would have been unlikely to yield as clear a picture of available materials and priorities. In a few instances this approach was unsuccessful and indeed one international agency refused entry without an official appointment.

4.7 Data analysis

4.7.1 Postal survey

Data for all samples from the postal survey was coded and analysed with the statistical package SPSS.

Whenever possible, data for the in-depth exercises was entered either as straightforward numerical data or was coded as an attitudinal statement. Coding for qualitative data was done only after most research visits had been made to ensure that all relevant insights and contingencies were covered (Oppenheim, 1992). The coding was based on notes and observations written up either during or immediately after meetings. Most data resulted in a straightforward frequency analysis. Cross-tabulation was used where a statistical relationship was likely.

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5. Phase I: The findings of the postal survey

The postal survey sought to establish a broad base of facts about groups and organisations known to share information at grassroots level and to determine areas of interest upon which to base more in-depth research. The overall response rate to the postal survey was 49%; a total of 414 forms were sent out, 203 responses were received of which 6 were invalid.[4] Survey responses were returned from 49 countries (they were sent to 61 countries). Appendix C shows the national distribution of survey responses.

[4] Invalid responses included one group saying their work had changed, one respondent had retired, one form was incomplete, two groups were no longer known at that address, one letter of apology believing it was too late to return the form.

Encouragingly, several organisations commented that they had not only enjoyed completing the questionnaire but that it had helped them reconsider their mode of operation. One even said that filling in the survey form had helped them rethink their priorities in producing materials.

5.1 Analysis of survey respondents

The introductory letter requested that several people should complete the survey together whenever possible. Responses indicated a high level of organisational coherence with 75% of respondents completing the form with two or more respondents. A total of 530 people participated in responding to the survey questions.[5]

[5] 15% of groups had some male expatriate involvement (14% with one and 1% with two). 18% had some female expatriate involvement (16% with one and 2% with two females). 2% had one female and one male expatriate.

5.1.1 Nature of organisation or group

In examining the nature of the organisation or group, questions were asked about the origin, size, financial status and the facilities available.

The majority of respondents (67%) worked in a larger organisation, 13% indicated they worked in an informal group, and 10% worked in a small group with less than 5 members. 2% of those who responded indicated that they worked on their own, though the survey had gone only to addresses indicating a group or organisation. NGOs comprised over half the respondents, of whom 29% indicated they had a religious basis. A further 8% were working with denominational religious groups (eg: at parish, circuit or diocesan level). The high percentage of religious based respondents reflects the Christian basis of *Footsteps.* Government departments or organisations comprised 10% of the respondents, with a further 7% involved in training (including training institutes, universities and colleges) or research. 5% of respondents were involved with literacy or radio broadcasting.

Information regarding the financial position of the group revealed a considerable discrepancy as many groups ignored salaries and operating costs in their budget estimations. Most just indicated the amount available for carrying out their activities, thereby invalidating this data. It is of interest to note that 24% of groups indicated they had either no income or less than US $50 a year and a further 18% had less than US $1,500 a year.

A more accurate picture of the grouping's financial status perhaps comes from the description of their office facilities. 20% of groups had no office facilities of their own at all, while 21% had very limited facilities, lacking a typewriter or computer. 42% of respondents thus had little or no income and, correspondingly, 41% had either no facilities or very limited facilities.

Cross-tabulations examining the relationship between the working situation of the groups and their facilities revealed a highly significant relationship. Few informal groupings had good facilities, a third of religious and church groups had very limited facilities, with a half of NGOs lacking facilities. Government and teaching establishments were considerably better equipped. A statistically significant linear relationship existed between income and available facilities.

Cross-tabulations were also carried out to investigate any relationship between regions of the world and the income of the associations. The majority of respondents with limited office facilities were found within Africa, whereas Asian respondents, in comparison, were significantly better equipped.

5.1.2 Basis for categorisation

Responses to the above questions were used to categorise organisations and groups as detailed in Section 2.3 (page 4).

TABLE 1 - Formation of group in postal survey

GROUP FORMED THROUGH...		
an individual's enthusiasm	45	(23%)
community awareness of needs	40	(21%)
support of local government	22	(11%)
work of an outside agency	14	(7%)
co-operative or credit scheme	2	(1%)
other	9	(5%)
Total	**194**	**(100%)**

Missing data 3 cases

The categories were based upon information concerning the nature of the group, their access to facilities and, sometimes, reference to group income for postal survey respondents. The three clear divisions made were refined during in-depth research in Uganda and Ghana where correlations concerning geographical location and objectives were further examined. The frequencies for postal survey respondents were as follows:

Category A
Large NGOs and Government (GOs and NGOs)

114 58%

Category B

Grassroots Development Organisations (GDOs)

61 31%

Category C

Rural People's Associations (RPAs)

22 11%

Respondents therefore included larger, well resourced organisations more usually associated with the provision of information, particularly in printed form, and also respondents from either small, informal, poorly resourced groupings or small organisations with either no income or very low income, not normally considered likely sources for the provision of information. Unless otherwise indicated, results will be given for all respondents but, where relevant, data will be analysed with reference to these categories.

5.2 Formation and aims of groups

When questioned about the formation of their organisation or group, nearly a quarter of respondents stated that it had begun through the enthusiasm of one individual. **(Table 1)**

The number of organisations with a religious basis was considerably higher in Africa, accounting for 40% of respondents, compared with 21% in Asia. In Asia the role of individuals was significantly more important, with 33% of respondents selecting this compared with 16% in Africa ($p<0.007$).

Respondents were asked to indicate their three main aims in order of priority. Two major aims of groups were concerned with improving the situation within their target communities, by improving economic well-being (stated by 60%), and health (54%). Passing on information to the target communities was seen as the third most important aim (47%), with building up the knowledge of group members (30%) in fourth position. Aims which required either a high level of organisation or empowerment such as marketing produce co-operatively, gaining credit and seeking justice received a surprisingly low ranking.

5.3 Socio-economic status of target communities

A number of questions sought to establish the nature of the target communities with whom the groups worked. The target communities were predominantly rural (73%). A further 20% of groups worked with both rural and urban communities; only 7% worked solely with urban communities.

Target communities were characterised by high levels of poverty and insecurity, with the majority having no regular income (52%) and few farmers (14%) owning two or more hectares of land. On cross-tabulation, more farmers owning their own land were found in Africa, with more landless labourers in Asia.

Less than a quarter of the target communities were well provided with good quality, inexpensive and accessible health care facilities. The use of traditional healers as commonplace was mentioned by 15% of respondents.

5.3.1 Limiting factors for farmers

Findings from the survey indicate that the overriding limiting factor for agriculture in the target communities was a lack of resources to enable farmers to purchase necessary inputs. Five other limitations received high rankings. Of these key limiting factors, only two - unreliable climate and poor soil fertility - could be attributed mainly to natural causes. A further two - land shortages and poor markets - were likely to require political or economic intervention before significant improvements could be made. Poor access to relevant agricultural information and training was ranked third. Given that this is the one factor out of these six which could be most significantly improved through cost-effective and replicable measures, this provides an indication of the potential significance of this research.

Zangbogu group meeting, Ghana.

5.4 Sharing of Information

This section examines how groups passed on information, their motivation for sharing information, the methods used, the languages used and the kind of people involved in sharing information.

5.4.1 Methods used to pass on information

Few organisations used only one method to pass on information to their target community. The majority used a number of information sharing methods. **(Table 2)**

Half of the groups and organisations indicated they had been trained, not necessarily

through outside workshops or more formal training, but commonly through in-staff training.

The majority (97%) shared information in local languages, some also sharing information in both national and local languages. Small, informal group training was the most commonly used method (72%). Over half used posters, charts and drama or role plays which indicates a willingness to use audiovisual and participatory methods of sharing information. The use of puppets and flannelgraphs by respondents was not widespread, particularly in Africa.

TABLE 2 - Methods employed by postal survey respondents to share information with target community

	FREQUENCY-USING LOCAL LANGUAGE	FREQUENCY-USING NATIONAL LANGUAGE	OVERALL PERCENTAGE USING METHOD
Small group teaching	131	10	72%
Drama and role plays	99	5	53%
Teaching notes	78	23	51%
Posters or charts	78	18	49%
Production of booklets	55	8	32%
Production of literacy materials	45	8	27%
Newsletter production	31	10	21%
Radio programmes	23	6	15%
Use of puppets	18	1	10%
Use of flannelgraphs	17	2	10%

Out of a total of 197 groups

Over half (51%) produced teaching notes of some kind, though sometimes these may be

material prepared by a head office, since nearly 12% were not in the local language (comparing with an average of 3% for all other methods). The number of organisations using local radio to pass on information indicated a large potential target audience for information. Nearly a third produced booklets and a fifth produced newsletters. Also of interest was that a quarter either specifically produced literacy materials, or indicated that their materials might be suitable for use with literacy training. Since post-literacy materials are often in very short supply, this indicates that 'real' materials may provide useful sources for literacy work.

Over half (54%) of the postal survey respondents used just one local language to share information. Over a quarter (27%) used two languages, one used 12 tribal languages and another 13 tribal languages. A total of 154 different named languages (not all languages used were named), were being used by 197 groups to pass on information to target communities. The majority of these (57%) were African languages, with 33 groups using KiSwahili. For a full list of the languages see Appendix D.

5.4.2 Identification of information needs

Respondents identified the information needs of their target groups by a number of different means. Recent developments in the use of participatory techniques which encourage communities to prioritise their own needs, may have been incorporated into the work of some respondents. Over 40% of groups mentioned community participation in the identification of information needs. In just over a quarter of situations 'outsiders' appeared to play a major role in determining information priorities and needs for the local community. **(Table 3)**

TABLE 3 - Identification of information needs of target communities by postal survey respondents

	AGREEING	
Community identifies needs together	49	(27%)
We prioritise the needs of the community	31	(17%)
Our experience elsewhere helps us to identify needs	16	(9%)
Community leaders identify needs	15	(8%)
Outside experts help us to identify priorities	6	(3%)
Key individuals in the community identify needs	5	(3%)
Several of the above	61	(33%)
Total	183	(100%)

Missing data 14 cases

5.4.3 Motivation

The difference between simply having access to useful and relevant information, and the desire to pass it on to others who might find it of use, is considerable. An examination of what motivates people to take this step is of great interest. Are people motivated, for example, by a sense of pride in their own knowledge, by the 'ignorance' of those they wish to help, by religious commitment or by a sense of injustice? Or are the needs of the community in requesting information, driving the process? **(Table 4)**

Motivation of survey respondents in sharing information

	AGREEING	
People have so little information	75	(39%)
Community requests this information	67	(35%)
To pass on useful source materials in local language	61	(32%)
Group members want to share their skills	57	(30%)
Our head office directs us to share information	19	(10%)
Various other reasons[6]	17	(9%)

Missing data 4 cases

[6] Among the other reasons given were: helping people make informed decisions (6), developing better community health care (3), Christian evangelism, creating environmental awareness (2), sharing skills with refugees in preparation for resettlement, helping develop a positive outlook on life and finding the most appropriate solution to rural poverty.

Few groups (7%) appeared to be motivated by their organisation's policy directing them to pass on information. This indicated a considerable degree of self direction and confidence among survey respondents. The results suggested that sharing information is not strongly driven by demand for useful information by target communities. Rather, the desire to share information was largely driven by altruistic reasons for nearly half the respondents, and by their awareness of the needs of the target community both for more information, and for more accessible information. A fifth stated that group members wanted to pass on and share their own acquired skills, implying their confidence and pride in the knowledge they have gained.

5.4.4 Education and literacy levels of members

Given that a certain amount of confidence in one's own knowledge is required before sharing information with others, a number of questions were asked to determine the educational background of those involved in training of some sort. No differentiation between formal and informal training was made. **(Table 5)**

TABLE 5 - Cross-tabulation between categories of postal survey respondents and mean percentage levels of education among staff or group members

LEVEL OF EDUCATION	GOs and NGOs		GDOs		RPAs	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Primary schooling	86%	83%	83%	85%	76%	60%
High school - 2 years at least	78%	74%	57%	53%	51%	44%
College	36%	31%	31%	27%	25%	14%
Degree	37%	28%	16%	12%	21%	5%
Literate in English	72%	68%	77%	71%	66%	56%
Literate in local language	80%	78%	87%	83%	73%	66%

Education or literacy levels for women were consistently lower than for men, the one exception being that of primary schooling in GDOs. In nearly all cases education and literacy levels corresponded to income levels of groups, higher for GO and NGOs and lowest for RPAs. However, literacy levels in local language were higher in GDOs and a surprising number of men held degrees in RPAs.

5.5 Access to sources of information

The sources of information fell into two main divisions. Those of major importance were books and information owned by the group, workshops and training sessions attended and local individuals whose knowledge was respected (this included both 'outside experts' and 'indigenous knowledge experts'). **(Table 6)**

Table 6 - Information sources of postal survey respondents

	GOs and NGOs	GDOs	RPAs	TOTAL
Newsletters and books	42%	38%	48%	41%
Local individuals	11%	19%	8%	13%
Government resource person	9%	13%	14%	11%
NGO within country	8%	9%	12%	9%
Workshop or training	7%	5%	7%	6%
Experts	5%	3%	4%	4%
Radio or newspaper	3%	4%	1%	3%
Research station	4%	1%	0%	3%
Library or resource centre	2%	3%	0%	2%
Knowledge within community	3%	1%	0%	2%
Networking	3%	0%	1%	2%
Religious leaders	1%	1%	4%	2%
Contact organisation overseas	2%	1%	0%	1%
Other sources[7]	0%	2%	0%	1%
Total	100%	100%	100%	100%

[7] Other named sources with a ranking of less than 20 included: information from commercial companies, group meetings, the Bible, experience, travel, tours, information from head offices and distance education.

Sources of significant but lesser importance included government resource personnel, contact through letters or visits to organisations both within country and overseas and use of a nearby library or resource centre. Interestingly, minor and little used sources included the ordering of relevant books which in well resourced countries would be expected to come near the top of the list. In addition the use of libraries and resource centres received a very low ranking. However, their seeming irrelevance may rather have reflected their lack of availability (Menou, 1991; de Horowitz, 1993; Mzeyimana-Kerpen.1993).

Surprisingly, printed information owned by the groups varied little between the three categories and was almost as important for small informal groups as for large, well funded groupings. However, RPAs had virtually no access to resource centres or the opportunity of purchasing books. Access to training workshops was higher for GOs and NGOs, presumably since they were more likely to be informed of the availability of such courses and secondly, were more likely to have the resources to enable staff to

attend. Government resource people such as extension agents and local knowledgeable individuals were of considerably more importance to RPAs and GDOs than for larger GOs and NGOs. All categories of groups indicated that they made good use of letters to organisations. GOs and NGOs had much better access to resource centres and were more likely to be able to purchase necessary books. They also tended to be less dependent on government resource people and other organisations. The overall ranking places books and other printed information in priority of place in terms of information sources used, for all three categories of groups. This was a finding of some significance for this research.

Four out of the five most important sources were exogenous to the respondents and, given that individuals with expertise might be both exogenous or indigenous to groups, this figure is may be slightly higher. Outside information was thus seen as highly significant and valued by all categories of groups. These results gave no indication of the value attached to indigenous knowledge from outside the

Missing data 6 cases local community which may be shared either by development workers or local newsletters and the comparable value attached to what could be termed 'scientific' information from outside sources. This was an area which needed to be further investigated during the in-depth research.

5.5.1 Satisfaction with information access

Given the focus of the research on printed information, postal survey respondents were asked to assess the availability of reading materials within their target communities. **(Table 7)**

Some interesting observations emerged here. Firstly only a tiny minority of respondents (3%) saw their target communities as having good access to reading materials. Nearly half (41%) lacked good access to reading materials of any kind. Nearly a quarter believed their access was restricted either through lack of purchasing power or the lack of material in local languages. Nearly a third were believed to have no interest in reading materials because they were not literate. It is worth noting that these were the perceptions of the organisations providing information; not of the target communities themselves and these perceptions needed further investigation during Phase II. These figures, admittedly from a sample group, nevertheless may serve to indicate the extent of the famine of printed information in many developing countries and to highlight the difficulty people have in maintaining literacy when there is so little to read.

TABLE 7 - Reading materials available to target community from postal survey

Good access to reading materials	6	(3%)

Good supply available but few have funds to purchase	20	(11%)
Good supply of English material but little in local language	20	(11%)
Few are literate so little interest in reading	58	(31%)
Few reading materials of any kind available	75	(41%)
Other comments[8]	6	(3%)
Total	**185**	**(100%)**

Missing data 12 cases

[8] Other comments included: no materials on the subject of development, an increasing interest in vernacular languages and unawareness of how to order materials.

5.5.2 Information access of respondents

(Table 8) A quarter of respondents (25%) were satisfied with the information they recently obtained on a specific topic. Those who lacked access to useful contacts were very few, maybe revealing that everyone knows somewhere to turn to for advice but would often like more contacts. 14% lacked funds to purchase relevant books and information, a figure that was significantly higher for GDOs and RPAs. Overall, 75% were dissatisfied with their information sources for one reason or another.

TABLE 8 - Satisfaction towards information access of postal survey respondents

Obtained some information but not enough	74	(42%)
Found enough useful information	45	(25%)
Lacked funds to purchase useful information	24	(14%)
Information obtained was not relevant	11	(6%)
Lacked contacts to find useful sources	6	(3%)
Several of above	17	(10%)
Total	**177**	**(100%)**

Missing data 20 cases

When cross-tabulated with income and region, there were no significant relationships apparent -revealing that perceptions of information access were not always linked with income or geographical location. When the three categories were looked at

individually, surprisingly, it was the RPAs who seemed most content with their access to outside information; possibly a reflection that their horizons were limited by the available sources in their immediate area?

5.5.3 Presentation of information

(Table 9) Part of the postal survey sought to probe respondents' attitudes towards the manner in which information was presented. The majority of respondents found access to outside information a problem, with two thirds unable to obtain information in the local language and just over a third finding information too expensive or lacking good contacts. Just under a third (27%) found the available information difficult to understand. Only a quarter (24%) were relatively well-resourced with adequate access to information and often without enough time to read all available information. Only 15% of groups had funding to enable them to purchase necessary books.

TABLE 9 - Attitudes to presentation of information of postal survey respondents

	GOs & NGOs AGREEING	GDOs AGREEING	RPAs AGREEING	TOTAL AGREEING
Information available but not in local language	61%	63%	63%	62%
Information available but too expensive	36%	47%	53%	41%
Hard to find information and contacts	36%	46%	58%	41%
Information available but difficult to understand	23%	31%	42%	27%
Access to information but little time to read	33%	10%	16%	24%

Funding available to order necessary books	18%	17%	5%	16%
Information is not a problem	15%	15%	11%	15%

Missing data 8 cases. 7% added additional comments.[9]

[9] Information available is often not very appropriate (3), few people read so little is available (2), information is often out of date (2), information is available but too expensive to copy (1), would like to develop resource centre (1), need access to computer technology (1) and people have no tradition of researching information (1).

When the three categories are compared, all RPAs lacked funding to purchase books and found material more difficult to understand. They also found it hardest to find good contacts. Staff in GOs and NGOs were better able to make good contacts, though they had considerably less time to read available materials.

When cross-tabulated with the number of expatriate staff, some significant differences did emerge. For example, very few groups (5%) with expatriate workers agreed that information was either too expensive or difficult to understand.

5.5.4 Newsletters

Newsletters, both national and international, are one source of outside information which is often available free of charge, irrespective of geographical location. Access to *Footsteps* newsletter was a common factor amongst all respondents. The role of newsletters proved a significant one in providing information. **(Table 10)**

TABLE 10 - Access to newsletters by postal survey respondents

None	3	(2%)
Between 1 and 3 received	71	(37%)
Over 3 newsletters received	106	(56%)
Too many - no time to read them	10	(5%)

Total	**190**	**(100%)**

Missing data 7 cases

These results are interesting when compared with the average information overload common in industrial countries (Hamelink, 1995; UNDP, 1998). Of the 5% who reported they lacked time to read the newsletters they received, nearly all were in high income groups. The distribution of newsletters was similar for all three categories.

Readers were asked to name the two most useful newsletters they received. A total of 81 individual newsletters were named - the majority of which were only mentioned by one reader - and they included 31 newsletters in local languages. Not surprisingly perhaps, as it was the one they all had in common and because this might be an area where respondents were trying to include the 'right' answer, 123 listed *Footsteps* as one of the most useful. **Table 11** indicates those newsletters mentioned by 5 or more respondents.

Newsletters were a valued and regular source of new information.

TABLE 11 - Newsletters found most useful by respondents of the postal survey

	FREQUENCY
Footsteps (Tearfund-UK)	123
Ileia (Netherlands)	16
Child Health (AHRTAG-UK)	15
Spore (CTA-Netherlands)	13
ECHO Development Notes (ECHO - USA)	9
Contact (WCC-Switzerland)	8
Heifer International (USA)	7
AIDS Action (AHRTAG-UK)	6

Together (World Vision - Australia)	5
Total of remaining 72 newsletters	96
Total	**298**

Respondents could mention two newsletters

Newsletters were grouped together under the categories and sources shown in **Table 12.** This serves to illustrate the considerable range of available newsletters. A third of newsletters were from local or regional sources within developing countries, the remaining two-thirds from industrial country sources. All newsletters listed that were familiar to the researcher, were known to be available free of charge to those working in developing countries. Given that newsletters were among the first sources of information listed as most useful and that so many were freely available, it was apparent that they were an extremely valuable and regular source of new information.

TABLE 12 - Categories of newsletters received by postal survey respondents

Local language newsletters	31%
Health newsletters	15%
Literacy, development and education newsletters	16%
Agricultural newsletters	14%
Environmental newsletters	6%
Water and sanitation newsletters	6%
Forestry newsletters	5%
Medical journals	4%
Food technology	3%
Total	**100%**

5.5.5 Use of information from *Footsteps*

86% of respondents indicated that they had used information from *Footsteps* articles, of which over half had used three or more different ideas and nearly a fifth too many to mention. Of these, 54% provided clear evidence of the uptake of this information and a further 22% felt it likely that some people had implemented the new ideas but were unsure of the evidence to prove this. More research would be needed to investigate how often further supplementary information from other sources was also available to

respondents. However, these findings indicate a readiness to implement new ideas from a printed source in isolation from other sources of information.

The final part of the postal survey looked only at those groups who were involved in production of printed materials and was completed by 60% of respondents. The results of this are given in Section 7 which looks at the production of locally generated training materials (page 55).

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6. Phase II: Information provision within farmer associations in Uganda and Ghana

The research in Phase II examined a sample of farmer groups for whom postal survey respondents might typically target information and materials. The research examined farmer groups' access and preferences to agricultural information sources and printed materials. The research took place in Uganda, East Africa during 1996 and Ghana, West Africa during 1997.

Farmer groups visited included both RPAs and GDOs. The research could have been restricted to RPAs only. However, firstly it was not always possible to determine prior to a visit whether groups fell within the criteria of a RPA or a GDO and secondly, more successful (and therefore often most interesting) RPAs might eventually be classified as GDOs as their level of income and organisation increased. In Uganda, 32 RPAs and GDOs were visited with a total of 486 group members participating in group interviews and participatory research exercises. In Ghana, 43 RPAs and GDOs were visited with 731 people participating in the research. Out of an overall total of 75 groups, 65 were defined as RPAs and 10 as GDOs.

6.1 Background to socio-economic situation in Uganda

6.1.1 Ethnic and cultural background

Uganda has 14 main ethnic groups, many minor groups and a total of 43 different languages and dialects - not all of them written. Luganda and KiSwahili are the most widely spoken African languages. Bantu related languages are spoken by over 60% of the population, mainly in the South and West while the northern population speaks Nilo-Hamitic language groupings (Lubwama, 1991).

6.1.2 Socio-economic conditions

In 1995 Uganda's population was estimated at 18.7 million with an average per capita annual income of US $ 190 *(Economist,* 1995). The economy is dominated by agriculture which provides a direct livelihood for nearly 90% of the population *(Economist,* 1998). Millets, maize and plantains are the most important food crops, though millets alone provide the staple in the drier northeast. Agricultural exports consist almost entirely of coffee with some cotton and tea. The Owen Falls Dam and Hydro Electric Power (HEP) station provide virtually all Uganda's electricity and are another source of exports since a third of the electricity is exported to Kenya.

The present government's economic policy is the rehabilitation and development of a self sustaining mixed economy, with GDP growth rate of at least 5% per annum. Inflation has been below 5% since 1994. Recent World Bank statistics reveal Uganda to be the sixth fastest growing economy in the world, despite being placed amongst the 20 poorest countries in the world (UNDP, 1998).

6.1.3 Education and literacy policies

The Government of Uganda recognises 23 languages but only 10 languages are in official use by the government and on local radio broadcasts. English is the national language. Nearly 40% of the population is non-literate (UNDP, 1998).

During the colonial administration an extensive infrastructure of primary and secondary schooling developed. The emphasis was on achieving academic excellence to provide an educated work force able to fill key posts in administration. For children able to pass the selection procedures of the academic system, costs were low, with the result that many older Ugandans received a good academic education. During the political disruption of the 1970s and 1980s, government funding for education was erratic and severely cut. Teachers might go for months or even years without pay, surviving on produce from their gardens and continuing their work only out of their belief in the value of academic education and their commitment to young people (Furley, 1988).

In the 1960s there was a large government literacy programme working in 22 languages with mobile and permanent lending libraries. Though top down in operation, with primers and reading materials translated from English, it proved reasonably effective in reaching adults. From the early 1970s this ceased to function for nearly 20 years until in 1992 a new national literacy programme known as the Integrated Non-Formal Basic Education Pilot Project (INFOBEPP) was begun, working initially in just a few languages (Okech, 1995).

Present policy is to provide education for all children, not just for the more able and a huge; programme of

school building began in the 1980s. However, with the halving of the education budget in recent years there is now a dearth of equipment, notably textbooks, and trained teachers. Though free primary schooling should be available for all children, Government cutbacks have resulted in parent teachers associations imposing 'voluntary' costs to provide the crucial funding to maintain schools. Such 'voluntary' costs often force poorer parents to withdraw their children.

6.1.4 Government agricultural information services

The present agricultural research and extension services have their origins in British colonial times. The majority of the present nine research institutes and District Farm Institutes were established between 1910, when the Department of Agriculture was established and 1960, just prior to Independence in 1962. Commercial cash crops were generally emphasised at the expense of subsistence crops. The 1960s and Independence saw a major emphasis on extension services and farmer training. During the political chaos of the 1970s to mid 1980s, the financing of extension services and training was neglected and virtually collapsed. Older farmers reminisce of the 'good old days' in the 1960s when extension officers had funding and good transport with access to regular training, film shows and literature.

In recent years there have been substantial changes within the provision of extension services, though changes in practice tend to lag behind changes in extension thinking. A modified Training and Visit Extension System was adopted in 1993 by the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) with funding from the World Bank (about US $27 million). Field Extension Workers (FEWs) are now instructed to work with farmer groups whenever possible, forming new groups or working with existing groups if appropriate. FEWs are supervised by County Extension Coordinators (CECs). Subject Matter Specialists within each district provide technical support and training to FEWs and CECs under the control of District Extension Coordinators.

Recent retrenchment and funding shortages mean that many posts remain unfilled and transport provision is often very limited so FEWs may be unable to reach any but nearby groups. Morale and motivation were low in the regional office, research station and DFIs visited by the research team.

> *'We used to have 67 field extension workers, but now have only 43. Their salaries are so small. There is one field extension worker for every 10,000 families so it's not surprising that some farmers have received nothing for 10 years. With the reduction in staff, there was no corresponding increase of facilities. We have no library, just a few pamphlets. Most of us are graduates and we have to rely on our student notes and occasionally visit Makerere to look things up in the University library. Nobody checks our work or rewards hard work by promotion.'*
>
> EXTENSION OFFICER, MBARARA DEPARTMENT OF AGRICULTURE, 1996

Each district of Uganda has a District Farm Institute, which used to provide regular in-service training for extension agents and short courses for farmers. Some have been rehabilitated after the political chaos of Amin's regime but others remain in a very dilapidated state with skeleton staff.

'The water pump broke down 15 years ago and there has been no money to repair it. We used to have two buses, a land rover and a lorry to transport participants and supplies, now we have none. Our generator is also out of order. Without these things we cannot run residential courses. Our buildings are dilapidated and empty. Money has been promised on paper to renovate but has never arrived. We have no poultry, pigs or rabbits but some cows. The small library dates back mostly to the 1950s and 60s. There is a very good demonstration of pasture grasses and an agro forestry plot run by the Department of Forestry. We would give up if there were no hope of rehabilitation.'

PRINCIPAL, IKULWE DISTRICT FARM INSTITUTE, 1996

The National Agricultural Research Organisation (NARO), established in 1992, is a semi-autonomous organisation which is now responsible for coordination of agricultural research programmes. Since the end of 1998, NARO has also become responsible for agricultural extension. Information services and publication production are now combined into one organisation, the newly established ARIS (Agricultural Research Information System) in Kawanda, Kampala, which will provide the base for sharing information in the future. Previously each research station maintained its own library and independently produced simple agricultural booklets and leaflets. Some were much more active in this than others - notably Entebbe, Tororo and Mbarara. Though these publications were useful, observed distribution (during in-depth research) was wholly inadequate in comparison to the demand for information, even among extension workers, let alone farmers.

6.1.5 Role of NGOs and church

With the re-establishment of political stability, 1,500 NGOs, both international and national, have established themselves in Uganda. DENIVA is an organisation that networks 400 NGOs in an attempt to prevent duplication and overlap of services. Most international NGOs - such as Action Aid, Heifer International and World Vision - have bases in Kampala and their activities in the more remote parts of Uganda are often patchy, each tending to concentrate on certain geographical areas. In the geographical regions covered by the research within Uganda, most organisations visited were small scale with national staff, developed to respond to a local need.

Uganda is unusual in that 83% of the population claim Christian faith. Of the adult population 52% are Catholic, 30% Anglican and 1% other denominations (Johnstone, 1993). A further 6% of the population follow traditional religions and 3% the Bahai faith. Only 8% are Muslims, despite Amin's efforts to increase the dominance of Islam. Half-built mosques dating back to the 1970s are in evidence in several major towns. When Uganda became independent in 1962 even the political parties were based on religion. The Democratic Party was essentially Catholic and the Kabaka Yekka and the Uganda People's Congress were Protestant. Government solidarity with the church has been spelt out publicly on several occasions by government officials, especially President Museveni (Ward, 1995).

Religious groups have a network of churches and mosques within almost every village of Uganda. Both Catholic and Anglican churches provide centres where development workers, priests and pastors can

receive training in rural development. The Anglican Community Rural Service used to provide extensive grassroots training for Anglican priests and Development workers in most areas of Uganda. This continues in a few districts, but has been largely replaced by Zonal Coordinators and Diocesan Development Officers supporting several development projects within each Diocese.

6.2 Background to socio-economic situation in Ghana

6.2.1 Ethnic and cultural background

Ghana has three major language and ethnic groupings. The Akan, including the Fante and Asante, are the predominant group (52% of the national population) occupying the fertile central forest areas. In the East and South there are the Ewe (11%) and Ga-Adangme (8%) groups while in the north there are three major sub-groups all speaking Voltaic languages (23%). There are over 70 ethnic groups, each with its own language or dialect (Grimes, 1992).

There are some widespread cultural practices which are relevant to this research. One is the custom of *susu* which operates like a credit union. Members make regular payments and take loans in rotation. Members cannot opt out until the circle is completed. *Nnoboa* is another self-help system in which a group of neighbours or extended family help each other when a need arises, such as house building or farming, in return for a meal and the assurance they will be assisted in turn when they have need (Winter, 1997).

6.2.2 Socio-economic conditions

At Independence in 1957, Ghana was one of the richest countries in Africa. It produced a tenth of the world's gold and was the world's main exporter of cocoa. Since then, numerous financial and political crises have severely weakened the economy. Ghana has won the approval of the IMF for its stringent structural adjustment policies in recent years, which brought extreme hardship to many during the 1980s, but are now slowly yielding fruit. Ghana has a population of 16 million of which 65% is rural with a GDP per capita of US $430 *(Economist,* 1995).

An effective transport system covers much of the country, though the four main north-south routes are the weakest, and symptomatic of the gap in all aspects of development between the north and south. There are few good roads in the Upper West and Upper East regions. There is a weak infrastructure in much of northern Ghana, with little diversification and few job opportunities outside subsistence agriculture or migration to the south. Of the three regional capitals, only Tamale is a major city, though still with a relatively small population of 170,000.

The Akasombo dam at the southern point of Lake Volta provides HEP for much of the country and in particular for the aluminium processing plant at Tema near Accra, on the coast, where there is much other light industry.

6.2.3 Education and literacy policies

An estimated 5-6 million people of the total population are non-literate and the majority of these are in northern Ghana. The northern part was made a British protectorate rather than a colony, with the function of providing labour for the gold mines and cocoa plantations in southern Ghana. Secondary schooling was thus thought unnecessary and until 30 years ago there was only one secondary school in the north of the country The southern half of the country accommodates 90% of secondary schools.

The Government recognises 15 languages for official purposes and these are used in schools, the press, radio broadcasts and literacy training (Bamgbose 1991); English is the national language. The present government literacy programme is under the Non-Formal Division of the Ministry of Education with training available in all 110 districts. An initial pilot phase ran from 1989 to 1991, successfully using the radio as an awareness raising tool. Extensive World Bank funding was received from 1992 with additional support from UNICEF and the then ODA (UK). In 1997 there were 9,000 literacy classes around the country.[10] Primers were developed for all 15 languages and should be available for each participant in the literacy classes. Newspapers in all 15 languages have been produced for literacy classes on a regular basis. The withdrawal of World Bank funding from the NFED in September 1997 is likely to have severe effects.

[10] Personal discussions with staff at NFED.

Primary schooling is free and compulsory for all children, though parents have to provide uniforms and equipment. Fees for Junior Secondary Schools are low, but fees for Senior Secondary Schools (SSS) rise sharply, as these are normally boarding schools with all associated costs. Only 10% of applicants qualify for SSS level education. University fees are approximately the same as for SSS. There are four universities - in Accra, Kumasi, the Cape Coast and a new one in Tamale.

6.2.4 Government agricultural information services

In Ghana changes in the Agricultural and Extension Services in the past decade have been fundamental. The introduction of the Unified Extension Service (UES) in 1992 with World Bank funding required that Extension workers - now known as Front Line Staff (FLS) were re-trained to meet raised training requirements. However, some 1,500 FLS were sacked since they lacked college education, leading to initial shortages in many districts. The promotion of women FLS is a high priority, with women comprising 66% of the 1996 admissions. There is now a regional system of Technical Officers including Subject Matter Specialists who provide training and support for the FLS in their region. Farmer representation is sought in determining priorities for future training to deal with problems identified by both researchers, FLS and farmers. FLS have to work with groups of farmers, no longer with individuals, in line with the new LIES approaches and to improve efficiency. Substantial World Bank funding since 1989 has enabled the provision of housing in remote rural areas and motor bikes for all FLS and vehicles for Regional Coordinators. There are at present 1,500 FLS with an allocation of 15 per district.[11]

[11] Personal discussions with staff in the Department of Agricultural Extension.

Decentralisation was introduced at the end of 1997 with the redistribution of Technical Officers into the 110 districts of Ghana. Technical assistants (or grassroots field staff) were retrenched during the reorganisation of the Department under the LIES. Many of the TAs were young, female and came from the very rural areas. Therefore, they were willing and able to work in remote locations under relatively harsh conditions.

The Department of Agricultural Extension Services is now responsible for the coordination of printed information relating to agriculture in collaboration with research institutes. A number of well produced booklets, flip charts and leaflets are available, at present only in English, which are aimed at FLS and farmers. Their production is limited not through resources but from a lack of qualified authors to produce them.

6.2.5 Role of NGOs and church

Numerous NGOs have developed with government approval since Independence. Networking of NGOs tends to follow the north-south split of the country. ECASARD (Ecumenical Association for Sustainable Agriculture and Rural Development) is one such group based in Accra with 34 member organisations.

ACDEP (Association of Church Development Projects) is a sister grouping for NGOs in the north, based in Tamale. ECASARD provides a regular newsletter for members and actively promotes training and visits to enhance networking. They are hoping to develop effective marketing facilities for products such as honey.

Many similarities were apparent between Uganda and Ghana with regard to organisations providing training and information. In both countries religious groups have freedom of expression and compassion was often a motivating force both in religious organisations and in individuals working with NGOs or government groupings.

Traditional religions are followed by 20% of the population, 16% are Muslim and 64% Christian (Johnstone, 1993). The misconception has arisen that the north is largely Muslim, mainly because southerners observe that the northerners who settle in the South tend to be Muslim. However, there is a strong Catholic Church in the Upper West and other denominations elsewhere, including Presbyterian and Baptist in the Upper East.

Most of the main religions have agricultural development programmes. A large Co-operative Credit movement and the Nandom Agricultural Project were among the first to be established by the Catholic Church in the Upper West. In the North East there is a strong Presbyterian group, the Garu Agricultural Services. The Evangelical Presbyterian Church has six agricultural projects, three in the north and three in the south. The Christian Council of Churches provides training and networking at ten centres around Ghana. The Ghana Institute of Linguistics Literacy and Bible Translation (GILLBT) work in all the officially recognised languages and numerous others as well, producing a range of literacy materials. With a large headquarters in Tamala, they have other centres all over Ghana.

6.3 Background information relating to farmer groups

Research was carried out over a ten month period in 1996 in Uganda with five research visits, each of several weeks, made during this time. In Ghana the research took place over an eight month period in 1997, comprising four research visits each of several weeks. In addition, preparatory visits were made to each area to finalise arrangements, accommodation, translators, transport and any other relevant details.

6.3.1 Geographical distribution of groups

In **Uganda,** groups were visited in four geographical areas;

- the north, mainly in Lira and Luwero Districts
- the east in the neighbouring districts of Iganga, Mukono, Jinja and Kamuli
- the east in Mbale and Tororo districts
- the southwest in Mbarara, Kabale and Ntungama districts.

In **Ghana,** groups were visited in five geographical areas, comprising:

- the northeast in Garu district in the Upper East region
- the northwest in Nadowli, Wa and Lawra districts in the Upper West region
- central areas in Techiman, Wenchi and Sunyani Districts in the Brong Ahafro region
- the east in Ho, Hohoe and Kpandu Districts in the Volta region
- the south in Birim S and Akwapim Districts in Eastern region.

Appendix I lists the groups visited, their location and common language.

Findings from Uganda and Ghana were initially analysed separately, but the findings in most instances proved so similar with regard to group functioning, that they are presented together with any significant differences being noted.

6.3.2 Characteristics of groups visited

The majority of groups were farmer associations but there were also five literacy groups, two clan or family groups, two co-operatives and one small resource centre. In addition, ten larger NGOs and a number of GDOs such as FURA, LAEDA, and MTEA facilitated arrangements to visit groups with which they were either networking or had initiated contact. The term 'umbrella' organisations is used to indicate this relationship.

Of the RPAs visited, 12% received *Footsteps* copies directly and a further 34% had indirect access to

information from *Footsteps* passed to them usually by a member of an 'umbrella' organisation. Of the GDOs visited, 67% received *Footsteps* directly and 17% indirectly - usually through a head office.

RPAs and GDOs ranged from highly organised and successful groups, several of which were providing outside training for non-members, to two newly formed groups which were not yet really functioning as groups at all.

6.3.3 Ethnic and language groups

The intention was not to cover all main ethnic groups but to ensure a range of ethnic groupings were included, to examine whether any significant variations were apparent.

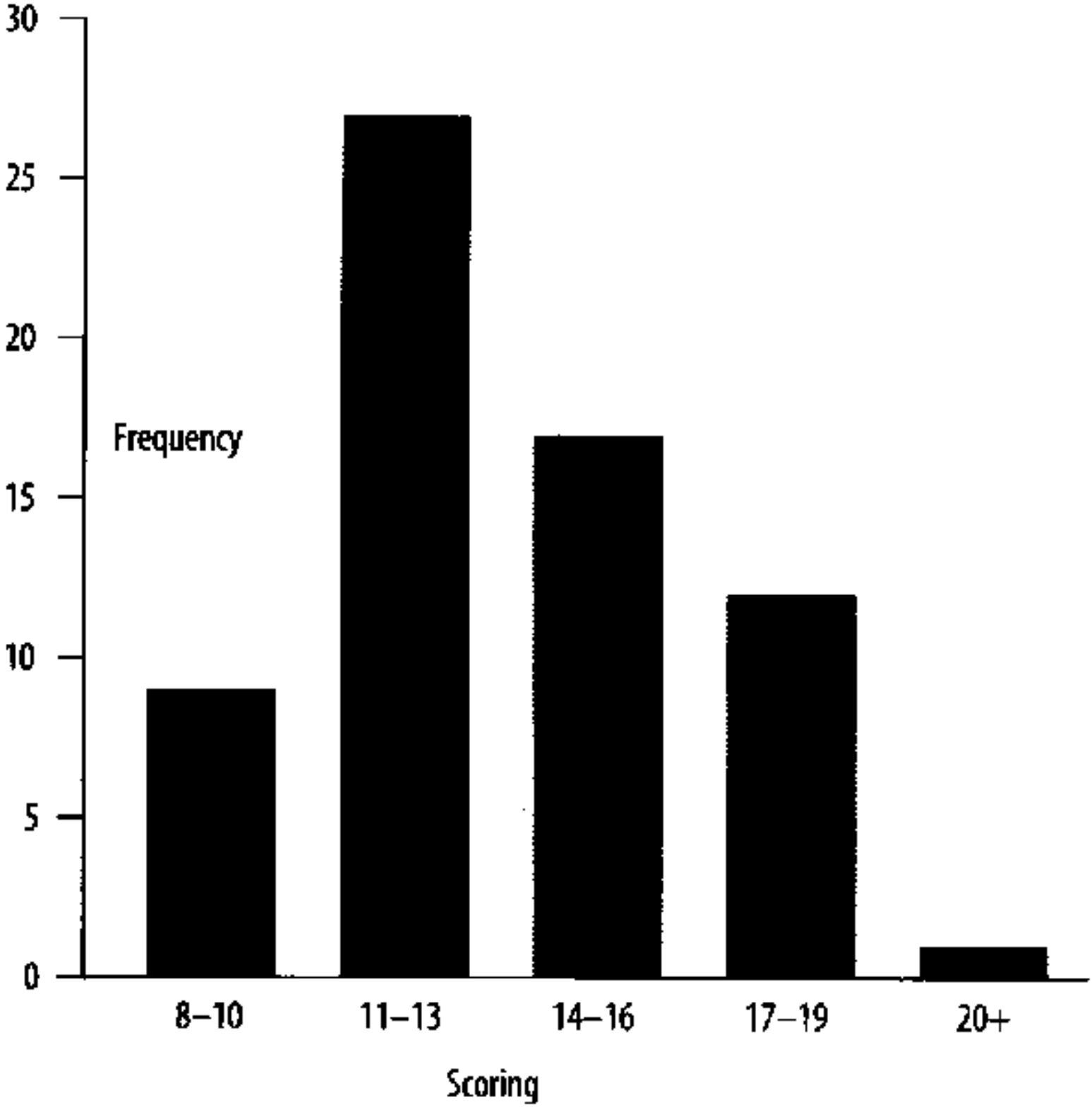
In Ghana four main ethnic groupings were covered -the predominant Twi speaking Akan, the Ewe in the east, and in the north the Dagaare and Kusaal groups with a total of five language groups. In Uganda rather more ethnic groupings were included - the majority Baganda, the Busoga and Teso in the east, the Lango in the north and the Runyankole in the southwest with a total often different languages.

Ethnic differences such as access to land, gender roles and kinship ties, which might affect the operation of farmer groups, were observed.

6.3.4 Comparative ranking of groups in in-depth research

There was a need to establish some meaningful comparisons between the wide variety of groups visited in both countries, sited in very different locations with a wide range of farming potential and widely differing access to social services and economic opportunities. A system of ranking was therefore developed, taking five factors into account: the location of the group, the agricultural potential of the area, access to NGOs, health facilities and the economic status of the community. Each factor had a range of five possible categories, with a low score indicating poor access or agricultural potential and a high score good access. The lowest score obtainable was 5, the highest 25.

Figure 1: Scoring distribution for groups visited



The ranking was done jointly by members of the research team, partly through observation and partly through discussion with group members. Such ranking only reflects the situation within which the groups visited were operating; it is not an attempt to locate them within their countries as a whole. **Figure 1** gives the overall distribution.

It allowed for some meaningful comparisons between very isolated groups with poor agricultural

productivity with groups in more favourable situations.

6.3.5 Socio-economic status of farmer groups

Agriculture was the main source of income for the majority of communities visited. Petty trading provided a second source of income in communities where there was good access to markets. Most rural communities had few permanent or well built houses or buildings indicating a generally low level of income and status.

Economic status was determined largely by observation and based on what local people saw as indicators of wealth. In some parts of Uganda, iron roofs and bicycle ownership were standard indicators of wealth. In Ghana, people saw wealth more in terms of well built, permanent housing.

Scoring system for comparative ranking of groups

Isolation	
1.	Isolated - over 10km from road with average bus services
2.	Within 5km of road with average bus services
3.	Within 1km of road with average bus services
4.	Semi urban - outskirts of town or large village
5.	Urban-within 1km of town
Farming productivity	
1.	Erratic rainfall, poor soil fertility, few inputs
2.	Erratic rainfall, reasonable soil fertility, few inputs
3.	Good rainfall, soils of average fertility, few inputs
4.	Good rainfall, soils OK, some access to inputs
5.	Good rainfall, fertile soils, good access to inputs
Access to health facilities	
1.	More than 10km from health facilities
2.	Within 10km of health facilities
3.	Within 5km of health facilities
4.	Within 3km of health facilities
5.	Within 1km of health facilities
Socio-economic status of community	
1.	Agriculture main source of income, limited petty trading, no permanent housing
2.	Agriculture main source of income, limited petty trading, few permanent houses

3.	Access to large market, reasonable trading, up to 25% permanent housing
4.	Access to work in nearby town, reasonable trading, up to 50% permanent housing
5.	Varied employment, semi-urban, mostly permanent housing
	Access to organisations working in development
1.	Poor access to 1-2 organisations, once or twice a year
2.	Limited access to 2-3 organisations, several times a year
3.	Average access to up to 5 organisations once a month (from anyone)
4.	Access to about 5 effective organisations - group attempts to initiate contacts
5.	Good regular access to a number of NGOs etc, some funding available, training and support, at ease with making contacts

6.3.6 Degree of isolation of groups

The isolation of groups may well influence their access to information sources, particularly when sources such as NGOs, extension agents or printed information are considered. Initially one indicator of geographical isolation was taken to be the distance from a tarmac road. However, in the north of Ghana there are so few tarmac roads, this figure became unhelpful. Instead of a tarmac road, the measure of isolation was therefore taken to be the distance from a road with some kind of regular public transport.

Nearly half of the groups (45%) were within one kilometre of a road with some kind of public transport. At the other extreme, 25% were ten or more kilometres from public transport services, the maximum being 25 kilometres (in SW Uganda). The average distance was 3.7 kilometres. The distance from a road with public transport should not be seen as necessarily providing easy access to towns. For many groups, members face a very long and expensive journey to reach a small town with a bank, farming supplies and equipment.

Many of the semi-urban or urban groups were GDOs and had chosen a central location for a small office.

6.3.7 Networking with organisations working in development

Two thirds of the groups visited had limited access, usually by means of visits with staff from just 2 or 3 organisations several times a year. Just 11% had regular access to several effective and supportive organisations.

> *'Why do NGOs always stay in towns? Why don't they come and establish their offices in rural areas?'*
>
> MUGWANJURA FARMERS ASSOCIATION, UGANDA

6.4 Factors influencing the functioning of farmer groups

6.4.1 Origin of groupings

A large proportion of farmer groups had originated through the enthusiasm of one or two individuals, either from within or outside the community, revealing the key role of individuals in the formation of groups. Most RPAs comprised members who lived within easy walking distance of the meeting place, usually within the same or neighbouring villages.

Informal groupings of farmers with good and facilitatory leadership, rapidly became aware of their own potential for managing change. This awareness was not always acknowledged by umbrella organisations and extension agents who may have helped in the initiation of groups. They still referred to the group as 'their group', and claimed ownership and responsibility for them. This was a perception rarely shared by association members, who usually took pride in their independence and drew on support from several outside sources.

6.4.2 Group aims

Though most members of farmer's associations were grassroots farmers living at subsistence level, and the name of the association often included the term 'farmers', improving agriculture was not always seen as their first priority. Income generation was most frequently associated with food processing of products such as cassava and oil palm, though some groups also marketed their products together, notably the two co-operative groups. Some groups had many successful women traders who were well aware of the benefits of storing produce and selling at high prices in times of shortage.

> *'Being in a group helps us develop our skills.'*
>
> WEGBE WOMEN'S GROUP, GHANA

The mutual support of group members, especially in times of trouble, was ranked third. This emphasises that most groups were acting not just as production units, but as social entities with a genuine commitment to each other's well being.

> *'Being in a group has improved our personalities. Some had marriage problems and other members have counselled and helped them. Some did not know which way to turn to earn income but the group has given them a means to earn a small income to buy pencils for their children and soap for their families.'*
>
> SEGRU WOMEN'S GROUP, GHANA

Many associations had taken as their motto the local translation of 'unity is strength', emphasising their beliefs that by working together they could improve their situations. **(Table 13)**

TABLE 13 - Aims of RPAs and GDOs in Uganda and Ghana

	FREQUENCY
Income generation	80
Improving agricultural production	69
Mutual support of group members	32
Training - literacy, youth and adult education	24
Community development	23
Tree planting - fuel and fruit	23
Improving health or nutrition	19
Savings and credit	15
Environmental care	11
Support of women's issues	3
Care of orphans	1
Total of groups responding	**75**

Up to three aims were included for any one group.

6.5 Access to communication media

Three factors are of primary importance when considering the access of groups to outside communication media including radio, newspapers, books or training. These are:

- the ability of group members to understand these media based on their education and literacy levels
- whether access is limited by their resources
- whether access is limited by their location.

6.5.1 Education and literacy levels

Results for education and literacy levels were obtained through a show of hands and members were quick to point out any discrepancies and to encourage those who were shy in admitting their abilities. Some

testing with a Cloze exercise (Jenkins 1981) revealed that literacy skills in English were poor indicating that members seldom had great fluency, more usually the ability to read or write a simple letter or to follow some instruction. The literacy rates indicated by group members therefore suggest their basic ability to understand and use a language, not fluency, and may be correspondingly higher than national literacy rates.

In Ghana there was a noticeable difference in literacy rates between groups in the north and the south of the country. Results are therefore presented for both regions. **(Table 14)**

TABLE 14 - Literacy rates and high school attendance among RPA and GDO members

	FREQUENCY OF GROUPS	LITERATE IN LOCAL LANGUAGE	LITERATE IN ENGLISH	ATTENDING HIGH SCHOOL FOR 2+ YEARS
Overall	75	65%	39%	34%
Ugandan	32	65%	39%	39%
Ghana	43	55%	37%	42%
North of Ghana	12	4%	6%	6%
South of Ghana	31	72%	42%	53%

Given that the majority of groups were rural based (where literacy and education levels are usually lower than the national average) these results seem to indicate that group members may be among the better educated members of their local community given that national literacy rates are 62% in Uganda and 65% in Ghana (UNDP 1998).

6.5.2 Resource limitations

Radio ownership comprised 53% of households in RPAs but a limited availability, or means to purchase batteries meant that considerably less than half of RPA members listen regularly to the radio. Access to TV (not ownership) was only mentioned by 3 RPAs.

Members were asked to indicate their ownership of any kind of printed information about agriculture including booklets, pamphlets, newsletters and books. Sometimes members had an opportunity to read children's school textbooks on agriculture. Some kept and used notes taken during training, often many years previously. Overall, 18% of RPA members had some kind of access to printed information in agriculture but in most cases these represented only one small booklet or newsletter and therefore these figures should be interpreted sparingly. Only 4% of group members interviewed owned any kind of agricultural book. Many (70%) RPA members and 30% of GDO members had no access to books.

Many members commented on their frustrations about their lack of access to more printed information during the research meetings. This limitation was due primarily to lack of funds, but also to a lack of awareness about sources of free materials. A third of RPAs had no printed information of any kind, 56% had limited access (less than 40% of members owning one or more item) and just 9% had reasonable access (over 60% of members owning one or more item). Very few of the **i** information sources observed were in local languages, most being in English.

6.5.3 Limitations through geographical isolation

Access to newspapers was also severely limited. An average of just 14% of RPA and GDO members had access (not necessarily through purchase) to a newspaper once a week or more. For RPA members only, access to a newspaper at least once a week fell to just 9%. Many isolated rural areas simply did not have deliveries of newspapers; people only saw them if someone had visited town and bought one and then they were widely shared. However, 45% of GDO members had regular access to newspapers as many more of these were based near urban areas. Newspapers were more likely to be available in local languages.

Of those groups in the most isolated locations (over 10km from a road with regular bus services), only 4% had good access to printed information about agriculture with a significant relationship between isolation and access to printed information ($p>0.5$).

These results revealed an enormous lack of all kinds of printed information concerning not just agriculture, but all other kinds of information. Information in local languages was even more scarce. For many isolated rural groups, the only literature available in their own language were Bibles and hymn books.

6.6 Composition of group membership

Group membership was taken very seriously. No groups indicated that people were able to drop in and out of membership as they pleased and some groups went so far as to punish non-attendees with fines. Membership was seen as a privilege, which sometimes required a long wait. Occasionally, non members who were being considered for membership were allowed to attend the meetings.

Ranking the most frequently used information sources -Bikyiiteng Bullock Farmers.

Nearly three quarters of all groups had 30 or fewer members. The average membership of RPAs was 29, with an average of 17 members actually present during the research meetings; an average turnout of 57%. Two groups were co-operatives with very large memberships involving most of the adult population of their communities. Their size skewed the mean figure. If the median is used, the figure applying to group membership is 24.

All RPAs except two (who were still considering formalising their relationship) had elected formal committee members. In most groups these consisted of Chairperson, Secretary and Treasurer. Some had

deputies, many had additional posts such as a messenger, an organiser, an adviser or trainer. Larger groups might also have an executive committee. All groups but one kept written minutes. Women's Groups in the North of Ghana rarely had any literate members and would call upon a male secretary to take their minutes. Only one group said their secretary kept their minutes 'in her head' (all had complete confidence in her memory). Such formalisation of group activities was of some surprise, given that these were informal, autonomous groups, and was an indication of the important role they played in the eyes of their members. In many instances the groups had significant contacts with umbrella organisations who had probably encouraged such practices. However, even groups with no such outside contacts had often developed similar organisational structures.

The openness of groups to new members was a feature of much interest. Successful groups attracted new members who could threaten the group's existence if numbers became unwieldy. Most groups were well aware of the implications of the group becoming too large. One group, Tibani in Northern Ghana, had split into three groups to deal with its growing size. However, problems arose as the original group contained the enthusiasts who had initiated the group, together with some of the more innovative and mobilised members of the community. People who were slow to respond to an invitation to join the first group, might struggle to maintain enthusiasm and commitment within a second or third group, particularly when most potential leaders had joined the original group. This was clearly shown in Tibani where Group 1 was very successful but Groups 2 and 3 from the same community were losing both members and enthusiasm. More successful efforts to maintain growth involved splitting one large group into working teams, apparent in Zangbogu, Ghana. However, in many cases groups simply limited their numbers or set up substantial barriers to membership, usually financial. **(Table 15)**

TABLE 15 - Openness of RPAs in Uganda and Ghana to new members

Open to new members	29	(45%)
Membership closed	16	(25%)
Considering whether to accept new members	10	(15%)
Membership self-limiting	8	(12%)
Membership falling	2	(3%)
Total	**65**	**(100%)**

Self-limiting membership covers various instances such as clan membership, gender exclusive groups, ownership of certain livestock, access to irrigated land, members of training courses, membership of religious groups and setting barriers to membership (such as large joining fees or filling certain preconditions such as building tree nurseries or latrines).

Female groups were more likely to have closed membership. Within female groups 42% had closed membership whilst no male groups were closed. In groups with a balance of male and female members, 14% were closed to new members.

6.6.1 Gender influences within groups

Groups with all female members or mostly female members predominated, comprising just over 50% of RPAs visited. Male groups with either all men or mostly male members made up only 14% of RPAs. Groups with a balanced gender mix of members comprised 35%. These mixed gender groups often included wives and husbands.

The sample group of GDOs had a much higher proportion (40%) of all or mostly male membership.

There was often a surprising degree of openness and confidence among women members within mixed gender groups which had met together for some years. They were ready to speak openly and contribute to discussions in the presence of male members. In groups which were either newer or did not work or meet together regularly, women members were generally inhibited in the presence of men. This difference is highlighted in that when groups were asked to divide themselves into smaller groups to carry out the exercises, maturer groups often preferred to stay in mixed gender groups, whereas in less established groups they would usually split according to gender. This confidence was observed in different regions of both Uganda and Ghana, revealing little relationship to ethnic background.

Women's groups frequently expressed great frustration at their lack of access to land to farm together as a group. Such access was frequently dependent on the goodwill of one of their husbands. Land could be lent for a couple of years, but then withdrawn from the group's use.

> *'We learn by having our own land to experiment with, not by working on our husband's land.'*
>
> TIBANI II WOMEN'S GROUP, GHANA

The purchase of land on behalf of the group was the ultimate aim of many groups, but was realised by only a few groups. Some groups had been given land on a long term basis by a benefactor and appeared confident in their ability to continue using it. Women are not allowed to own land in the northern areas of Ghana. In areas of Ghana where matrilineal inheritance of land and property was common, women's access to land was still through their husbands or male members of the family so land shortages remained a problem. In male groups land shortage was not raised as an issue, both because men owned land and also because few male groups worked land together.

In terms of energy and commitment to working together, women were observed to be considerably more motivated. There was a statistically significant relationship between the gender balance of a group and the likelihood of working together. Women were more willing to invest time and effort into establishing long term initiatives such as tree plantations, vegetable production and marketing or animal husbandry. Men preferred clear, short-term benefits to be apparent for them as individuals from the outset such as bullock training and access to irrigated vegetable plots.

Women were unlikely to consider visiting government departments or officials to request training or

advice. In balanced gender groups this was usually left to men. A high degree of self-confidence was usually necessary before female members would confidently visit or send messages to extension agents, NGO staff or government officials. However, this was apparent in some groups such as Ihimbi Women's Group near Kabale, Uganda or Sokode Novisi near Ho, Ghana. The effectiveness of these groups had been recognised by outsiders and they had received training and donations or loans (for the purchase of land for Ihimbi and a grain mill for Sokode). Members were now very confident in their own abilities.

It should be noted that almost without exception, treasurers were female - even in groups with predominantly male membership. As an official in Garu Agricultural Services commented, *'Women fear debt and work hard to repay loans.'*

6.6.2 Regularity of meetings

75% of groups met formally at least once a fortnight. Many groups (59%) worked together at least every fortnight. Some (34 %) worked together on a more seasonal basis. This could either be helping on each other's farms, processing food products or working on group land. Traditional systems of sharing work (known as *nnoboa* in parts of Ghana) were mentioned, but groups were rarely based simply on these. Some groups functioned well without members ever working practically together, such as marketing co-operatives.

In female or mostly female member groups, 79% worked together regularly. This fell to 45% in groups with a balanced gender mix and just 11 % for mostly male groups.

Of groups who met and worked regularly together, nearly all displayed a good or high degree of unity. This meant the group were precise and purposeful about their objectives, members were relaxed in each others company, demonstrating close friendships within the group, able to joke at each other's expense and able to participate in discussion. Poor levels of unity were exhibited by dominant group members with differing priorities and objectives, unease between some members (with negative comments overheard during group meetings), members being inhibited during meetings and few members apparently meeting informally as friends.

6.7 Access to agricultural information

Examining the access of farmer groups to sources of printed agricultural information was a key aspect of this research and given a high priority in terms of time. To avoid undue emphasis on printed materials, data was collected on the basis of the overall preferences of farmers in terms of how they would like to receive agricultural information. Every effort was made to ensure that the particular interest in printed materials was not conveyed to group members. Other sources of information were queried and examined further, in order to ensure members were not influenced in their comments (but also because the information was often fascinating in its own right)

Groups were asked to consider all available sources of new information concerning agriculture. If ideas

were slow in coming, certain sources mentioned by other groups were suggested to encourage ideas and lateral thinking. There was no attempt to delimit the number of sources considered (26 in total were mentioned), other than by requesting that individuals were not considered by name and in ensuring that categories already used by previous groups, were adhered to. For example, an individual known to the group as a trainer would be queried to establish their background. If they worked with an NGO or the government they would be placed in either of these categories instead. For the benefit of non literate members, all information sources were drawn (either by the researcher or group members who offered to help) as diagrams on cards, sometimes with great hilarity. This meant non-literate members could participate fully. When no more sources were forthcoming, groups were asked to rank in order of usage, their top five sources of new agricultural information.

Since each group was free to mention any source of new ideas, numerous sources were given, which were rarely included among the top five choices and so were not included in the analysis. These included newspapers, teachers (information coming via their children's teachers), drama/role plays (either seen or participating), TV, District Farm Institutes (relevant in Uganda only, where they sometimes provide farmer workshops), husbands (wives were not mentioned), Government Community Development Agents, demonstration gardens, literacy classes, proverbs, videos, funerals (mentioned in Ghana as important social occasions often lasting several days and providing opportunities both to travel and exchange information), local chairmen (Uganda only), local market traders and research stations.

On some occasions, individuals who were mentioned as a source of ideas, such as extension agents, NGO staff or trainers and teachers within the group, were actually present. However, group members seemed to be so objective in considering their ranking of sources, that such individuals were sometimes given a low ranking, overlooking their presence and any personal feelings involved. On several occasions when ranking was finished, it was observed that members realised what had happened and that their ranking could have caused upset, but this does illustrate the objectivity of group members.

6.7.1 Definition of terms used in the exercise

The definitions used within this exercise are normally self explanatory but some have certain regional or cultural connotations and others include a wider range of sources than their title would suggest:

Observation and Experience - their own experience as farmers over the years which helps them observe and assess the potential value of new ideas.

Friends - this nearly always only referred to other group members.

Trainers - this refers to those within the group who were seen as a source of sharing new ideas.

NGO - this referred to any kind of contact with an NGO, such as training days, workshops but, most commonly, ongoing contact with an extension agent or development worker from the NGO.

Elders - well respected elderly people, either called elders, clan leaders, or individuals respected for their

wisdom.

Religious leaders - church or mosque leaders or religious development workers.

Books - any kind of printed material about agriculture, including books, newsletters, teaching notes and leaflets.

Innovative farmers - individuals known to group members (and usually identified by name) who were known to experiment and try out new methods regularly.

Travel - either individual visits to friends or relatives, practices observed during working outside the community or sometimes referring to group visits.

Extension agent - a government extension agent.

The effectiveness of many of the sources mentioned was highly dependent on the role of the individual personality. For example, some groups found their elders very useful, others felt they were irrelevant, resulting in enormous variation between groups. Sources where the personality of the individuals might show such variation included elders, church leaders, trainers, NGOs, extension agents, innovative farmers and market traders. However, over such a large sampling, it is to be hoped that personal variations will to some extent be ironed out.

Figure 2: Use of agricultural information sources by grassroots farmers in Uganda

CASE STUDY: NYAMATETE WOMEN'S GROUP, UGANDA

By way of an introduction to the information sources exercise, it may be helpful to see it first through an example of a typical group: Nyamatete Women's Group was located about 20km south of Mbarara in southern Uganda, some 5km from a tarmac road. The gender balance was mixed. Male and female members often argued over their perceptions of the importance of information sources. When discussing the role of elders as a source of new ideas, the women commented, *'Even in these days? Do we really need them?'* There was a lengthy and heated discussion on whether advice from friends or the radio should be trusted more.

'If your friend comes and asks you 'have you planted beans yet? 'you rush out and plant them.'

'But are our friends experts or people who know little?'

'People on the radio are experts...'

'But do these experts on the radio know you better than your friends? Can they ask you questions?

When no agreement was forthcoming they took a vote and friends won overwhelmingly. Extension agents were not included for either usage or trust and when asked, they commented, *'Yes they are there, but they don't work.'*

In their final decision, reached after much animated debate, observation, experience and friends received the same ranking for both usage and trust. When ranking sources in terms of the trust held in them, elders were replaced by books. A preacher from the church was felt to be very supportive to the group and was therefore raised above a development worker from the Anglican Diocese in Mbarara (who was present), who had helped initiate the group. Such heated discussion was typical and frequently only ended once the suggestion of a vote was made.

Figure 3: Use of agricultural information sources by grassroots farmers in Ghana

6.7.2 Geographical sources of agricultural information

The most commonly used sources have been grouped into three categories, based on Hunke's (1993) three knowledge systems:

Endogenous - referring to sources within the group

Indigenous or local - referring to sources within the local community

Exogenous - sources outside the local community:

ENDOGENOUS SOURCES

These are sources emanating from within the group and included members' personal observation and experience, friends (nearly always referring to other group members), and trainers, again always referring to someone within the group.

Trainers - The high importance given to trainers within the group is a very relevant point to note. These are usually individuals within the group, sometimes shared with neighbouring groups, who bring enthusiasm, an openness to new ideas and the ability to motivate and inspire other members. Their presence was noted in all well functioning groups. People have more faith in this source than in elders, church leaders and usually extension agents. The training and personal development of such people could be key to promoting new ideas. The name 'trainer' was that most commonly used by group members, though they were occasionally referred to as 'teacher' or 'organiser'. However, as the research progressed, the crucial role of these individuals in the sharing of new ideas became apparent and the term 'animator' was introduced as a more appropriate and descriptive term for their work and role.

Friends were an important source of new ideas. Members of Kyamatambamre Literacy Group (not yet functioning properly as a group entity) commented that new ideas were jealously guarded and only shared

with close friends, presumably since they might help provide a competitive edge in the struggle for raising income from farm produce.

However, within established RPAs the definition of close friends often seemed to extend to all members with respect to the sharing of good ideas.

LOCAL OR INDIGENOUS SOURCES

These are regarded as sources outside the group but within the local community. These included elders, church leaders, market traders, local Chairmen and innovative farmers who were rarely group members.

Elders - Comments concerning elders differed widely (as might be expected when so many different individuals were being discussed) and not all were respectful as the following illustrate:

> *'Elders always reminisce about the 40s, 50s and 60s.'*
>
> KISALIZI ENVIRONMENTAL ASSOCIATION, UGANDA
>
> We *are sick of old people's things.'*
>
> BUREMBA WOMEN'S LITERACY GROUP, UGANDA
>
> *'They are losing their senses and only interested in their stomachs.'*
>
> BAYIRI WOMEN'S GROUP, GHANA

For some groups they were old fashioned and out of date. However, for other groups they were a valued source of experience and indigenous knowledge. *'What new ideas does he give us!'* commented the ladies. *'But aren't some old ideas still useful?'* argued the men in Nsinda Farmers' Group, Uganda.

Religious leaders - The value of religious leaders, ostensibly a surprising source of new agricultural ideas, is worth noting. Most of the leaders referred to by groups were from churches of various denominations but also included mosques. For some groups, their religious leaders simply prayed for good rains and harvests and reminded them of the seasonal changes. However, for many, their religious leader had regular contact with nearby towns and was a genuine source of valued and trusted information. Pastors, priests and Imam's would sometimes hold meetings after services and share new ideas. In the few instances where a Church leader had actually trained in agriculture, their impact was considerable (for example, Rev Canon Bashaija in Rwancereere Farmers Association, Uganda and Enos Tam, a lay reader in Nyamatete Women's Group, Uganda).

Innovative farmers - Nearly all group members recognised the term for innovative farmers and could identify one or more in their area. Many members may have visited their farms, though it was obvious that

such visits were usually rare and probably not encouraged by the innovators. Members usually regarded innovative farmers as a positive source of new ideas, but during discussion it was obvious that these ideas were not freely shared and often gained more through observation.'

> *They don't invite us, we have to make a special effort to arrange a visit.'*
>
> KIWEMBI WOMEN'S GROUP, UGANDA
>
> *'Even if innovative farmers have no time to talk or visit you, you can still learn by watching what they do.'*
>
> BUREMBA WOMEN'S GROUP, UGANDA
>
> *'The extension work system has died a natural death in this area - now the innovative farmers are the only source of new ideas. But their ideas are often still old ones.'*
>
> NGANDA HEALTH PROMOTERS, UGANDA

EXOGENOUS SOURCES

These are sources outside the local community and include NGOs, extension agents, radio (usually national broadcasts but in local languages), newspapers, books, travel, and government training colleges and research stations.

NGOs - The work of NGOs was nearly always referred to in a positive manner. They were seen as one of the few, usually only, source of inputs such as free planting materials, tools, seeds, etc. Most groups valued and would have liked more regular contact and visits from the trainer or extension worker associated with an NGO.

Extension agents - This referred only to government extension agents. Advice given by extension agents was usually valued and appreciated. The criticisms given were that they never visited or visited too rarely. If extension agents were known to visit every week or two, they were nearly always ranked as the top source of information. The results for extension agents were considerably higher for Ghana - a likely consequence of the recent large inputs into the Ghanaian Extension Department by World Bank funding, resulting in good housing for agents in rural areas (observed in a number of areas of Northern Ghana) and funding for transport.

Extension agents in Uganda complained that their budgets for fuel were so low that they were prevented from visiting after the first few weeks of each quarter (Agents in Mbarara Extension Department).

Radio programmes were rated substantially higher in Ghana. Though there is a good agricultural broadcasting service in Uganda, many farmers complained that the relevant broadcasts in local languages were transmitted at times when they were either out farming (mid-morning) or late at night when they

were already asleep.

Travel usually referred to visits to family members elsewhere in the country. However, on two occasions, both in Uganda, a whole group (Mugwanjura Farmers Association) had had the opportunity to travel together, one to visit a district farm institute (Kacwekano in Bushenyi) and the other, an NGO forestry demonstration project (VI Tree Planting project in Masaka).

Members of Mugwanjura Farmers Association were given the use of a pickup truck from the Diocese to visit the District Farm Institute at Bushenyi, some 80 miles away, on condition that they contributed the cost of fuel. They saw ox ploughing, improved matoke plantations, passion fruit cultivation and fish ponds. Less than a year later these activities (with the exception of ox ploughing) were implemented on several of the farms visited.

This visit had proved of immense significance in terms of group development, increased confidence and the often rapid uptake of new ideas. Members were exposed simultaneously and given the opportunity to discuss and examine new innovations together. For many of the women it was a rare opportunity to travel outside their own area. The group had subsequently arranged and paid for a further visit to another recommended project.

6.7.3 Variation apparent in information sources used by different groups

The information sources exercise revealed some significant differences between the results for Uganda and Ghana. Differences between government provision or policy are most apparent with the results for extension agents, radio and books. The lower number of 'books' in the Ghanaian results was partly explained by the high number of groups in the north, where literacy levels were very low.

Within Uganda over two thirds of new ideas, and in Ghana just over half of the most frequently used sources of new information came from within the local community or group. This implies that many groups had to rely largely on their own resources and ideas but this was not necessarily through choice. No group ever mentioned refusing a visit from any outsiders. Indeed from the reception given to visitors in almost all groups, it was clear that such visits are rare. In Ghana, significantly more exogenous sources were selected, largely due to the apparently increased effectiveness of both the extension services and local radio broadcasts. There was little variation between the value placed on sources within the group which indicated a substantial level of confidence among the members, both in their own knowledge and experience and that of other members.

Figure 4: Trust in agricultural information sources by grassroots farmers in Uganda

The figures for women's groups or groups with mostly female members, showed surprisingly few differences. In Ghana, the only significant differences among the most used sources were that friends were placed before the radio and elders received a much lower ranking.

> *'Elders and chiefs will only call the men when they have something to say.'*

TEMPANI WOMEN'S GROUP, GHANA

'The extension agent has only visited the men in the group.'

WEGBE WOMEN'S GROUP, GHANA

In Uganda, women's groups placed trainers above friends, and elders above radio, revealing that women's access to the radio may be more limited or that they valued the information of elders more. Typically, male NGO workers and extension agents received almost the same ranking from women's groups which seems surprising, given their reduced access to these sources.

Books and newsletters were often among the information sources listed by groups, but because they usually were only relevant for one or two members, were included in the top five categories by only 21% of groups sampled. However, many people commented that if they had more access to them, they would certainly list them as a preferred source as they were a much valued and trusted source of information. This was commented on by 66% of groups.

6.7.4 Trust in agricultural information sources

Having established the range of information sources, groups were then asked to reconsider their ranking, this time scoring on the basis of their trust in the sources. In approximately 20% of groups they did not wish to make any changes.

Figure 5: Trust in agricultural information sources by grassroots farmers in Ghana

Several surprising differences emerged between the frequency of usage and trust in information sources. Members appeared to lack complete faith in their own judgement and observation, which may indicate several things; a lack of confidence, a readiness to learn or a perception that outsiders may have expert knowledge. Friends remained an important source, but trust was slightly less than usage, indicating that people may sometimes limit their trust in the information provided from friends, not so much from an intention to mislead but because of a concern that the friend may have 'got it wrong'.

It is interesting to note that in both countries trust in information from radio programmes is substantially less than the frequency of use.

Of particular relevance to this research are those sources in which trust is ranked higher than actual frequency of use, since this implies that these are sources which groups would like more access to and this was reinforced by the comments made by group members when re-ranking the information sources. Those with slightly higher scores include trainers and religious leaders. Those with markedly higher scores include NGOs, books and newsletters, and extension agents. Many groups commented on how they longed for more access to all of these sources of information.

'As a group we have grown to the 'going to school' stage in terms of access to information. We still have a long way to go.'

BRUTU CO-OPERATIVE FARMERS, GHANA

Trust in extension agents was higher than frequency of use in both countries, but especially in Uganda, where the overall score rose from 4% to 8%. District Farm Institutes (DFIs) in Uganda, which provided farmer training courses, received a low ranking for usage. However, though few groups had access to their training, DFIs received the largest overall percentage increase from usage to trust. From less than 1% in terms of those having access to them, this rose to over 5% in terms of trust. Travel by one or more group members to DFIs in Uganda or NGO demonstration units was of considerable influence in encouraging the uptake of new ideas. Members who had visited, tended to try out ideas observed on their return.

NGOs are an important and well trusted source of new ideas in both countries, and their overall ranking rose in both Uganda and Ghana.

Books and other kinds of printed information received considerably higher rankings for trust than for availability in both countries, increasing from 6% to 8% in Uganda and from 3% to 4% in Ghana. This is an affirmation of the value attached to them by farmers, even though so few had good access to them. Nearly a third of groups (29%) included printed information in their top five most trusted sources (contrasting with 21% who included them in their five most used sources).

6.8 Flow of information

Having established the perceived importance of sources of new information, observations were made about the flow of information within the group. Members of most RPAs did not see the role of their group as primarily for sharing new ideas, but rather as a support system or a means of pooling their labour and energies. However, it became clear that in every group which was functioning well, the sharing of new ideas in agriculture was on-going, more likely in the form of informal comments and advice than as training sessions.

'Forming a group provides us with a pool of knowledge.'

CARD, UGANDA

'We would like more new ideas If there were more groups around, more new ideas would come into the community.'

BRUTU CO-OPERATIVE FARMERS, GHANA

'The more often we meet, the more often we gain new ideas.'

OMBO WOMEN'S GROUP

Groups with little confidence in their own abilities were often reasonably content with their access to new ideas.

'New ideas are better little by little.'

KOGOBUU YIKORI - OMBO, GHANA

However, as group confidence grew, so apparently did their ability to assess and digest new ideas and consider whether they should try them out.

'We would like more information and training to broaden our outlook.'

ZANGBOGU WOMEN'S GROUP, GHANA

6.8.1 Flow of new ideas within group

Members of RPAs were asked to think of new agricultural ideas which some of the members had adopted in recent years. These could include, for example, adoption of new varieties, new crops or vegetables or erosion control measures. Members were then asked to think back to the source of the new idea and then to work out how the new idea had spread within the group and, possibly, outside the group. Members were often surprisingly specific about this process and the various stages. Few had any problem in recalling the source of the idea, the first person to implement and so on.

There were usually several stages before the majority of group members would implement a new idea. Initially one member (the animator in 77% of groups) would try it out. If the idea looked promising, several more members would try it. Only if these were also successful, would most members then implement the new idea (each stage normally took 1 -2 years before the benefits became apparent). If several group members had received training or visited demonstrations of the innovation and implemented it, usually one stage was all that was required for the majority of members to implement. On the two occasions when a whole group had visited together, the majority implemented some of the new ideas within a year of return. Ideas mentioned, often by several groups, included:

- planting crops in straight lines
- growing new crops - passion fruit, Irish potatoes, pineapple, clonal coffee, export chillies, vegetable nurseries, mushroom propagation
- raising alternative livestock - bee keeping, rabbit husbandry, edible snail husbandry, fish farming

- tree planting - melia, eucalyptus, moringa, household tree nurseries, propagation of tree seedlings in nurseries

- improving soil fertility - live barriers of elephant grass (soil erosion control), compost making, ring weeding around plants followed by mulching with weeds, improved fertiliser application

- new post-harvest technologies - improved granaries, fodder cutting machines for zero grazed animals, improved methods of processing cassava

- selecting maize seeds for improved germination.

All the above ideas constituted a considerable change in agricultural practice and had been tried and tested by more than one group member. Sometimes all members had adopted the new practice. Less far-reaching ideas were in play all the time as members worked alongside each other.

Tree Nursery - Ihimbi Women's Group.

6.8.2 Informal training within group

A relationship was found to exist between the type of group and their access to printed information. Only 10% of RPAs could be described as having reasonable access to printed information, in contrast with 70% of GDOs (as illustrated in **Table 16).**

TABLE 16 - Access to any kind of printed agricultural information by farmer groups in Uganda and Ghana

ACCESS TO PRINTED INFORMATION	GDOs		RPAs	
	NO OF GROUPS		NO OF GROUPS	
None at all	1	(10%)	22	(35%)
Limited access (less than 50% of group members owning one or more item of printed information)	2	(20%)	35	(55%)
Reasonable access (over 50% of group members owning one or more item of printed information)	7	(70%)	6	(10%)
Total	**10**	**(100%)**	**63**	**(100%)**

p< 0.00002, chi square = 21.58, df = 2, missing data 2 cases.
Data not significant as 33% of cells have frequency < 5.

A further relationship exists between the likelihood of RPAs carrying out training within the group and

their access to printed information. Regular training was carried out by 89% of groups who had limited or reasonable access to books comparing with 11 % of groups without printed information.

Most RPAs saw their aims as primarily benefiting their own members and improving the income or health of members' families. Few saw themselves as sources of information for their wider community. It was noted that groups who had achieved confidence and empowerment through the success of their group enterprises were much more likely to want to share new ideas widely. For the GDOs examined, passing on information was usually a high priority.

6.9 Summary of information provision

The potential of the farmer groups as providers of information was clearly apparent. It is important to note that many others share observations about the existence and potential of such groups. Carmen (1996) confirms the existence of large numbers of autonomous groups in Kenya, Burkina Faso and other countries in the Sahel. Zinyama (1992) observed the structure and functioning of farmer groups in Zimbabwe and their capacity for self management, improving social status, and concluded that they showed considerable potential for social change. Carroll (1992) likewise, considers group capacity building for collective action to be at the heart of the development process, though very difficult to evaluate. Garforth (1990; 1995) discusses the potential of working with rural people's organisations from the perspective of extension work and mentions the large numbers of such farmer associations throughout Thailand, Zimbabwe and the Philippines.

When a member (usually an animator), was not only confident in the quality of the information and its relevance to a particular situation, but was also able to fully comprehend its import, a further step might follow. This step involved the adaptation of such information into a form which would enable others to benefit, who might not have the same literacy skills, understand the same language or have the same educational background and experience. Effective knowledge and information transfer depend on the right cultural context being used. When such information is confidently adapted and passed on, in any of a number of forms, it is suggested that this is one indicator of empowerment and self-reliance. The use of printed means to do this is the subject of the next section.

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7. The provision of printed agricultural information materials

Organisations which have the provision of printed information as one of their objectives, are discussed here in more detail. The findings combine relevant findings from the postal survey and from the informal overview of organisations in Uganda and Ghana which were involved in sharing agricultural information. Further relevant findings relating to the impact of printed information among groups during the in-depth research in Uganda and Ghana are included.

7.1 Phase I: Production of printed information by postal survey respondents

Printed materials of some nature were produced by 60% of postal survey respondents. The data that follows refers to the 119 organisations from the postal survey who were producing printed information and provides details of various production factors.

The likelihood of producing printed materials increased with income. Over two thirds of GOs and NGOs responding to the postal survey produced printed materials and just over half of GDOs.

7.1.1 Targeting and distribution

Organisations were asked to indicate the kind of printed materials they produced and the results are shown in **Table 17.**

Teaching notes were more likely to be informal duplicated aids and notes for members or trainers than printed information for wide distribution. Newsletters and booklets would normally be for wider circulation and numerous examples were sent to the researcher. Many were in local languages. A variety of other materials were also mentioned with a frequency of less than five.[12]

[12] Other materials mentioned with a frequency of less than 5 included: books, magazines, hand-outs, calendars, annual reports, videos, photocopies, research papers, Bible studies, brochures, embroidery patterns, accounting notes, puppets, flannelgraphs, alphabet charts.

Most organisations were producing just a few items of printed information each year, often in quite small quantities, to meet the needs of members, health workers and development workers with whom they were linked. The majority of respondents saw the production of printed materials as a small part of their work, taking either very little of their time (43%) or about a third of their time (37%). Some commented that they did not have enough staff to do more. However, 20% saw the production of printed materials as their main priority and a few organisations were producing very large quantities (over 10,000 copies) of materials.

TABLE 17 - Nature of printed materials produced by postal survey respondents

	MATERIALS PRODUCED	
Teaching notes	63	(53%)
Newsletters or newspapers	58	(49%)
Booklets	46	(39%)
Resource packs	18	(15%)
Teachers or trainers manuals	6	(5%)
Posters or flip charts	5	(4%)
Literacy primers and readers	5	(4%)

A silk screen duplicator demonstrated by MTEA staff in Iganga, Uganda.

7.1.2 Languages used to pass on information

Respondents were questioned about attitudes towards language usage and reading preferences with the following results. **(Table 18)**

TABLE 18 - Language preferences for reading materials from postal survey

respondents

PEOPLE PREFER TO READ IN...		
their own local language	27	(24%)
the official language	37	(33%)
English (not the official language)	7	(6%)
both local and official language	42	(37%)
Total	**115**	**(100%)**

Missing data 4 cases

English was the official language for nearly a third of respondents. Further examination of the results, separated out respondents whose official language was not English and found that a significant number of these respondents (64%) commented that their target community preferred to read either in their local language or the official language or both, rather than in English. Only 6% of respondents indicated that their target community preferred information in English when this was not their official language.

Clear preferences are thus expressed for receiving information in either local or official languages. In addition to the language used, difficulties in understanding more complex language usage were also raised by respondents.

7.1.3 Potential for post-literacy materials

The shortages of follow-up reading materials for new literates is a real barrier to maintaining literacy (Gfeller, 1997; Walker, 1996; Friedman, 1960). A small number of the respondent organisations were working in adult literacy. However, though others did not have literacy as their main focus, their materials might well prove adaptable.

When questioned about their co-operation with literacy work, nearly half were aware of literacy programmes nearby and a quarter were already cooperating with them in making their materials available to the literacy programmes. However, a further quarter of respondents said that literacy programmes were not aware of their materials, though many (41%) agreed their material might well have considerable potential for use in literacy training and post-literacy work. This indicates the potential for co-operation between organisations producing post-literacy materials and those producing teaching materials about development issues. Such co-operation and networking might prove most beneficial when working within small language groups.

Only 14% of respondents were able to meet the demand for their printed materials.

Nearly half (46%) of respondents said there was considerable interest in their materials but they lacked sufficient funds to produce larger quantities. Some (17%) felt that the inability of the target community to pay for their materials inhibited their ability to produce more printed information. Only 3% felt that poor quality limited the demand. These findings reveal that desire for locally produced materials far outweighs their actual appearance and quality (though this point of view is being expressed by the producers of the materials)

7.1.4 Priorities in producing printed materials

In over two thirds of organisations (71 %) there was group decision-making concerning the production of materials. In only 9% of situations did one person make all the decisions. Production was thus rarely explained by one enthusiast acting in isolation, though there may often be one enthusiastic writer backed by a team of like-minded people.

Most organisations (83%) produced materials for an audience wider than their own immediate membership and gratifyingly few felt their materials remained unknown. One third felt they lacked equipment and facilities and a quarter lacked funding to produce more materials (this is further explored in the next section).

Training in the production of printed materials came from several sources, though 21% commented they had received no training and 3% had no knowledge of alternative methods of production. Helpful training, usually through workshops, was received by less than a third (30%) of respondents, with most having learnt 'on the job' and 21% learning indirectly either from books on the subject or learning informally through visits to similar organisations (25%).

7.1.5 Copyright

Only 8% of respondents were unaware of the meaning of copyright. Nearly two-thirds (63%) were well aware of copyright laws, whilst another third (29%) were aware of copyright though did not always follow it. It should be noted that copyright restrictions do not extend to many countries, so few organisations would actually break the law by flouting copyright.

7.1.6 Available equipment and supplies

Respondents were asked for details about the kind of equipment they used for producing materials; equipment which they either own or simply have **access to. (Table 19)**

TABLE 19 - Access to printing facilities for postal survey respondents

AVAILABLE EQUIPMENT		
Typewriter	75	(69%)
Computer and printer	73	(68%)
Stencil duplicator	47	(44%)
Printing equipment	24	(22%)
Electronic scanner	11	(10%)
Silk-screen printing	10	(9%)
Total cases	**108**	

Missing data 11 cases

There was some overlap in the availability of equipment. 46% of organisations had access to both computers and typewriters, 23% had only computers, 21% had only a typewriter and 9% had neither.

A further 11 % mentioned they had use of a photocopier. The availability of printing equipment is more likely to reflect easy access to commercial printers than ownership. Few had access to electronic scanners, which can transform the use of traditional stencil duplicators with good quality reproductions and diagrams. Even fewer made use of silk-screen printers, a low cost method of printing involving easily made equipment.

The public library established by AEC

Organisations were asked about their access to supplies of the equipment necessary to enable them to produce materials. Nearly half (47%) commented that supplies and spare parts were not a problem, but the remaining half had various difficulties such as:

- spare parts difficult to find (26%)
- supplies such as paper, ink and stencils were often not available (19%)
- erratic electricity supplies a problem in production (21%)
- lack of funds to purchase necessary supplies (47%).

Other shortages mentioned by just a few organisations included lack of transport to buy supplies, lack of illustrations, lack of staff, lack of training and knowledge, and printing delayed through managerial problems at the printing press.

7.1.7 Design and layout

Though many people in the target community may be appreciative of any printed information, irrespective of design quality, it is apparent that most postal survey respondents were frustrated with their own limitations. They were prevented from producing better designed material due to the constraints of finance, training, source materials and equipment. Nearly a quarter (24%) recorded a lack of suitable illustrations to use in their materials. **(Table 20)**

TABLE 20 - Constraints in design potential among postal survey respondents

No training received in design	41	(35%)
Available equipment limits design potential	30	(25%)
No knowledge of how to improve design	14	(12%)
Design is not a problem	4	(3%)

7.1.8 Evaluation and monitoring of materials

Over 40% of organisations were regularly seeking to evaluate the appropriateness and ease of use of materials by their target audience. Over half were regularly influenced in their future production by on-going comments.

Of considerable interest was the low priority given in evaluation to factors which outside agencies (such as the Catholic Secretariat, Ghana) commonly use as arguments against producing information in printed form, such as low levels of literacy, poor design skills, lack of demand. These were not seen as important by those organisations involved in producing printed materials. Reading materials were seen as a priority by local people according to 95% of organisations and an overwhelming 99% felt there were insufficient adequate materials available.

7.1.9 Cultural value of locally generated materials

Many respondents saw their role as producing functional information to support their development work rather than enhancing empowerment among their target communities. However, two thirds of respondents indicated a direct link between the local production of printed information and their relevance to the local culture and nearly a quarter believed that their materials encouraged a sense of pride in the local culture. **(Table 21)**

TABLE 21 - Attitudes concerning cultural values of locally generated materials

Materials valued since relevant to culture, needs and situation	76	(64%)
Materials give sense of pride in our own culture	27	(23%)
People prefer to learn about city life	7	(6%)
People tired of information always coming from capital city	6	(5%)

A third of respondents gave details of other organisations producing locally produced materials, 19% mentioning one other organisation and 16% giving details of up to six other organisations.

7.2 Findings of Phase III: Regional overview of organisations sharing agricultural information in Uganda and Ghana

A sample of organisations with a focus on sharing information relating to agriculture were visited in capital cities and in several regional centres in each country. The organisations visited included most of the main agricultural agencies in each country, whether government, religious or international NGOs. Within these organisations there was an enormous range in terms of funding, expertise, training and motivation, ranging from large, well-funded international NGOs with impressive head offices in the capital city to departments within government ministries and religious organisations and finally to small regional GDOs with a few voluntary staff. Organisations mentioned as a source of information by the farmer groups visited, were included whenever possible. Samples of printed information were obtained if available and these were examined to see how many could be described as locally generated materials. In total, 57 organisations were visited in Uganda and 38 in Ghana. Of these, just under a half were based in the capital cities (25 in Kampala and 18 in Accra) and the remainder were regional. Brief details of each organisation's work and any printed information produced, can be found in Appendices J and K. The majority (89%) of organisations were GOs or NGOs, whilst 11% of the organisations fell into the category of GDOs.

7.2.1 Output of printed information in Uganda and Ghana

Organisations visited were assessed for the nature of their output of printed materials. This assessment was based on examples of materials obtained and produced by the organisations, information from staff and observation of the availability of such materials, both at regional and national level. The following figures resulted. **(Table**

22)

TABLE 22 - Output of printed materials by organisations visited in Ghana and Uganda

No materials produced at present for distribution	28	(31%)
A few materials produced at national level	20	(22%)
Good distribution of materials at national level	16	(18%)
A few materials produced at regional level	15	(16%)
Good distribution of materials at regional level	12	(13%)
Total	**91**	**(100%)**

Missing data 4 cases

Just under a third of organisations produced no printed materials for distribution, just under a third were producing materials at a regional or district level and over a third at national level. Based solely on general impressions of the organisations, it was apparent that most larger, well resourced organisations not at present producing printed information for distribution had the staff and facilities to do so, but either lacked the motivation or did not view producing printed information as a priority.

7.2.2 Nature of materials produced

Of the 95 organisations visited in Uganda and Ghana, 28 were producing regular newsletters. On the basis of personal observation and evaluation, just under a third could be classed as appropriate and readily accessible to grassroots readers, whereas over two thirds were readable only by well educated development workers.

Two GDOs were producing regular printed information in local languages targeted at grassroots level readers. KIIRA produced a regular newsletter, and MTEA regular information notes.

CASE STUDY - MTEA

Officials were enthusiasts for passing on information. When newsletters arrived with useful information they would often use this as the basis for a news sheet in the local language. Funding does not allow for many copies to be made - usually just one or two among each member group. They used a typewriter and silk-screen duplicator with great effect.

CASE STUDY - KIIRA

The future of this GDO was uncertain following substantial rifts over finances among officials, with the founder member disassociating himself to form a new organisation but keeping the original name. In the past, a local language news sheet had been produced on a monthly basis and distributed for a small cost. About 800 copies were produced and sold of each issue. KIIRA was one of the first NGOs in Iganga and had about 20 member groups in other parts of Uganda. They also produced primers in local languages.

Both were based in Iganga, Uganda. Production of their materials was severely restricted by lack of funding, mainly to purchase stencils, ink and paper. In both case studies, newsletters were charged for but the small cost which people were prepared to pay was not sufficient to cover production charges.

Aside from reports (which are rarely of significant public interest), the other most frequently produced materials noted during the visits were information booklets or leaflets (27%) and training notes or manuals (9%).

Few NGOs with a national coverage were producing what could be termed locally generated materials in agriculture. Exceptions to this were GILLBT and the NFED literacy programmes, which both had national coverage. They were also the agencies producing the greatest range of local language materials, which were accessible for grassroots farmers, albeit with little coverage of agricultural topics. Smaller regional organisations who were working closely with farmers, and therefore better aware of their needs, were most likely to produce locally generated materials. **(Table 23)**

Table 23 contains one item which was not written in local languages but in English, but was included because it was largely visual and therefore potentially useful for any language (World Vision), though preferably with a trainer able to read the small amount of English text.

TABLE 23 - Organisations producing materials on sustainable agriculture in local languages in Uganda and Ghana

ORGANISATION	LOCATION	TYPE	DISTN	INFORMATION PRODUCED	FEE

Africa 2000	Kampala	NGO	national	*Environews* - quarterly newsletter in English and Luganda	free
AT U-Press	Lira	NGO	regional	Information leaflets in several local languages on oil seeds	free
Environmental Alert	Kampala	NGO	national	Handouts planned in four local languages	not yet known
Heifer International	Kampala	NGO	national	Large range of booklets, some available in local languages	charge
Women's Desk, Catholic Diocese	Jinja	NGO	regional	Training manuals and reading books in Lusoga	free
KIIRA	Iganga	GDO	regional	Primers and newsletters in local language	minimal charge
MMM	Mbale	NGO	regional	Manuals, leaflets and booklets in Lumasaba	unknown
MCAI	Masaka	GDO	regional	Series of booklets in Luganda	charge
MTEA	Iganga	GDO	regional	News sheets and notes produced on silk screen printer or duplicator	minimal charge
UCAA	Kampala	NGO	regional	*Change Agent* - training booklets in Runyankore and Rukiga	free to agents
UNFA	Lira	GO	regional	Newsletters in Luo	unknown
VI Tree Planting Project	Masaka	NGO	regional	Simple handouts in several languages, printed on card	free

Dept of Agriculture	Kitgum	GO	regional	Series of four booklets - *Yoo Maber* in Luo - well produced	minimal charge
Catholic Diocese	Mbarara	NGO	regional	Sustainable agriculture booklet: *Ohingye Otungye*	charge
Presbyterian Agric Info Services	Tamale	NGO	regional	Booklets and fact sheets. Quarterly newsletter - *Labaari*	free
Dagbani Literacy Project	Tamale	NGO	regional	Booklets and readers in Oagbani on agriculture	minimal charge
GILLBT	Tamale	NGO	national	Newspapers, primers and Christian materials in various local languages - some on agriculture	minimal charge
NFED Programme	Accra	GO	national	Newspapers and primers in various local languages - some on agriculture	charge
Information Support Unit	Accra	GO	national	Small quantities of excellent flipcharts that could be used for all languages	free to staff
World Vision	Accra	NGO	national	*Farmer's Guide* - well illustrated, few words, could be used for all languages	charge

7.2.3 Identification of target audiences

Material gathered during this overview revealed that the majority of GOs and NGOs producing materials at national level were printing technical information without first clearly defining and targeting their primary audience. The consequence was that educated staff in such organisations were producing materials about their activities for an audience which often largely mirrored their own staff. In terms of enhancing

networking this could certainly bring benefits. However, most organisations seemed unaware that by failing to define and target their publications at any particular audience they were in effect isolating many potential readers who would be unable to cope with understanding the language level used (eg: Service, COU; GTZ Notes; Technoserve).

A university or college education is a considerable achievement in most developing countries. The skills of academic writing are hard won and not easy to put to one side. Many NGOs were aware of international newsletters and journals and had used these as models for sharing information about their own work, often very effectively, and had found these very useful to provide evidence of their effectiveness with donor agencies. However, many newsletters collected during the overview were written in a style and language complexity more easily understood by readers with a university-level education. Most organisations were proud of their newsletters and staff seemed unaware of how limited an audience they would reach due to the complexity of language used.

7.2.4 Distribution within target audience

Almost none of the sample materials collected were observed in the hands of members of the RPAs or GDOs visited. Even extension agents rarely had access to copies of booklets and information produced by central departments of extension.

An exception was the quarterly newsletter *Environews*, produced by Africa 2000 (Uganda), largely funded by Danish and Canadian funding. This is produced half in English and half in Luganda with 2,000 copies distributed. Aside from *Footsteps*, this was one of the very few newsletters seen in the hands of group members in Uganda. Multiple copies are normally sent to groups for distribution among members.

The few organisations with good libraries were almost invariably in organisations with some expatriate involvement and therefore, presumably, a greater awareness of free sources of information from their own countries and the ability to order in foreign exchange.

Outside capital cities and main regional centres in both Uganda and Ghana, few bookshops were apparent. Two main commercial networks were found to be well represented in smaller towns. These were stationery shops stocking standard school textbooks and Catholic Centres providing stationery and liturgical materials. Particularly in Ghana, they stocked an extensive range of local language booklets widely used by priests to share with their congregations. Two of these booklets (one now out of print) looked at agriculture. The Catholic centres were nationally run, whereas the stationery shops were largely independent. Agricultural suppliers of seed and chemicals were also observed in most larger towns and could provide another

useful outlet.

7.2.5 Limiting factors in the production of locally generated materials

When respondents from the postal survey in Phase I were asked to consider the limiting factors that prevent them from producing more printed materials, considerably more than half indicated a lack of financial resources as the major limiting factor, either for the purchase of equipment or supplies, to pay for staff or through the limited ability of local people to pay for materials. Next in importance was the need to develop further skills in production, through training. **(Table 24)**

TABLE 24 - Limiting factors in the production of printed materials for respondents of the postal survey

	AGREEING	
Lack of people with time to produce materials	138	(58%)
Lack of funding for equipment and resources	137	(58%)
Lack of skills in producing materials	87	(37%)
Local people have no money to buy reading materials	71	(30%)
Lack of good source information and materials	41	(17%)
So few literate, there is no market for materials	30	(13%)
Reading materials are not a priority here	30	(13%)
Lack of interest among local people	16	(7%)
Too many useful materials already available	7	(3%)
Poor design means no-one wants to read	3	(1%)

Up to 3 limiting factors could be mentioned.

The Phase III research highlighted these results through observation of facilities available within each organisation and the motivation and inclination of staff towards the production of printed information. The ready availability of computers, printers, photocopiers and duplicators observed in the offices of large NGOs and GOs in towns was in sharp contrast to the desperation of several of the GDOs visited who had been trying for several years to obtain even a typewriter.

At regional level the limiting factors identified in the postal survey results were similar. Out of the 12 organisations found in Uganda and Ghana who were producing well targeted regional materials, a half lacked adequate funding and nearly a half lacked

sufficient personnel to produce more. Lack of motivation was not apparent here as a limiting factor but, rather, a lack of resources.

However, within the larger organisations producing well targeted materials and operating at national level, limiting factors differed, with a third lacking sufficient personnel and a third lacking motivation.

7.2.6 Role of individuals

The production of useful and imaginative materials calls for a certain creativity and persistence of character sufficient to retain the original vision through all the tedious stages of production. The underlying motivation of those who were producing locally generated materials seemed simply to be an altruistic desire to pass on relevant knowledge. Certainly there was no financial gain to be made at all from their production, and indeed often individuals were providing funding from their own sources to continue production. Several individuals were producing some excellent materials but often with very little financial backing. Where such individuals were working within a team, they were more likely to receive backing and support for their initiatives. This included staff within MTEA, MCAI, Suntaa Nuntaa, FURA and LABE.

CASE STUDY - LABE

The initiator of LABE (Literacy and Adult Basic Education) had a real passion to enhance literacy skills and to provide locally generated materials. He had established LABE whilst still a student at Makerere University and was the driving force behind the organisation, ably assisted by several other like-minded and committed staff.

LABE worked directly with local literacy committees in different areas of the country, providing training, linking them up with government support when available and providing literacy materials. They provided training in the construction and use of silk screen duplicators. They had been criticised for 'encouraging groups to move backwards' instead of making funding requests for duplicators and computers. They were unrepentant, seeing silk screen duplicators as a cheap, simple and readily available method of producing locally generated materials. They were flexible in their manner of working and very keen to encourage networking and overlap between experts and local people in the production of LGM. A regular newsletter, *The Lit*, was produced to enhance networking and to share information

CASE STUDY - MCAI

MCAI (Modern Campaign against Illiteracy) was a small organisation, founded by an individual who had written an extensive series of booklets in Luganda to aid literacy skills. Booklets ranged from primers to teaching on morals and good living. He arranged publishing himself and marketed them through private bookshops. Sales did not cover all the expenses, making it a struggle to find funding for further booklets to be produced

The role of creative individuals seems key and without them, even given excellent facilities, production of printed information may not be forthcoming. These people are often exceptional and persistent individuals able to overcome innumerable obstacles - mostly financial constraints -for the satisfaction of seeing information available in printed form. Given the absence of any profit motive, such individuals invariably try to meet the agenda of their target audience.

7.2.7 The promotion of literacy skills

At least two thirds of RPAs visited had some members with good literacy skills. However, the paucity of actual information available to read in both English and the local language on a regular basis meant that many group members had little encouragement to maintain their literacy skills effectively. Many group members mentioned that they owned Bibles and hymn books in the local language. Some weekly newspapers in both Uganda and Ghana are also available in the main language groups. There was a paucity of novels, cultural history and light reading. It was noticeable that animators tended to have considerably higher levels of literacy than other group members.

Most of the local language materials viewed were produced by literacy organisations. They consisted of primers, some post-literacy primers and in Ghana local language newspapers. In several groups visited in Ghana only one primer was available for the whole group, though officially each learner should have their own primer. Despite the impressive range of post-literacy reading materials developed and available in Accra, these had not reached some of the groups visited in the north. NFED has supported the production of newspapers in each of the 15 languages. Production is much less regular than anticipated, but where distributed these have been much appreciated by learners. Most are professionally printed - however, training in the use of silk screen duplicators has been provided with the hope of decentralising production.

Government and outside funding supported the national literacy programmes in both Ghana and Uganda. GILLBT was largely funded by its parent organisation, the Summer Institute of Linguistics in the USA. Literacy programmes do have considerable

ability and motivation to produce local language materials but generally work in isolation from other rural development sectors and from small national organisations such as LABE and KIIRA.

CASE STUDY - THE YOO MABER SERIES

Three staff in the Department of Agriculture in Kitgum produced a series of four booklets in Luo/Acholi - the *Yoo Maber* series. This series was probably the best example of cheap, but well produced locally generated materials seen in Uganda. Their aim was to communicate practical knowledge and skills in the local language. The booklets were A5 in size, 20 pages long, with excellent illustrations considering they were duplicated. Initial funding to print 200 copies of each was provided by an Italian NGO (AVSI) helping with the rehabilitation of Kitgum District in 1989 and 1990. The actual unit cost of production was 1,000/= and they were sold at a subsidised price of500/= to local farmers.

There has been considerable ongoing interest in these booklets from local farmers. The main author would like to reprint at least 1,000 copies of each to meet demand. Unfortunately, no funding has been forthcoming, leading to an enormous waste of excellent communication skills. The Ugandan authors (one of whom has since died) would no doubt have produced many more materials, given encouragement and funding (personal correspondence). The difficult security situation in the north of Uganda during the research visits (with several roads closed) prevented a personal visit by the researcher to the Departments concerned in Kitgum and information was received by correspondence following mention in the postal survey.

Staff at the Women's Desk in the Catholic Diocese of Jinja were one of the few examples of groups producing a range of local language materials who were not working exclusively in literacy training. They worked with a total of 184 women's groups within 3 districts and 10 parishes. In addition, they helped with 70 adult learning and literacy classes. They have produced training manuals for literacy instructors and a series of four reading books in Lusoga, the local language, which were distributed free of charge among 2,000 literacy trainees. Before materials are produced there was consultation at grassroots level to determine the most appropriate content to gain the interest of readers. All materials were commercially produced and financed through the Catholic Church.

7.2.8 Extension training materials

Within Uganda, production of agricultural information had previously been the responsibility of each District Ministry of Agriculture. Production was then centralised and moved to Entebbe, in the headquarters of MAAID. With the opening of the

Agricultural Research Information Systems (ARIS) in 1995, this excellently equipped resource centre and library at Kawanda Research Station, just outside Kampala, has now taken up the task of producing materials. A good range of earlier MAAID materials for extension officers and farmers was available within ARIS. The challenge for them to provide a range of useful booklets for FEWs and farmers is of enormous importance and one of the key staff is at present undergoing postgraduate training in this area of expertise. In terms of resources and access to information, ARIS is ideally placed to disseminate information. Co-operation with rural farmers, graphic designers and groups such as LABE with experience of post-literacy work would help in determining the target audience and ensuring readability.

In Ghana, the newly revitalised Department of Agricultural Extension Services is now responsible for the coordination of printed information. It plans to respond to information and ideas assembled by regional staff, in the hope that this will ensure that materials produced are timely and appropriate to farmers' needs. A large range of previously produced material was available, including some excellent A4 sized books with large, clear illustrations and one flip chart, again with excellent artwork and diagrams. Nothing was available in local languages and distribution of the present material was not apparent in regional centres visited by the researchers. Certainly the resources, skills, funding and personnel were available to produce a wide range of materials.

However, though both of these centres were able to reveal a considerable range of useful materials (if somewhat didactic in approach), local extension offices sometimes failed to have even a single copy. Even more of a concern was that the extension agents interviewed seemed both unaware of their existence and of the resources and information services ostensibly available to back up their work.

7.2.9 Summary of Phase III: Regional overview

This information was based upon informal staff interviews, personal impressions and an assessment of the printed information collected rather than on a rigorous quantitative survey. However, the trends revealed are very clear. NGOs and GOs with a national focus rarely saw the provision of printed information for farmers as a priority, particularly in local languages, despite the fact that most had the capability and staffing to produce such printed material. NGOs and GOs instead concentrated their efforts on networking with similar organisations. In addition, distribution networks were extremely poor so that even when useful materials were available they often failed to reach their target audience.

The information gathered also revealed that the capacity of GDOs was of considerable potential. Staff within these small organisations had a genuine understanding of the

needs of farmers, high levels of literacy in both the national and local language, and tended to be highly committed in their work. They often viewed the production of printed materials as a priority. However, their capacity was severely curtailed through lack of funding, equipment, training and source materials and their potential largely unrecognised.

7.3 Phase II: Impact of printed information within RPAs

Findings from Phase II confirm that members of RPAs relied heavily on information sources which were either endogenous or local. Access to exogenous sources of information was severely restricted, as **Table 25** reveals.

TABLE 25 - Access to various sources of exogenous information by members of RPAs

Access to radio	53%
Access to several sources of printed agricultural information within group	6%
Access to a weekly newspaper	9%
Monthly contact with extension agent	41%

66% of groups commented on how much they valued printed sources of information, despite their lack of access to them. RPAs with good access to printed information were much more likely to hold regular training within group meetings and to have a positive outlook about the future of the group. Of the 8 RPAs with direct access to copies *of Footsteps*, all circulated copies among members, retained past copies and had made extensive use of ideas both during meetings and in practice. On several occasions during the visits two members were observed sitting together, poring over a copy of either *Footsteps* or *Environews* (the only other newsletter observed several times in the hands of group members), working hard to understand the text in English (or Luganda) and helping each other with difficult words, emphasising the value of information in improving literacy skills.

7.3.1 Design preferences

An exercise to examine design preferences among members of farmer groups was carried out using sample pages from *Footsteps* and details are available in Appendices E and F.

Results showed clear preferences for design incorporating plenty of clear illustrations with little text. This reinforces Linney's views (1995) of the value of visual literacy. The preferred cartoon had few speech bubbles but plenty of explanation beneath each picture, a finding echoing Zeilinski's (1986) in India. Overall preference was for the cartoon which incorporated a lengthy explanation. This was followed by pages with plenty of illustration and little text and then, surprisingly, by a page making good use of boxes in the layout (but no illustrations). Half of the respondents preferred large (16 point) text, but closely followed by the smallest text size, (12 point), with some respondents commenting that small text allowed more information to be included. Clear illustrations were preferred to photos 'because you could understand the picture better', confirming the findings of Fugelsang (1982) and Epskamp (1984).

Of the materials observed in Ghana and Uganda, only two publications met these preferences in full. One was a World Vision publication using clear diagrams and virtually no text. The other was a set of well produced flip charts from the Department of Extension in Accra. None of the groups included in the research had access to either of these.

7.3.2 Information flow within RPAs

All established groups were sharing information, usually simply through the observation of their activities by other members of the community and casual conversation. However, the more proactive sharing of new ideas among members was often well organised within farmer groups. Regular (every 2-4 weeks) training sessions for members were held by 35% of associations, with nearly 60% holding occasional (2-3 times a year) training sessions within the group. New information was usually mentioned and often discussed at length during meetings before further action or training sessions were planned. The time and consideration given to the sharing of new ideas during group meetings was considerable and provided a substantial force for change. RPAs who carried out regular training were 'hungry for new ideas' and actively sought views and new information from the visiting research team members.

Members already exposed to several sources of printed information were always keen to obtain more. *'We would like many more new ideas in agriculture, especially if they come through the church'* (referring to a Baptist church with a pastor who has been very supportive of the group). *'It would be useful if we could get information through print,'* commented members of Bayiri Women's Group in northern Ghana, none of them literate. However, the pastor could read English and would share with them. Several members were attending night school to become literate in Dagaare.

Many members of RPAs commented that one key advantage of printed information was the ability to refer back to it for necessary details when appropriate.

'Information is better coming from a book because you might forget things, but you can check them up in a book.'

WEGBE WOMEN'S GROUP, GHANA

The effectiveness of printed information in sharing ideas is likely to increase proportionally with the access of farmers to such information. During the research there were several examples of ideas taken up by farmers with success, based purely on something a group member had read, showing that there can be real confidence in information which comes only via the printed word...

- Rwancereere Farmers Association on the Rwandan border were successfully controlling gully erosion with information from *Footsteps.*

- Buluba Youth Group followed printed instructions to build several successful vegetable nurseries.

- The NGO, Suntaa Nuntaa, distributed instructions for maintaining tree nurseries, used and found useful by two groups visited.

- Instructions on book keeping (from *Footsteps)* were in use by the Treasurer of the Christian Friendly Association.

Groups who had gained confidence in their own knowledge, whether through experience, through successfully working together or in their achievements as a group entity, were found to be actively passing on information outside their group on a regular basis, either through community meetings, training of small groups, drama or role plays or through some kind of printed information.

Members of Ogur Afforestation Association brought the printed information they owned to each meeting.

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8. Conclusions

This section draws together the research findings and examines the insights they provide into the research questions concerning the potential role of printed agricultural training materials in enhancing information access and empowerment among farmer groups.

The research findings represent two country case studies from which lessons can be drawn and which may have a wider applicability, in that the findings were not limited to one country, or one region within a country, or any one ethnic group, or to areas of high agricultural potential. The research's use of three different phases to draw out findings both from organisations producing agricultural information and examples of intended beneficiaries, though occasionally confusing, has nevertheless revealed important aspects of information access and sharing. The findings reveal an enormous, largely unmet hunger for relevant agricultural information through the printed word, both among grassroots farmers and organisations sharing information. Secondly, they confirm that even where outside support is lacking, farmers will work collectively to support each other and share advice and information informally. Thirdly, they reveal that though not always easily apparent, and despite severe shortages of resources, there are still organisations with a clear focus on supporting the needs of farmers for information, pointing to a potential for the improved production, content and distribution of locally generated materials.

During the research, few materials which could be deemed locally generated were observed in the hands of the members from farmer groups. Given that comments on general printed information were favourable, even though these views were often made on the basis, for example, of an old school textbook or a few handouts on new seed

varieties, more widely appropriate materials in local languages should meet with a considerably higher level of appreciation.

It is clear that genuine locally generated materials were in very short supply. Those producing such materials may be aware of the needs of their target audience, but they were generally limited in meeting those needs by a lack of the funds required for production, staff and equipment. Larger national organisations tended to have their own priorities, including the need to enhance networking with other organisations and to convince donors of their effectiveness, and in consequence were less likely to produce locally generated materials.

8.1 Potential of Rural People's Associations

During the planning stage the decision was made to visit farmers in established groups for several reasons. Firstly, it was a convenient way of discovering the views of many more farmers than would have been possible through individual interviews and, secondly, it would allow the flow of information into, within and out of the group to be revealed. By establishing the criteria that the selected groups should be autonomous and have been established for two to three years rather than using groups formed at the convenience of, for example, NGOs or extension agents, the intention was to avoid groups where the flow of information was largely determined from outside the group.

These combined criteria ensured that a fascinating array of largely independent farmer associations were met. The level of organisation, openness to new ideas and potential for action exhibited by these groups proved a considerable and rewarding surprise.

The informal social support systems exhibited within associations were an important binding strength. The nature of support varied considerably but tended to be stronger among female or mostly female groups who were more likely to work together and spend more time in each other's company. Older women talked of the reassurance they felt in knowing that during sickness and death, other members would support them and appear in large numbers for their funeral. Younger women talked of help and counselling received. Some groups practised informal savings and credit systems whereby each member either paid a regular sum of money or amount of crop produce which benefited one member in turn. Some associations mentioned that if a member was in financial problems their turn might be brought forward.

Though the benefits of improving information flow were still not reaching the poorest in rural communities, nevertheless empowered groups keen to share relevant information and living and working alongside them were more likely to extend

information than any outside agency. A willingness to believe in the potential of self-formed, collective groupings and use them as a means of extending information provides a challenge to the methods of working adopted by many NGOs. Ideas found of benefit in the support and building up of groups, such as facilitating group travel, group workshops in the community and funding training by group members, may rarely meet donor objectives and time limits, yet their benefits may prove profound and far reaching.

8.1.1 Confidence building observed within associations

Of considerable interest was the observed increase in confidence which individuals, and notably women, had apparently gained through group membership. Confidence was assessed through the pride expressed in their achievements and the apparent ability of individuals to influence their future, to speak out with assurance and to initiate contact with staff from outside agencies. For example, members of Buluba Youth Group and CARD were proud of their experience and understanding of sustainable agricultural techniques and confident of their ability to share these with others; members of Bikyiiteng Bullock farmers had gained confidence and enthusiasm in their work of introducing bullock farming in their community; members of Tangiybe Beekeepers were confident in pursuing their aims of networking and supporting beekeepers within their region.

Such confidence was also apparent among women's groups which had achieved some progress and who talked proudly of their previous situations, difficulties overcome and the steps which had led to their present situation. Members of Kyebajja Tobona Bulange Women's Association, Uganda, had great pride in the wells dug and capped, the grain mill established and progress made with literacy training in their area. They now had the confidence to approach donor agencies for help and advice. Members of Sokode Gbobame Novisi Women's Cooperative Credit Union had established their reputation with very successful roadside vegetable plots in 1991. With profits raised they began poultry keeping and subsequently bought a grain mill using a loan. Their rapport with the male extension agent was marked and the leaders had confidence in meeting with other NGOs in the area, both unusual activities for women.

Also noticeable was the confidence of women members among mixed gender groups. Women members were often uninhibited in speaking out in a relaxed way in the presence of male members. Such confidence is in sharp contrast to the more usual perception of rural women's lack of participation in open community meetings (Chambers, 1983; Creevey, 1996). Examples of such confidence were found in all regions and in both Uganda and Ghana.

8.2 Role of animators

Animators were both a frequent source of new ideas and the people most likely to identify the needs of the group for further information. Tilakaratna (1987) defines them as development workers who assist the self-mobilisation of the poor, but his comparison to the work of development workers is not entirely inline with these findings. Zivetz (1990) is another of the few individuals who makes reference to the empowering role of animators (though Havelock (1973) also refers to them, defining them as 'user system mobilisers'). From Zivetz's experience in West Africa, he comments that the majority of animators come from within the community where they are a driving force and yet in some way or other they are usually 'outside' this community in terms of previous experience and exposure. They may, for example, have spent time in government service or worked elsewhere. They are more likely to be literate and have some education than the average community member. In addition, their horizons may have been widened through exposure to outside influences. The research findings serve to confirm Zivetz's views. Generally, women animators were less likely to have worked outside their community, although sometimes they had either accompanied or visited their husbands working away from home. There seems surprisingly little reference to animators in other research, considering how their presence (or absence) within any given group could usually be identified after half an hour of observing group rapport and discussion.

Most animators would be likely to fall within Rogers' (1995) definition of 'early adopters', revealed by their openness to try out and adapt new ideas. Rogers uses the term 'opinion leaders' to describe individuals who observe the reactions of both innovators and traditionalists to new ideas and implement change when they judge it worthwhile. Opinion leaders tend to be held in considerable respect by others in the community.

Oakley et al (1981) comment on the necessary characteristics required by what they refer to as 'agents' (development workers or group organisers), without which they would prove ineffective. They list these as humility, commitment, sensitivity and self-confidence. The animators met during this research did indeed exhibit all or nearly all of these characteristics. Animators were not initially included as part of the research as their key role within autonomous groups had not been anticipated. However, their very obvious role within the first groups visited highlighted the need to include them as part of the research. Their openness to new ideas, the respect in which they were held by members, together often with a higher than average level of access to printed information and formal education, make them an ideal target for distributing information. Moemeka (1990) talks of the common practice of 'You buy, I read for the group' whereby those who read (in this case referring to newspapers) are people who are trusted and respected within the group, engendering reassurance and acceptance of new ideas. Animators, by virtue both of their respected position within the group and often better than average levels of literacy, were often 'people who read for the group'.

The key role that they play needs wider acknowledgement and support. However, though one outcome might be to target training, information and support to known animators, it must also be acknowledged that their success is largely due to the fact that they are seen as integral to the group and community by other members. Any form of support which directly targets them, may change this dynamic. If they are seen to receive special attention, training or financial rewards for their work, this may result in a widening gulf with other members, threatening the whole basis of their effectiveness. Support, such as printed information, access to workshops and training, utilisation of members for training other groups, should thus be targeted at the wider group, whilst acknowledging that animators will be generally be the ones to utilise and extend this support. Extension agents and development workers could seek to develop their rapport with known animators, both male and female, ensuring that the animator feels readily able to call on them for advice or support.

8.3 Indicators of empowerment with regard to information access among farmer groups

Studies of group formation and development are well researched and documented. Forsyth (1983) details the five widely accepted stages of group development: forming, storming (resolving conflict), norming or cohesion, performing and adjourning. By choosing to study autonomous farmer groups who had already worked together for several years, the initial stages were rarely observed during this research. In addition the groups visited were still functioning as groups and none were likely to dissolve in the immediate future. With the exception of six groups who were still in the initial three stages of group development, most of the remaining groups could be described as within the 'performing' stage whereby they were operating as social units and achieving various tasks and goals collectively. Within this stage there were marked differences observed in the functioning of the group, such as the level of participation and the degree of empowerment observed amongst members.

Brown's (1991) suggestion that information flow may provide an indicator of social development and a possible means of understanding how information flow and empowerment relate to one another, was introduced in section 3.3.2.

A detailed assessment of the characteristics of the 75 RPAs and GDOs encountered during the research suggests that various levels could be proposed with regard to observed information flow and empowerment. A total of five levels are therefore proposed with regard to the groups' access, use and ownership of information. The level

of empowerment with regard to information access increases through the various levels. These levels describe the attributes of a group as an entity and may not apply equally to all members in the group, since some individuals will have more confidence than others. These levels therefore describe group characteristics; the sum of their members potential. **Figure 6** provides a summary of these levels and key indicators for each level.

Figure 6: Indicators of information flow with regard to its contribution to empowerment

LEVEL I	Mobilisation
LEVEL II	Confidence in collective purpose and the sharing of experience
LEVEL III	Confidence in the use of information to encourage change within the group
LEVEL IV	Confidence in group's ability to extend influence
LEVEL V	Empowered to enhance information sharing within local community

8.3.1 Level I - Mobilisation

A number of groups appeared to be at the point of mobilisation. Their characteristics and experience illustrated the way in which groups at the early stages of mobilisation seemed heavily dependent on one source of exogenous information, usually a worker from an NGO, and exhibited little evidence of a flow of information among their members. Included within this level are both groups which were yet to organise themselves into a functioning entity and groups which were so dependent on an NGO for support and direction that they could not be regarded as acting wholly independently.

Two of the RPAs examined in Uganda and Ghana had not yet organised themselves into formal groupings but were considering the possibility. One was a small group of men and women in Kyamatambamre, Uganda, considering forming a group after joining a literacy class together and through the example of a nearby group, the Nyabuhama Bakyara Twimukye. The second was a large group of men in Pianloco, northern Ghana, who were spurred into considering the possibility of acting as a formal group by the example of an active women's group, the Tambie Poab Noryine.

> *'When we saw how effective the women's unity was to the community, we were inspired to get organised.'*
>
> PIANLOCO MEN

Both groups had thus become aware of the benefits of collective action by the example

of another group and both groups seemed likely to take things forward, though the men of Pianloco were a large group with some very strong characters who were struggling to achieve any kind of consensus about their priorities and mode of action (the conflict stage).

Of particular interest are the views of the men and women in Kyamatambamre regarding friends. They rejected friends as a source of information, saying, *'Friends don't help us', 'Sometimes friends are jealous and don't want to share good ideas'* (implying that so-called' friends' preferred to keep good ideas to themselves). No other group shared this view. Certainly there was no evidence of group bonding among these people, in sharp contrast to the close bonding, friendship and sharing of ideas noted within established groups.

Also included within Level I were groups which appeared to be very dependent on the support of personnel from an NGO acting as an umbrella organisation. These groups tended to adopt only ideas which came from the umbrella organisation and had little or no contact with other exogenous sources of information. They often appeared lacking in confidence. Some examples included Kakora, a kinship group supported by Salem, Uganda. Salem had provided the Kakora group with a small piece of land for growing crops and had suggested and helped with establishing pig husbandry. However, the animals observed were in poor condition and the venture had not been very successful. In northern Ghana the long established Segru Women's Group was comprised mostly of elderly ladies. The group has received support from Nandom Agricultural Project (NAP), a Catholic NGO and with their encouragement began pig husbandry. However, this has not been too successful and it has proved hard to feed the pigs adequately. This group lacked any apparent animator, members lacked confidence in their secretary and had lost nearly half of their members. They have worked collectively to establish pig husbandry and make decisions. However, they have very limited access to exogenous information and NAP is their only long term contact. Their inability to make progress stems to be partly from a lack of dynamic members to lead the group forward and partly from poor advice in recommending pig husbandry without sufficient food supplies.

Two other groups, BIGA (Bio Intensive Gardeners Association) and OBAFA (Osupunu Banks Agroforestry Farmers Association), fell into this category, though both were likely to quickly mobilise their members and make progress. These were two new groups which formed as a result of training in organic agriculture received at the Ghana Rural Reconstruction Movement project centre at Yensi, southeast Ghana. Members came from a widely scattered geographical area which makes meeting and acting collectively difficult. Their motivation was commendable in wishing to support each other in trying out new techniques. However, they were still very dependent on the support of staff at the GhRRM project where they met. Their wide geographical distribution may hinder the formation of collective groupings able to work together.

The six RPAs which fall into this level were open to change and new ideas. Some were very new, others well established, but all lacked confidence in their achievements as a group and were heavily dependent on one source of project-based exogenous information. In addition the lack or loss of good leadership may cause groups to lack purpose and fail to progress. Geographical dispersion is likely to make it difficult to establish close relationships between members and to work together regularly.

Indicators for Level I could include:

- awareness of needs
- recipients of outside aid and decision-making
- dependent on one source of exogenous information.

8.3.2 Level II - Confidence in collective purpose and the sharing of experience

Thirty one RPAs and GDOs were placed within this second level. In addition to establishing definite aims and a sense of collective identity, easily identifiable by the formal appointment of officers and sometimes an executive committee, these groups were characterised by their ability to share their experiences within the group. They exhibited a sense of ownership of their activities which enhanced this sharing and encouraged the full participation of members. All but one kept records within the group. All were characterised by the following:

- access to more than one source of exogenous information

- confidence in their collective ability to make valid decisions based on group dialogue and understanding

- a sense of formal identity and common purpose.

LEVEL II - CASE STUDY

Wliwlinyo Mango Group

This was a small group begun in 1995 and based in eastern Ghana with just five members. It was started by an older man, now the Chairman, to encourage youth. ('I started the group to prepare the future for the next generation'). He had donated nearly 1 hectare of land to the group for the purpose of planting mangoes. They were advised by the Evangelical Presbyterian Church Project who were providing them with grafted mangoes and advice, on the understanding that the Church would receive a third of the eventual profit. The group met once each month and worked together when necessary. The female secretary, in her 30s, had attended some workshops run by EP and the remaining three young people who were members had agricultural textbooks at school. The older members were very willing to learn from the youngsters.

LEVEL II - CASE STUDY

Nalimawa Women's Group

This group with 15 members based near Jinja, Uganda, met twice a week to work together on a half hectare plot of land (donated by the Chairwoman and her husband) to grow vegetables and passion fruit. Their main source of information and advice was a development worker from the Jinja Diocese Women's Desk who had also helped some members (usually Chairperson or Secretary) attend workshops. Information was shared with group members. There was some contact with the government extension agent but not with any other NGOs. They were still largely dependent on the Jinja Diocese Women's Desk for outside information and support.

Each group already had access to their own knowledge, which was shared among members. However their access to exogenous information was still limited, usually to two or three sources on an irregular basis.

8.3.3 Level III - Confidence in the use of information to encourage change within the group

Groups within Level III had all been established for several years during which introduced changes had had time to yield and bear fruit (often literally). The quality of leadership appeared key within the 17 groups placed in this level and to their use of information. Receptive and facilitatory leaders were able to listen to the views of members, hold the group together and facilitate access and use of information which

might be relevant to the group interests. Members not only shared information but were able to critically reflect upon their past activities before taking future action.

Groups where two or three strong characters were fighting for centre stage or more control, where leaders were closed to outside influences (in a variety of forms) or where leaders relished the power they exerted over the group, would be unlikely to be found within Level III. Receptive, unified and facilitatory leadership nearly always included the presence of one or more animators in the leadership structure. Level III group members appeared to have an increased confidence in their ability to enhance change as a collective identity, observed as members talked freely during meetings about their achievements and how they planned to build on these. Leaders might have visited offices of nearby NGOs or written letters requesting advice and understood they did not have to remain as helpful beneficiaries but could take some steps themselves to influence a desired outcome. They usually had reasonable access to several sources of exogenous information.

LEVEL III - CASE STUDY

Soweto Women's Group

This was a small group comprised of four married couples (despite the name). It was initiated by a World Vision extension worker but was now fully autonomous. It was located in an extremely isolated part of North Luwero, Uganda, near Lake Kyoga. The Chairlady, Margaret Kizza, was an enthusiastic, very hardworking farmer, continually experimenting and ready to implement new ideas. They were using swampy land at the edge of the lake with deep drainage channels and had very productive and impressive vegetable and crop gardens. Visitors to the gardens were welcomed. Members were close friends and husbands were an integral part of the group. Despite good literacy and education levels among members, they had little access to exogenous ideas on agriculture since the departure of the World Vision worker. They had no access to printed information, including newspapers, and were not in contact with any NGO. However, they were still experimenting with new ideas gained from the extension worker and with indigenous knowledge

LEVEL III - CASE STUDY

Zangbogu Women's Association

A lady from this village had travelled to visit friends and observed a women's group meeting under a mango tree. Listening to their activities encouraged her so much that on her return she persuaded ten others to join in forming a group in Zangbogu. At the time of visiting, the group had 72 members, met every fortnight and ran a small credit system. Operating in a very poor area of the Upper Western region of Ghana, 20km north of Wa, members had worked together growing trees for fuel, groundnuts, bambara and soya beans and had introduced pig husbandry. Social aspects, such as supporting members with ill health, played an important part. Their husbands were impressed by their achievements and through their support the group had access to a total of 11 acres loaned by various husbands, though scattered in different places.

Their main support had come from the NGO, Suntaa Nuntaa, but they also had contacts with ADRA and government personnel. Members had attended several workshops. Several animators were present. The group divided into three for the purpose of working together, with sub-groups competing for productivity. Suntaa Nuntaa helped them produce a role play on the benefits of tree planting which they had performed locally with great success.

With successful practical achievements behind them, it was observed that given good leadership, a collective awareness of their strength in unity had developed. Motivation to share information within the group was high, since group members knew they were able to implement new ideas successfully. The following are suggested as characteristic of groups within this level:

- receptive and facilitatory leadership
- critical reflection on past activities resulting in further action
- reasonable access to several sources of exogenous information
- understanding of local situation and relationship with outside structures
- desire to share acquired knowledge within group.

8.3.4 Level IV - Confidence in group's ability to use knowledge to extend influence

It is increasing confidence in their own collective strength and knowledge and the beginnings of empowerment, that mark groups within Level IV.

Ownership of knowledge differs from awareness of that knowledge. This fact most clearly differentiates Level IV from III. Such ownership may develop from increased

and more selective access to sources of exogenous information. This may enable existing indigenous knowledge to be evaluated alongside new practices. Ownership is likely to come through use, implementation, experimentation, adaptation and confirmation or rejection of innovations. As a group's confidence in their knowledge and understanding progresses, so the group is more likely to interact with NGOs and government personnel, instead of simply passively benefiting from the passing on of knowledge. If knowledge proves of benefit, confidence is gained in this knowledge and consequently the owner of this knowledge may have the desire to pass it on to other individuals. It may also lead to the production of locally generated materials to enhance the sharing of knowledge and experience. Relevant indicators suggested for Level IV are:

- collective awareness of their strength in unity
- selective access to several sources of exogenous information
- ability to experiment, reflect, analyse and make informed decisions based on both indigenous and exogenous knowledge
- desire to pass on acquired knowledge outside the group

LEVEL IV - CASE STUDY

Ihimbi Women's Group

The group began in 1991 based in the outskirts of Kabale, Uganda. At the time of visiting, it had a closed membership of 31. Their aim was to increase the income of members through sustainable methods of agriculture. Their achievements were considerable, with the adoption of impressive vegetable production, soil fertility improvement and erosion control methods. The group also had a nursery producing trees on a large scale for sale to some NGOs, including ICRAF. Members were very hard-working, united and confident in their achievements. They obtained a large loan from UNDP which enabled them to buy a plot of land for group enterprises. The group were willing to share their knowledge on a more formal basis but felt they would need some financial incentive to encourage them to share information, even if just to cover transport costs

LEVEL IV - CASE STUDY

Tanyigbe Beekeepers Association

This group, based north of Ho in the Volta region, Ghana, had 15 middle aged members of mixed gender. There was a shortage of agricultural land in the area, owing to dense forests. Though bee-keeping was not part of their culture, they chose this activity as it did not involve too much extra work. Leaders (these included three animators - Linus, Rose and Juliana) had received training through a nearby NGO, the EP Church Ho Farm Project, and also attended workshops and training elsewhere in Ghana. Initially they began as individuals with their own hives, then formed a group. Regular membership subscriptions funded members to attend workshops. They received a loan from Agrimissio (US NGO) which enabled them to purchase 35 hives for the group. They had repaid a quarter of this at the time of visiting. They maintained these hives in three areas with different members responsible for each site. Their success and enthusiasm was leading to the likely formation of three other bee-keeping groups in neighbouring areas. However, there were problems with marketing all the honey produced, despite its good quality. The male secretary received several newsletters

The 13 groups within this level demonstrated confidence in their achievements as a group and their future plans, but also as individuals with a sense of purpose. Confidence, self worth and strength gained through collective action may gradually encourage rural peoples to extend their sphere of influence and knowledge to those around them.

8.3.5 Level V - Empowered to enhance information sharing within local community

Various definitions of empowerment exist (Craig et al 1995; Rowlands 1995). In the context of this study, it is defined as 'the ability of people to control their own lives and resources, to direct their own livelihoods and to extend their spheres of influence outside their immediate community'. Something as intangible as empowerment is extremely difficult to isolate or quantify. However, one measure of empowerment might be the extent to which collective groupings see themselves as owning their own 'knowledge' and their confidence in sharing this 'knowledge'.

LEVEL V - CASE STUDY

Nakisene Literacy Association, Eastern Uganda (a RPA)

Nakisene members included improving agriculture and literacy as their main aims. They had a small silk screen duplicator on which they produced very basic literacy materials. They had received information (mostly from MTEA of which they were a member organisation) on various aspects of agriculture. They shared information mainly through role play, songs and dances in open community meetings. Their skill in this had led to various invitations to perform elsewhere and had given them considerable confidence as a group. They had good links with several NGOs and government departments

A key priority of groups within Level V was the proactive sharing of useful information. They differed qualitatively from groups in other levels for whom the maintenance and success of group activities was the main objective. Though most were membership groups, their level of organisation and planning set them apart. Of considerable interest is that six have developed over time from RPAs, though now all but one are categorised as GDOs. Members sometimes take up staff roles and some receive payment for their work. However, none had a stable financial base and no members or staff were seen to be gaining adequate financial reward for their work. Their level of commitment towards achieving their aims was admirable and driven by altruistic and often religious motivation.

LEVEL V - CASE STUDY

Community Association for Rural Development (a GDO)

CARD were a group of go-ahead farmers, comprising both husbands and wives. They set high standards for membership and insisted that prospective members fulfil a number of preconditions before they were allowed to join - plastering their home, drying lines for clothes, compost heaps, building a latrine, a drying rack for kitchen utensils, an improved granary, a mud stove and a tree nursery. Couples had to join together, as the emphasis was on sensitising all family members. Other farmers thought they were slightly crazy, but all were prospering and one member came third in the Ugandan National Farmers Competition. They asked the extension agent to visit every couple of weeks.

Their headquarters was an unusual small wood-panelled two storey building, quite unique in the surrounding area. They received so many visitors that they had begun to charge. They provided training for individuals and groups and had flexible charges

depending on the wealth of the trainees. They planned to employ someone to develop the office and to produce materials and information. They had received support from the Africa 2000 network, funded by UNDP, for training and travel

LEVEL V - CASE STUDY

Multi-purpose Training and Employment Association (MTEA) (a GDO)

MTEA had a formal structure with about 60 member groups in Iganga District, Uganda. A small office in Iganga town centre was funded by members' contributions (and well-wishers) and provided administrative support. It had a typewriter, ink duplicator and silk screen duplicator. Much of the office work was voluntary and provided by members and officers.

MTEA began in 1986 as a youth organisation to help young people acquire skills necessary for employment. Later it expanded to include older people, whose training needs were just as great. As it grew, it relocated 2 miles to the centre of Iganga after so many groups became interested.

MTEA members used a typed stencil on silk screen duplicators to produce leaflets in both English and Lusoga. They produced eight sets of training notes last year for distribution to each member group on agricultural and environmental subjects. They charged 100/= (5p) to attach value to these. 'If things are given out free, people may give little value to them and just throw them around.

LEVEL V - CASE STUDY

Abrono Organic Farmers Group (a GDO)

Abrono were based near Techiman, Ghana. Their aim was to train young farmers in organic farming methods and improve employment prospects for rural youth. There were ten members, all practising farmers, who had so far trained about 120 farmers. They provided training to small groups and had produced one small explanatory leaflet. They had good links with the NGOs ECASARD, NENGO and ADRA and received a number of regular newsletters. The group was begun by the animator, Mr Kwaw Adams, after he had received a 6 month training course with ADRA

Few of the eight groups from the sample which fall into this level would be likely to regard themselves as 'empowered'. Most are struggling with severe financial and time restraints. Nevertheless, in their ownership of knowledge, confidence as an entity and

dealings with both NGOs, GOs and local community, they meet the definition of empowerment given above. These indicators are suggested:

- confidence in sharing knowledge
- two-way flow of influence with outside agencies
- ability to plan regular sharing of knowledge and experience in appropriate ways outside group membership.

8.4 Factors influencing information flow and empowerment

Numerous factors impact upon groups which may enhance the ability of group members to look at their situation objectively and to be aware of other possibilities in ways of thinking, action and skills which they may choose to pursue. People with real sensitivity to group members are most likely to help in this gradual process of empowerment, bringing with them knowledge of other situations, other information and other methods of doing things. Printed agricultural training materials may also help in this process if they enable or encourage the group to discuss new ideas.

Of groups in Level IV, over a third (39%) were involved in training small groups, 15% in providing some kind of printed information, nearly half (46%) in holding or facilitating open community meetings to pass on information, and 31% in sharing information through drama, role play or songs. When comparing these figures with those of the groups in Level V, some significant differences emerge. The number of groups in Level V providing training for small groups increases three times, with all now providing such training, sometimes on an informal basis but often with pre-arranged workshops, practical training sessions or a series of follow-up meetings. Three quarters of groups (75%) in Level V were producing locally generated materials in printed form (as teaching notes, booklets, posters and leaflets) in contrast with only 15% of groups within Level IV.

In terms of access to outside information some clear relationships emerge, as revealed in **Table 26.**

TABLE 26 - Comparison between levels of groups' development

	LEVEL I	LEVEL II	LEVEL III	LEVEL IV	LEVEL V

% members with access to newspapers	11%	7%	10%	16%	50%
% members with access to radios	43%	58%	46%	68%	86%
No of years of group formation	2	3.1	4.1	4.8	6.6
% members literate in local language	34%	57%	69%	74%	91%
% members literate in English	29%	29%	39%	49%	59%
Km distance from road with public transport	3.3	4.4	5.2	2.3	1.6
Total number of groups	6	31	17	13	8

Other clear trends include the steady increase in overall scoring (indicating improved communications, socio-economic situation, access to NGOs, health care and access to urban areas) for groups in higher levels. Average score was 18 for Level V, comparing with 12.7 for Level I groups.

Access to *Footsteps* and therefore, by association, usually some other newsletters as well, was much more likely to be direct for groups in Levels IV and V. 95% of groups in Levels IV and V mentioned the relevance of printed information during the research compared with just 35% within Levels I and II. 75% of groups within Level V requested more printed information following the research exercises comparing with just 21% of Levels I and II groups.

Some trends were a likely consequence of increasing levels of self mobilisation and empowerment such as small office facilities and gradually improved access to NGOs for groups in Levels IV and V. No relationship was observed between group size, role of animator within group, group income and access to extension agents. However, working together was more likely in higher level groups. Groups reaching Levels IV and V were more likely to contain male members. There were no all female or mostly female groups in Level V.

Printed information about sustainable grassroots agriculture may aid in the empowerment of grassroots farmers and may stimulate both their desire for more such information and the flow of agricultural information. However, access to such information alone is unlikely to catalyse group empowerment. No one group could be said to have gained substantially from access only to printed information unless this was in conjunction with other supporting factors, including facilitatory development

workers, receptive and facilitatory leadership, the presence of animators and the collective action of a farmer group. The combination of several or all five of these factors may result in the empowerment of farmer groups.

Access to information clearly extends the ability of groups to innovate and experiment with new ideas. It can also confirm the knowledge of group members, giving a greater confidence in their own understanding and knowledge. However, numerous other factors may also need to be in place before effective utilisation of information occurs, and there is no doubt that effectively functioning farmer groups can provide many of these. In that the research did not investigate the impact of printed information for individual farmers, it is hard to compare the extent to which the impact of group access to information differs from individual impact. In addition, since the research only investigated present access, often to an inadequate range of printed materials, the impact of access to a good range of relevant printed materials remains a matter of conjecture.

Figure 6 shows an upward trend in self mobilisation which may lead to empowerment, given numerous supporting factors. Groups may move both upwards and downwards through levels. Negative movement may be due to the loss of leaders or animators, loss of land or facilities (reclaimed by those who had donated it), failure of activities, unsustainable growth, loss of trust among members, usually through defaulting on regular payments or ill health, and increasing old age making it hard to sustain group activities. Several groups indicated that they had reformed after the failure of an earlier grouping. The most common reason for such failure was that community action had been the motivating force and proved unsustainable as so many community members did not participate. The reformed groups were always smaller and contained only members keen to participate.

Given that many groups are only interested in their own progress as individuals and that the sharing of information is often incidental, Level V should not be regarded as the ultimate level for groups. For most RPAs Level IV would represent the fulfilment of their aims as a group, with the sharing of knowledge and experience outside the group carried out in response to demand and providing confirmation of their progress by other community members. Financial concerns also play a major role here. Members of CARD, Uganda, obviously took great pleasure and satisfaction in advising others, but through useful contacts and reputation they were now able to request payment for their support. However, members of Ihimbi Women's Group, Uganda, were reluctant to take too much time out of their ordinary work to provide advice or training, since they were not offered any financial benefits. If NGOs or extension services actively sought to use and provide financial support to enable successful groups to select trainers and provide workshops for outside community members, there is no doubt many more group members would be willing to provide training. Such a step would do much to enhance the confidence of farmer members. Several members of CARD interviewed had

considerable confidence in their knowledge and experience. They had confirmed this through their own experience on their farms, they had seen positive results through sharing information with others and now were empowered to actively work towards furthering the effective spread of their knowledge.

Figure 6 also allows the arrow to continue upwards, implying that Level V is not the final end point and that organisations can continue to develop.

Lack of funding was an issue for all 75 groups. However, should funding be made available to enable the payment of salaries and provision of inputs, there is no doubt that relationships would change substantially. From open membership associations, individuals would have to be selected to become salaried staff, creating a two-tier membership. Funding to allow the provision of inputs (such as loans, seeds, livestock etc) immediately requires choices to be made, necessitating further division. From GDOs operating as membership entities, it seems likely that adequate funding would rapidly result in the transition to an NGO. For successful individuals selected as staff, there would no doubt be considerable gain, but only at the cost of the loss of very precious relationships and altruistic motivation.

The financial support of farmer groups is thus fraught with tensions. The support gained by members within such groups is strengthened by their common situation. Any interventions which result in changing this balance may result in the loss of what is, in essence, genuine participation in agricultural development. Attempts to identify, resource, and train animators and subsequently to employ them as NGO staff for training groups will no doubt be of individual gain, but it will remove the driving force from within many groups. Far better to target financial support towards information provision within groups - through financing and resourcing more extension agents, development workers, printed information on sustainable agriculture, sometimes in combination with radio or cassette programmes and enhancing group visits to demonstration units or other groups.

The research did not investigate the access and impact of printed agricultural information on farmers who did not belong to groups. Membership of effective farmer groups is likely to exclude the poorest within their communities. Exclusion would be likely to result from an inability to contribute even the small membership fees collected for savings and credit schemes, a lack of time to attend meetings and a lack of status making it less likely for them to receive a personal invitation through a member. Considerable innovation may be required to establish methods of enhancing group membership among the poorest, particularly if effective groups are already functioning in an area. One solution might be to encourage effective groups to widen their membership for altruistic motives by deliberately seeking out the poorest members of their community. Another solution would be to provide motivation for establishing literacy classes, co-operative groups or vegetable producing groups which would appeal

to the poorest, by either requiring no financial contributions or else leading to some long-term financial benefits. A further long term solution is to enhance existing autonomous groups with a view to enabling them to extend training and influence in their wider community.

8.5 Potential for locally generated agricultural materials and their role in empowerment

This research reveals an enormous desire for good, practical printed agricultural information, challenging the common assumption that rural farmers are non-literate and need new ideas presented in verbal or visual fashion. Access to appropriate printed information can be a powerful stimulus to farmer group development. Their use of information, both endogenous and exogenous, can bean indicator of group maturity and empowerment. The research has also highlighted the extent of the famine of printed information and other sources of exogenous ideas among a sample of rural farmers.

The production of good practical information in simple language is far from straightforward. The tendency to resort to jargon and technical terms is overwhelming. The needs of farmers in terms of quality of information, choice of language, simplicity of language and readability must always take precedence over impressing colleagues and funding agencies with academic jargon and glossy presentation.

Working together with likely recipients is one way to help ensure that farmers' views and needs become part of the printed materials. Bond-Stewart (1992) writes of the Community Publishing Programme in Zimbabwe, which publishes information targeted at village community workers. It works with representative community workers, particularly women, first discovering their priorities for information and then incorporating their work in the writing process. The programme has proved very successful and popular among many more readers than at first anticipated. A and C Knight (1995) share experiences in Pakistan where rural women, largely non-literate, shared in the discussion and production of learning materials on health as part of the HEAL (Health Education and Adult Literacy) Project, ensuring that local understanding and knowledge took priority over the professional medical approach. In the process, numerous health issues were widely communicated and the women learned literacy.

Such systems could well work in similar fashion by involving animators in the production of printed agricultural training materials.

The assumption that literacy is necessary for development (Bhola, 1994) is not upheld

by the findings of this research. Rather it is 'group literacy' which is necessary. A group only needs to have one literate member or even sympathetic non-member who will share printed information with them, to gain useful information and exposure to exogenous ideas. Indeed, the sharing of information in this manner which ensures that new ideas are assessed and discussed within a supportive group allowing ease of discussion and for feelings to be freely shared, has much to recommend it.

From this research, both development personnel and printed information are shown to have benefits and validity. Whilst interpersonal communication is more immediate and usually preferred by farmers (Brody, 1991), printed materials are valued, much cheaper in terms of potential distribution, support other inputs and, most importantly, are likely to remain in use for many years. In terms of sustainability, printed information remains for many years whilst extension workers and NGOs may come and go. In addition, the postal system, used by many newsletters for effective distribution, is usually able to transcend changes in government policy or regimes, whilst NGOs or religious groups may not.

Printed agricultural materials are not the only answer to the considerable information needs of grassroots farmers. Nevertheless, they can play a vital supportive role in enhancing the access of farmer groups to exogenous information. Channelling useful printed information on grassroots development to every interested individual in developing countries may not be feasible, but channelling such information to animators who will then pass it on may yield substantial results for lower costs.

In addition, LGM may play an important role in networking groups with other like-minded groups, particularly if their distribution is regional. LGM produced in the local language are of particular potential, given that they are most likely to generate interest and use appropriate vocabulary.

The findings indicate that simply propping up present routes of supply will be wholly inadequate to meet the demand for printed information in local languages. Resourcing small GDOs already focused on producing information targeted at grassroots farmers is likely to yield the most effective production of locally generated materials. In addition, novel methods which draw together resource personnel from a wide cross section of sectors to work together to produce training materials in local languages, designed to enhance the proven abilities of farmer groups, are recommended. The use of the Internet or CD ROMs to disseminate 'already digested' information in small 'bites' might prove of enormous benefit. (McConnell, 1996; Zijp, 1994).

Sustainability needs to be measured not by cost recovery and continual production but, rather, by methods of sharing information which are cost-effective, highly replicable and lead to permanent change by empowering farmers with relevant, sustainable and

productive agricultural information. Sustainability should rather be viewed in terms of providing information which may remain in use over many years. Encouraging good design practice and the use of local languages may well yield other benefits in revitalising small and struggling local printing establishments.

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9. Implications of the research

Research findings reveal that access to printed information may be of enormous benefit in situations where groups and animators are open to new ideas and motivated to make changes. Among such groups there is a great and largely unmet desire for information in any form, preferably via sensitive development workers attuned to their context and culture, but also for printed information, particularly if it is in a form which is easy to share within a group.

9.1 Awareness raising within donor agencies

There is a need for funding agencies, donors and governments to be made aware of the enormous potential of printed agricultural information targeted at grassroots farmers, making clear their cost-effectiveness. The research reveals that the use of imaginatively designed printed information has barely touched the surface of the potential audience and that it will become even more relevant as a means of dispersing information available through Internet access.

More resources need to be made available for the production of printed materials. The ability of small, poorly funded GDOs to produce locally generated materials with real

sensitivity to the needs of their target communities is considerable, and at present their ability to obtain funding is extremely limited. There is a need to develop an awareness that 'small is beautiful' when it comes to locally generated materials and that the funding of cheap, low-cost booklets may provide not only cost-effective benefits but stimulate the encouragement of other potential authors.

9.2 Value of newsletters as source materials for producer groups

The value of newsletters, whether national or international, is very considerable, particularly if they target grassroots development workers. They can help maintain a sense of linkage with the outside world and can play a considerable role in networking and exchange of ideas. They may also have considerable potential for use as source materials for local language materials.

In the present financial climate, funding agencies should regard newsletters with a target audience at grassroots level in developing countries as a non-renewable, cost-effective means of disseminating information, rather than seeking cost-recovery.

9.3 Value of Internet access for producer groups

The use of satellite connections and solar power is increasingly likely to extend internet access out of urban areas into rural areas and into the hands of smaller national NGOs. However, the wealth of information available via the Internet and CD ROMs is likely to do little to reverse the present information famine among grassroots farmers for various reasons:

- Material is likely to be available only in an international language.
- Information is often available as large chunks of text.
- There is overwhelming quantity and not readily digestible bite-sized portions.
- Material often lacks appropriate illustrations.

Improved access to the Internet is thus likely to be of limited benefit to farmers groups unless such access is carefully targeted and shared through intermediaries. Internet access within NGOs and GDOs will increase the need for the production of printed training materials to sort out relevant information and disseminate it in easily digestible forms. The networking of like-minded groups around the world working in regional

groups to adapt relevant information and produce materials in local languages should be encouraged.

9.4 Increase awareness among producer groups

All organisations and individuals with the potential to produce printed agricultural training information should carefully define and analyse their target audience, with full awareness of how this will be severely limited if only those with an international language and academic education are targeted.

Most printed information currently being produced is either:

- not targeted at grassroots farmers but at those who already have good access to information sources or
- if targeted at grassroots farmers, is poorly written, too technical, poorly illustrated and in an unfamiliar language.

There is a need for many more organisations to target their energies 'down market' in this area to reach a much wider target audience.

Recommendations include:

- defining materials and resources which are appropriate for a grassroots target audience
- using local languages whenever possible
- carefully checking and targeting writing styles in order to convey useful information to those with limited literacy skills
- designing materials imaginatively to encourage those with little reading experience, with good use of design techniques and culturally appropriate illustrations.

9.5 Support of creative individuals

The role of committed individuals with a flair for producing locally generated materials

needs to be acknowledged. The production of printed materials requires a creative instinct powerful enough to retain the ultimate end point in sight through all the tedious stages of production. This creative instinct can be likened to artistic talent. It can be fostered, trained and enhanced but is difficult to initiate however plentiful the resourcing. When appointing personnel for such work, proof of this creative instinct should be sought from past involvement -such as school magazines, posters or the sharing of information in other ways.

Drawing the time line - Bikyiiteng Bullock Farmers.

9.6 Coordination of regional committees

There is a need to encourage the formation and operation of regional committees for each written language group, bringing together representatives of NGOs, religious groups, literacy programmes, extension workers, communication officers, artists, designers, farmers and animators all committed to the joint production of local language materials. Translators who are skilled linguists with real understanding of agricultural issues are essential in the production process, as is careful proof-reading and piloting of materials to check understandability, illustrations and design. The need to involve farmers in this process should not be just peripheral but central.

The networking of such committees would allow the national and even worldwide sharing of useful source materials. There is no need to re-invent the wheel when so many good materials may already be available in other localities.

The needs of language groups either with no written language at present or with very small populations present more of an economic and long term challenge. Their needs could be partially met in the short term by materials which are largely visual.

9.7 Training workshops

The benefits of writers' workshops have already been proved by groups such as IIRR in the Philippines and ALIN in Senegal. Incorporating the added skills of producing materials in local languages and training in design, layout and printing might bring considerable benefits. The importance of targeting such training at individuals who are already committed to practical ways of sharing information must be emphasised.

There is a need to acknowledge the value of all levels of production from hand-written silk-screen materials to desktop publishing. All use similar skills and design techniques. All would benefit from the use of simple language.

9.8 Effective distribution of locally generated materials

Since the observed distribution of useful and appropriate information in Uganda and Ghana was inadequate, innovative methods of distribution should be sought. Several informal networks could be used to distribute non-commercial materials: the large network of literacy groups within national literacy programmes; the extensive network of extension services and the extensive and well coordinated networks of religious groups, reaching every village in both countries.

The most effective dissemination of information could occur if regional committees were established and coordinated with all development activities, so that information covered in printed materials was echoed in extension priorities, radio broadcasts and by development workers. Seasonal release of materials to coincide with relevant farming activities would also be of considerable benefit.

9.9 Sustainability

The production of printed information materials in local languages is unlikely to be sustainable without on-going resourcing. Nevertheless, the following points should be considered in their favour:

- Early conclusions of attempts at cost-recovery in various sectors indicate that even the poorest will pay for services or products that they value. Good printed information is likely to fall into this category.

- The unit cost of agricultural information produced in quantity is likely to be low.

- Printed information may have sustainable impact both in terms of practical changes implemented and in terms of the years of potential usage.

- Other common interventions in support of grassroots farmers are often more expensive and less sustainable (eg: extension personnel).

9.10 Post-literacy materials

Agricultural training materials in local languages produced in coordination with literacy programmes will yield several benefits:

- Text should be comprehensible to newly literate readers.
- Their production would increase the amount of 'real' materials available.
- Their availability would encourage the development of a reading culture in local languages.

9.11 Potential of farmer groups

The role of animators and autonomous farmer groups in improving the flow of new ideas in agriculture needs widespread acceptance and understanding. There is a need for extension staff to understand and appreciate the dynamics within such groups and to be willing to work in the role of a facilitator. Interventions which change the delicate social balance of groups may result in the loss of what is, in essence, genuine participation in agricultural development; an enviable and transient factor much sought after by development agencies.

Materials could be targeted for group use and reading with good use of discussion questions, ideas for action and short, bite-sized items of information which can be digested at one meeting - rather than a textbook approach. Flip charts with additional information on the back for the animator or facilitator might prove an appropriate method of sharing information within groups.

The production of appropriate printed information with good visual content, preferably in local languages, targeted at grassroots farmers is a challenge which necessitates the combined expertise and energies of farmers, linguists, researchers, editors, illustrators, animators, extension and development workers. Research findings reveal that the use of imaginatively designed printed information has barely touched the surface of the potential audience and that it may prove even more relevant in the future as a means of dispersing information available through new technologies.

A rare library of agricultural books seen in Mbarara, much of which had been obtained free of charge.

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Appendix A - Sample pages of Footsteps

AGRICULTURE

Grain storage

30% OF FRUIT AND VEGETABLES are wasted due to the unavailability of proper processing and preserving. Here are some practical ideas from different sources.

Is the seed dry enough?

Grains to be stored must be completely dry. Farmers can check this by biting on the grains. A very sharp cracking sound between the teeth is a sign that the seed is dry enough to be stored. Make sure watertight containers are used for storage.

One way of ensuring grains keep dry is simply to hang maize cobs in the roof above the cooking fire.

Turning sacks

Some pests of bean crops such as weevil larvae need to wedge themselves into positions from which they can bore holes with their mouths into stored grains. The extremely simple measure of turning sacks upside down every morning and evening for several weeks can reduce pest damage significantly. As the sack is turned, so the larva loses its position and has to begin again. After several days without success most weevils either starve or are crushed.

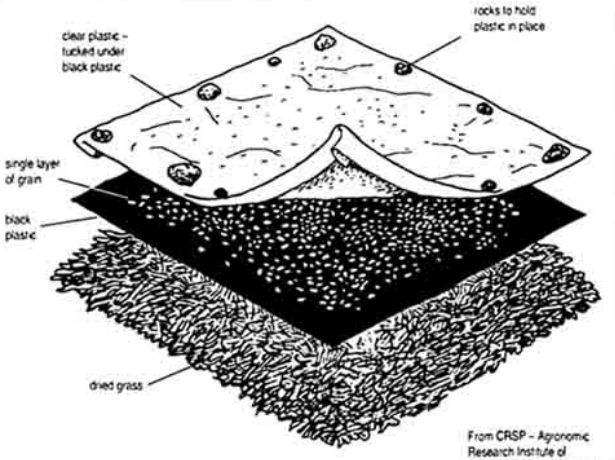
From ECHO, USA

Solar driers

High temperatures will kill weevils – and their eggs, larvae and pupae. CRSP have designed a simple solar heater in which the temperature of grain will be so high that all pests will be destroyed.

Place a sheet of black plastic on top of an insulating mattress of dried grass. Cowpeas, beans or grains are placed on this in a single layer. Then a layer of clear plastic is placed over the grains. The clear plastic and black plastic are folded together and tucked underneath using small stones to hold them in place.

Treat the beans and grains as soon as possible after threshing. Use the heater when the weather is clear and sunny. Treat seeds for at least 2 hours around midday. Then store the grains (using one of the improved methods shown opposite). The solar heater is ready to treat more grains the next day.



From CRSP – Agronomic Research Institute of Cameroon, Maroua Research Centre, Cameroon

LLAGE POULTRY PRODUCTION

scussion group in Kenya identified five main causes for low ith village chickens:

killing young chicks as they scavenged for food
idemics
t of food eaten while chickens scavenge
oductive poultry breeds
ing of chicks.

e of the solutions that were worked out and which proved t them to your own situations.

nyan farmers did not think that building a special poultry the first priorities for improving village poultry-production. soon as you house and enclose a chicken, it depends on you nd water. If you cannot provide the balanced diet needed, to allow them to scavenge.

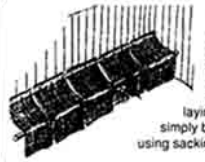
uction of meat and eggs improves family nutrition and me.

Improving hatching of chicks

Carefully select eggs for hatching. Choose only well shaped, strong shelled and medium sized eggs. Reject cracked or dirty eggs. Write the date on the egg when it is collected and don't store for more than 3 or 4 days before starting incubation under a broody hen.

Dust the mother hen and the nest with a parasite-killing chemical (eg: *Sevin* or *Asuntol Powder*) to keep her free of parasite pests. Place the nest in a cool, dark and quiet place for the 21 day period needed for incubation.

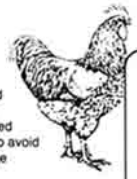
Improving laying conditions



Encourage hens to lay their eggs **before** they start scavenging by not releasing them until 2–3 hours after sunrise and by providing an area for egg laying. Effective nest boxes can be made by simply building a frame along one side and using sacking.

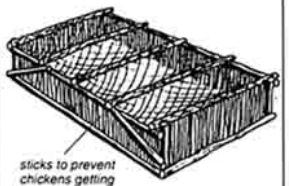
ving local poultry breeds

exchange schemes have worked ome areas. Cockerels of an 'improved' e reared by a project or Government These can then be bought or exchanged rs so that they cross-breed with village hanged cockerels should be exchanged f neighbouring farmers every year to avoid . After four to five years the exchange e should be repeated.



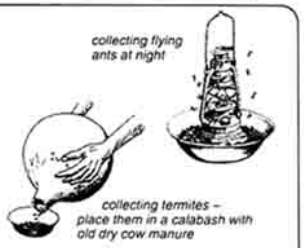
Perches

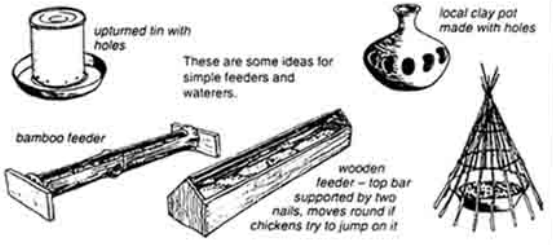
Provide simple perches for night-time use. This will make it easy to collect the manure regularly.



Extra feeding

Poultry were given extra food in the morning and also in the evening to attract them back into the night shelter. Protein-rich feeds are especially important. These could include trapped termites or flying ants, fish waste, snails, fermented grains used in brewing local beer, leaves and seeds (preferably cooked) of pigeon pea or Hyacinth bean (*Lablab niger*) and, if available, cereals such as maize or sorghum.



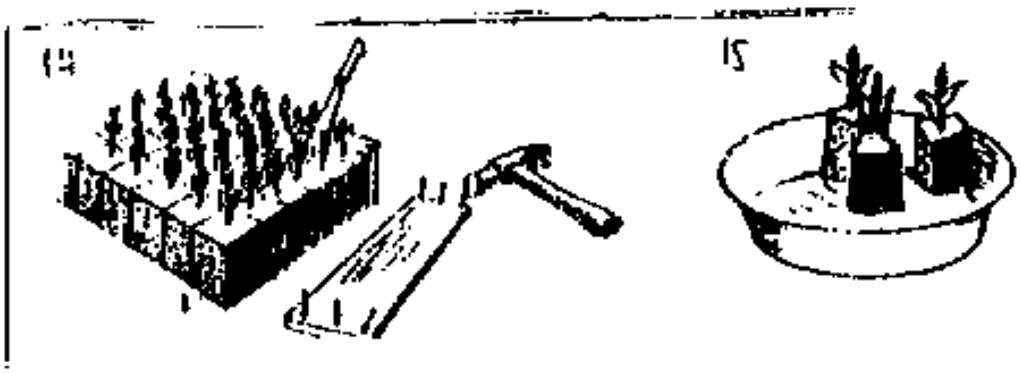


Appendix B - Samples of materials in local languages adapted from Footsteps

3. வெளியில் நாற்றுக்களை நடுதல்.

வெளியில் கெட்டியாக வளர்த்தல்.

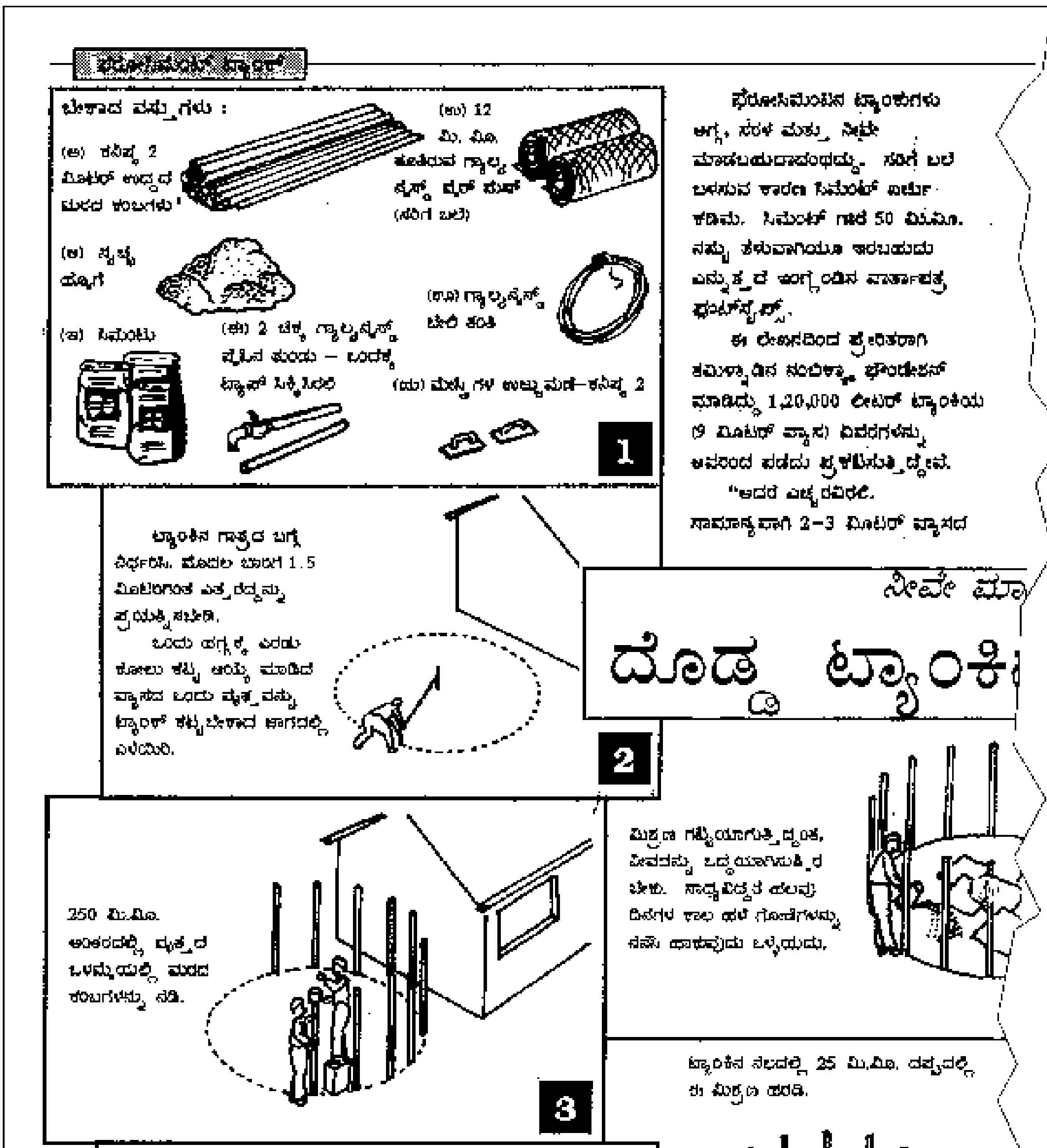
நாற்று மேடையில் இருந்து எடுக்கப்பட்ட நாற்றுக்கள் வெளியில் எவ்வாறு வளர்க்கப்படுகிறது என்பதாகும். நாற்றுக்கள் வெளியில் எடுப்பதற்கு 4–6 கிழமைகளுக்கு முன் நிழலாகப் பயன்படுத்தியவற்றை அகற்றவேண்டும். தண்ணீர் விடுவதையும் குறைக்க வேண்டும்.

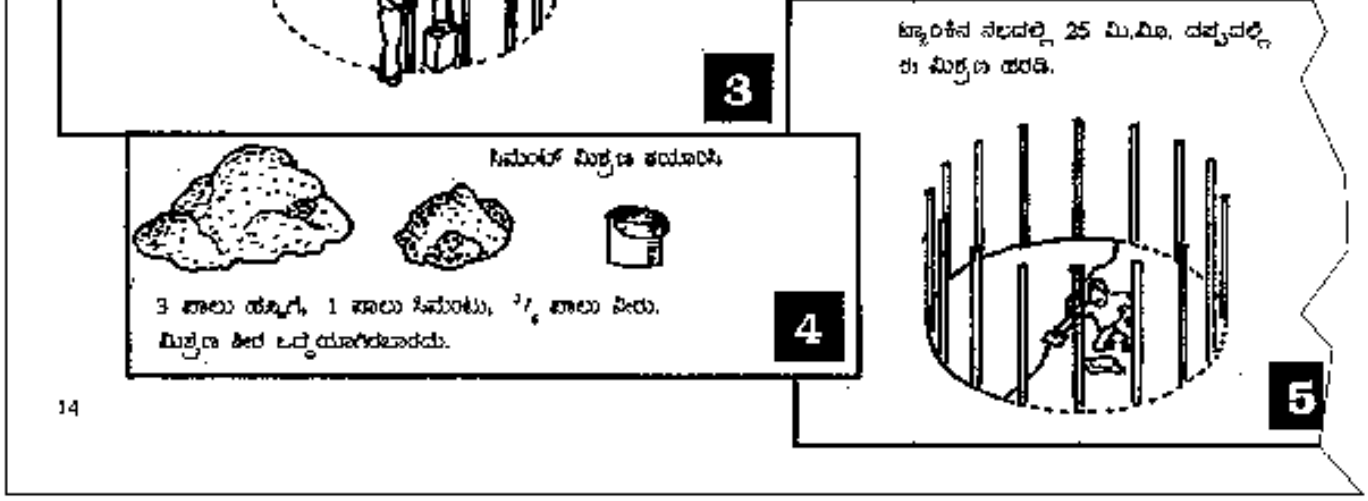


வெளியில் நடும்போது.

பெட்டிகளுக்கு நன்றாக தண்ணீர் விடுக, பக்கப்பலகைகளை எடுத்துவிடுக. பின் மண்ணை சதுரமாக வெட்டி கன்றுகளை எடுத்து தட்டில் வைத்தால் நடும் இடங்களுக்கு எடுத்துச் செல்வது சுலபம்.

பெரிய கிடங்குகள் வெட்டி வேண்டும். முடியுமானால் அடியில் உள்ள கற்படையான மண்ணை எடுத்துவிட்டு அதில் உரம் இட்டால் நல்லது சரியான உயரத்தில் மரங்களை நடவும். இப்போ பைகளையோ அல்லது தகரங்களையோ நீக்கிவிடவும். மண்ணை திரும்ப மூடி நன்றாக கீழே அமர்த்திவிட வேண்டும்.





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Appendix C - Distribution of postal survey respondents

Distribution of postal survey respondents

SURVEYS RETURNED		
India	27	(13.7%)
Kenya	21	(10.7%)
Tanzania	18	(9.1%)
Uganda	14	(7.1%)
Philippines	14	(7.1%)
Ghana	13	(6.6%)
Nepal	7	(3.6%)
South Africa	6	(3.0%)
Malawi	5	(2.5%)
Sri Lanka	5	(2.5%)
Zimbabwe	5	(2.5%)
Bangladesh	4	(2%)
Mozambique	4	(2%)
Nigeria	4	(2%)
Cameroon	3	(1.5%)
Ethiopia	3	(1.5%)
Zambia	3	(1.5%)
Pakistan	3	(1.5%)
Angola	2	(1.0%)
Indonesia	2	(1.0%)
Gambia	2	(1.0%)

Haiti	2	(1.0%)
Hong Kong	2	(1.0%)
Papua New Guinea	2	(1.0%)
Senegal	2	(1.0%)
Total	**173**	**(87.4%)**

In addition to the countries listed, a further 24 countries had just one returned survey (0.5%) and these were: Australia, Belize, Benin, Bhutan, Botswana, Brazil, Cambodia, Chad, China, Costa Rica, El Salvador, Ecuador, Finland, Italy, Lesotho, Mali, Myanmar, Namibia, Niger, Saudi Arabia, Solomon Islands, Thailand, USA and Zaire.

The few industrial countries were specific exceptions, the Australian respondents working with training in radio broadcasting, the Finnish group partly based in Mozambique, the Italian group producing a newsletter for distribution in developing countries only and the US address for training materials targeted at groups in developing countries.

Of the 530 respondents who participated in answering the survey; 341 people were from Africa, 172 people from Asia and 17 from elsewhere. 59% were men (including 22 expatriates) and 41 % were women (of whom 31 were expatriates). The majority of respondents (65%) were in working situations with no expatriate workers. 35% had some expatriate involvement, usually comprising one expatriate worker.

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Appendix D - Languages used for sharing information by postal survey respondents

The 154 languages used for sharing information by the 197 postal survey respondents and the number of groups using each language

Achuar	1	Gurung	1	Maba	1	Runyoro	1
Adhola	1	Gwari	1	Macua	1	Rutoro	2
Afrikaans	2	Hausa	2	Magindanaon	1	Sesotho	2
Akan	2	Hindi	10	Malayalam	1	Shangaan	1
Alur	1	llocano	3	Mandinka	1	Shona	3
Amharic	3	Indonesian	1	Mandulia	1	Sindhi	1
Annang	1	Italian	1	Manipuri	1	Sinhalese	4
Arabic	4	Kalenjin	1	Marakwet	1	Sissala	2
Bafut	1	Kannada	3	Marathi	1	Sonrai	1
Bahasa	1	Kasem	1	Massalit	1	Spanish	5
Bangia	3	Keiyo	1	Maya	1	Sukuma	1
Bemba	2	Kekchi	1	Meta	1	Sylhetti	1
Bengali	4	Khmer	1	Mo	1	Tagalog	3
Bull	1	Kiemba	1	Nandi	1	Tamasheq	1
Bunda	1	Kikuyu	1	Ndebele	1	Tamil	7
Bundu	1	Kinyarwanda	1	Nepali	6	Tausog	1
Burmese	1	Kisuku	1	Newari	1	Telugu	2
Cebuano	4	Kisukuma	1	Nkoran	1	Teso	4
Chichewa	5	KiSwahili	33	Noone	1	Thai	1
Chinese	3	Kom	1	Nuer	1	Tok Pisin	2

Chisena	1	Konzo	2	Nupe	1	Tumbuka	2
Chitewe	1	Kui	1	Nyanja	1	Twi	5
Chokwe	2	Kuma	1	Oku	1	Umbundu	1
Chonyi	1	Kurya	1	Oriya	5	Urdu	3
Creole	2	Kusaal	1	Oromo	1	Venda	1
Dagaari	2	Kuvi	1	Paite-Chin	1	Vietnamese	1
Dansa	1	Lamnso	1	Pangasinan	1	Visayan	3
Deg	1	Limbum	1	Phari	1	Waali	2
Dinka	1	Luang	1	Pidgin English	1	Waorani	1
Diola	1	Luganda	7	Portuguese	1	Wolof	3
Dzongkha	1	Lugwe	1	Puimei	1	Xhosa	1
Ewe	2	Lumasaba	2	Pushto	1	Yamba	1
French	5	Lunda	1	Quechua	1	Yao	1
Fulfulde	1	Lunyole	1	Quomache	1	Zarma	1
Ga	2	Luo	5	Rendille	1	Zemi	1
German	1	Lusoga	5	Rongmei	1	Zoumi	1
Giryama	1	Luvale	1	Rukonjo	1	Zulu	2
Groma	1	Luyia	3	Runyakitara	2		
Gujarati	2	Maasai	1	Runyankole	2		

A number of other local languages are used but were not mentioned by name.

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Appendix E - Exercises examining design preferences among members of farmer groups

This exercise was carried out with group members who regularly received *Footsteps* in Uganda, a total of 15. A number of changes were made to the original design to allow preferences to be expressed. The choices presented were:

- Plain pages of text in three type sizes
- Plain pages with the use of boxes
- Pages with illustrations ranging from one small illustration to virtually all illustration with little text
- Pages with a range of cartoon types, both with and without speech bubbles and with and without written explanations.

In total, ten different choices were presented, each with two examples to prevent the subject matter influencing interviewees' responses to the questions. Some examples are shown in Appendix F.

In practice, this exercise proved difficult as people were so keen to read the pages that they found it hard to express preferences quickly. The results were influenced by the subject matter on the pages, with articles on soil erosion and chicken feeders gaining most interest.

Appendix F - Sample pages used in design and layout exercises

The A-Frame

MATERIALS NEEDED

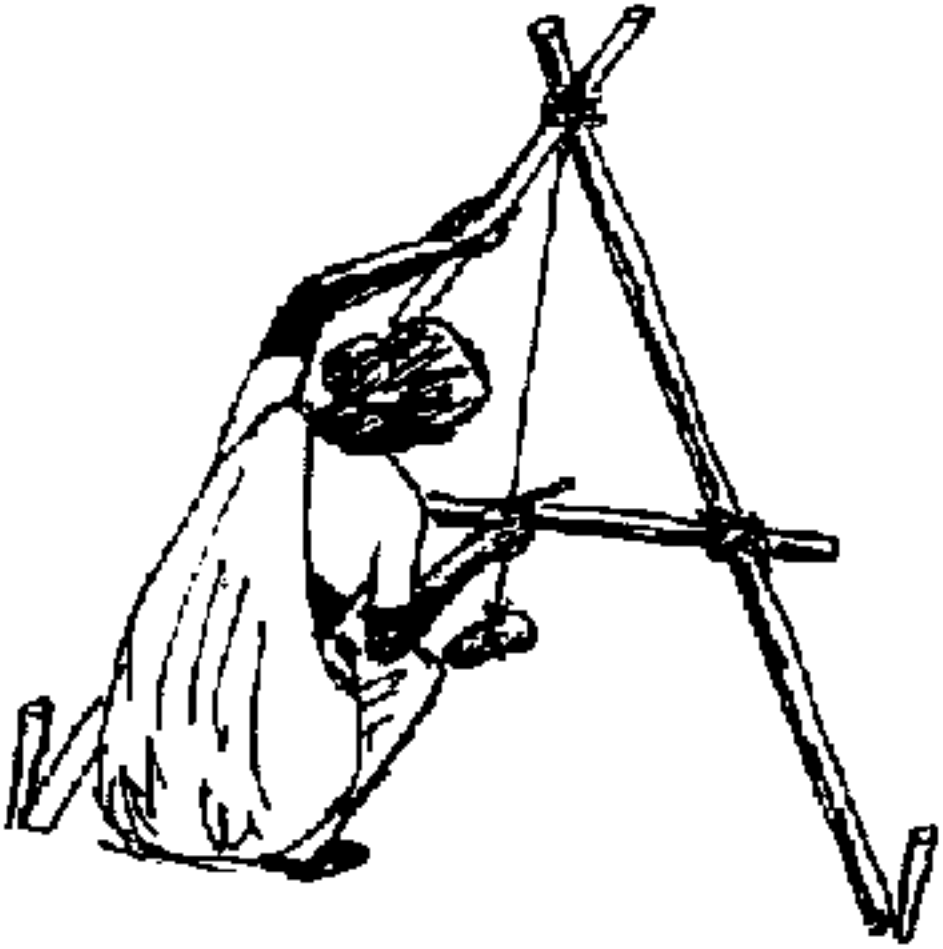
- 2 poles about 2 metres long
- 1 shorter pole about 1 metre long
- some string
- a stone

STEP 1

Tie the poles very tightly together to make the shape of a letter A. Hang the stone from the top of the A-Frame, making sure the stone hangs below the cross bar.

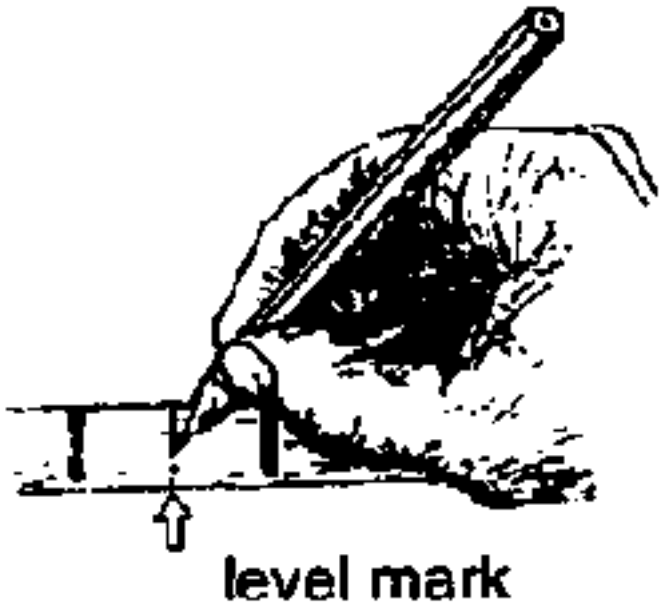
STEP 2

Holding the frame upright, mark with two sticks exactly where the poles touch the ground. When the stone stops moving, mark where the string crosses the cross bar. Turn the A-Frame around, placing the poles in exactly the positions marked by the two sticks. Again mark where the string crosses the cross bar.



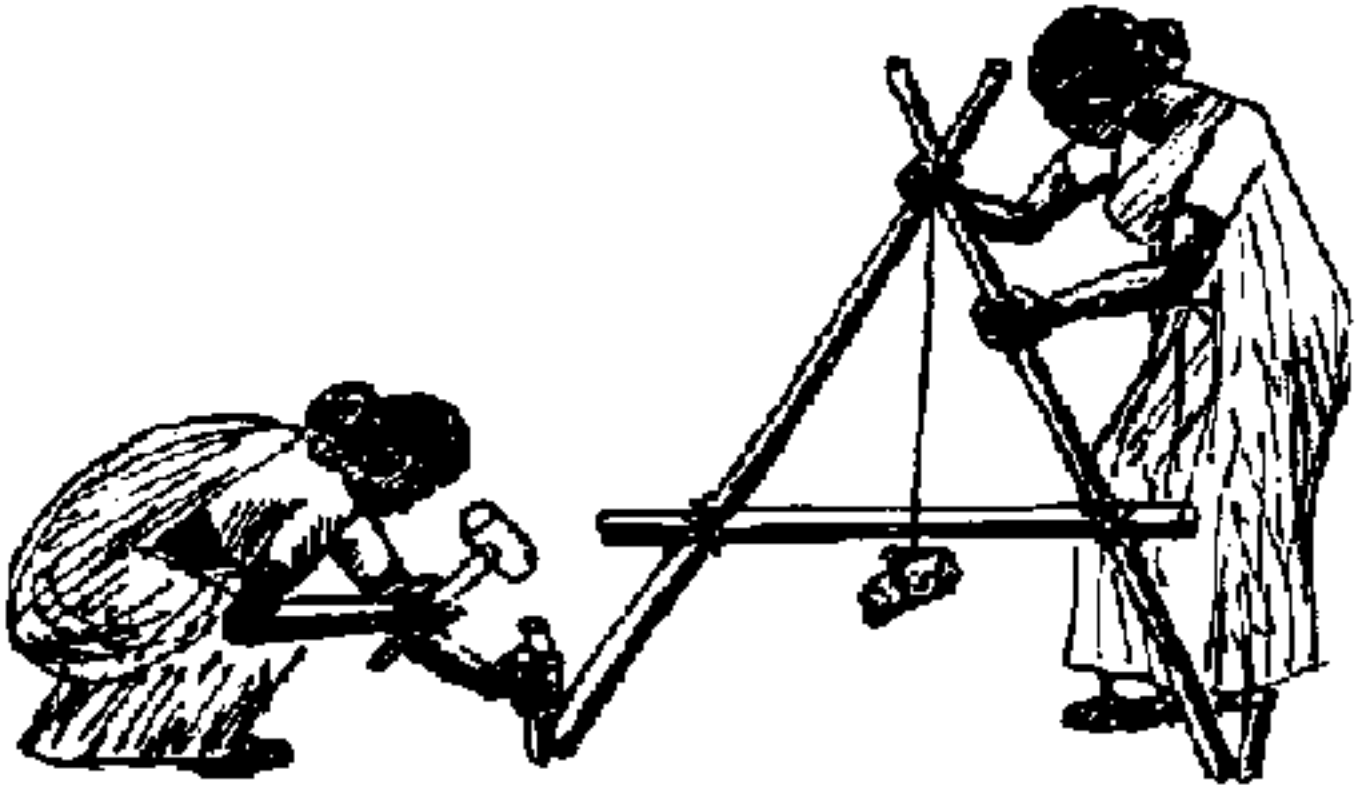
STEP 3

Mark the level mark on the cross bar - exactly half way between the previous marks. If the first two marks happen to be on the same place - this is the level mark.



STEP 4

Before using the A-Frame, collect a number of sticks. Begin, ideally with two people, at one side of the field where the first contour line is wanted. Hold one pole firmly on the ground. Move the other pole until both poles are on the ground with the string touching the level mark. Place a stick into the soil by each pole. Move the A-Frame along, by turning it around (pivoting), keeping pole 1 in exactly the same place. Move pole 2 until the string touches the level mark and place another stick into the ground by pole 2. Carry on in this way, pivoting the A-Frame across the field.



Food drying

DRYING is one of the oldest methods of preserving food. Beans, cereals, meat and fish are commonly dried to preserve them. The drying of fruit and vegetables is less common but this technology is a very simple one and would greatly improve the variety in people's diet. Tomatoes, herbs, mangoes and onions are examples of vegetables and fruit which can easily be dried and stored. Drying provides the opportunity for preserving good harvests instead of selling when market prices are low. Well packaged, dried produce can be sold later when prices may be higher.

When drying food, particularly if the produce is to be sold, it is very important that the food is kept as clean as possible. Workers must carefully wash their hands; all equipment should be properly cleaned. Any packaging must be clean and dry. Flies must be kept away from

the food at all stages. The following methods simply use the sun to dry food. This will work well where there is plentiful sun and the humidity is not too high. In areas of high humidity or little sun, there are other methods of drying food, using fuel. (See page 12.)

Tent drier

This is a tent shaped wooden or bamboo frame tied together and covered with plastic sheeting. Clear plastic is used on the sunny side and black plastic on the shady side. Or the drier can be covered with clear plastic with black plastic on the ground. The wire drying frame should be about half a metre from the ground. One end is left loose for entry - and closed with stones or bricks. The sides can be rolled over a pole to allow air flow and to control the temperature.

Mangoes

Good quality, half-ripe large mangoes which do not contain too many fibres will give the best results. The mangoes are first washed, peeled and cut into thin slices (6-8 mm thick) with a stainless steel knife. Soak the mangoes in a bowl containing:

- 1 litre of boiling water
- 7-800 g (5 small teacups) of sugar
- 3 g (1 heaped teaspoon or soda bottle top) of potassium metabisulphite (a preservative which can be bought in chemists)
- 2 large spoons of lemon juice

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Appendix G - Map of Uganda, showing districts and areas visited

Map of Uganda, showing districts and areas visited

Appendix H - Map of Ghana, showing regions and areas visited

Map of Ghana, showing regions and areas visited

Appendix I - RPAs and GDOs visited in Uganda and Ghana

Rural People's Associations and grassroots development organisations visited in Uganda and Ghana

NAME OF GROUP OR ORGANISATION	GROUP CATEGORY	DISTRICT (REGION)	LOCAL LANGUAGE
UGANDA			
Women in Development	RPA	Lira	Luo
Yikkiti Drama Group	RPA	Lira	Luo
Ogur Afforestation Association	RPA	Lira	Luo
Kisalizi Environmental Association	RPA	Luwero	Lululi
Kiwembi Women's Group	RPA	Luwero	Lululi
Soweto Women's Group	RPA	Luwero	Lululi
Bulamagi Women's Association	RPA	Iganga	Lusoga
Buluba Christian Youth Group	RPA	Iganga	Lusoga
Nsinda Farming Group	RPA	Iganga	Lusoga
Christian Friendly Association	RPA	Iganga	Lusoga
Bulange Women's Association	RPA	Iganga	Lusoga
Adult Education Centre, Jinja	GDO	Mukono	Luganda

Nganda Life Promoters	RPA	Jinja	Lusoga
Centre for Agricultural Development (CARD)	GDO	Iganga	Lusoga
Multi Purpose Training and Employment Association (MTEA)	GDO	Iganga	Lusoga
Nakisene Literacy Group	RPA	Iganga	Lusoga
Bungwani Farmers' Enterprises	RPA	Mbale	Lumasaba
Kakora Family Association	RPA	Mbale	Lumasaba
Fellowship for Urban and Rural Assistance (FURA)	GDO	Tororo	Ateso+Japadhola
Katerema Livestock Project	RPA	Tororo	Japadhola
Papoli Active Women's Association	RPA	Tororo	Ateso
Kaako Women's Group	RPA	Kamuli	Lusoga
Nalimawa Women's Group	RPA	Kamuli	Lusoga
KIIRA Adult Education Association	GDO	Iganga	Lusoga
Literacy and Adult Education for Dev Assoc (LAEDA)	GDO	Mbarara	Runyankole
Nyabuhama Bakyara Twimuke	RPA	Mbarara	Runyankole
Kyamatambamre Women's Group	RPA	Mbarara	Runyankole
Buremba Women's Group	RPA	Mbarara	Runyankole
Nyamatete Women's Group	RPA	Mbarara	Runyankole
Mugwanjura Farmers' Association	RPA	Ntungamo	Runyankole

Rwancereere Farmers' Association	RPA	Kabale	Rukiga
Ihimbi Women's Group	GDO	Kabale	Rukiga
GHANA			
Kogobuu Yikori - Ombo	RPA	Nadowli (UW)	Dagaare
Tibani Women's Group	RPA	Nadowli (UW)	Dagaare
Zangbogo Women's Association	RPA	Nadowli (UW)	Dagaare
Brutu Cooperative Group	RPA	Lawra (UW)	Dagaare
Brutu Gardeners Group	RPA	Lawra (UW)	Dagaare
Bikyiiteng Bullock Farmers' Groups	RPA	Lawra (UW)	Dagaare
Segru Women's Group	RPA	Lawra (UW)	Dagaare
Baayiri Women's Group	RPA	Wa (UW)	Dagaare
Kpatua Cooperative Group	RPA	Garu (UE)	Kusaal
Tambie Poab Noryine	RPA	Garu (UE)	Kusaal
Pianloco Farmers	RPA	Garu (UE)	Kusaal
Tempani Women's Group	RPA	Garu (UE)	Kusaal
Nazareth Women's Food Processing Group	RPA	Birim South (E)	Twi
Green Leaves of Hope Farmers' Association	GDO	Birim South (E)	Twi
Vegetable Farmers' Association	RPA	Birim South (E)	Twi
Amamase Mobisquad	RPA	Birim South (E)	Twi
New Frontier Farmers' and Processors' Assoc	RPA	Birim South (E)	Twi
Supportive Women's Organisation (SWO)	GDO	Akwapim (E)	Twi
Abrono Organic Farmer's Group	RPA	Techiman (B/A)	Twi

Bonya Farmers' Cooperative Credit Society	RPA	Techiman (B/A)	Twi
Konko Women's Group	RPA	Akwapim (E)	Twi
Ababio Women's Group	RPA	Akwapim (E)	Twi/Shai
Jumapo Women Farmer's Group	RPA	Akwapim (E)	Twi
Wegbe Kpalime Women's Group	RPA	Ho (V/R)	Ewe
Mawunyo Women's Group	RPA	Ho (V/R)	Ewe
Sokode Gbogame Novisi Women's Coop Credit Union	RPA	Ho(V/R)	Ewe
Dzigbodi Women's Group	RPA	Ho (V/R)	Ewe
Environmental Development Youth Movement (EDYM)	GDO	Hohoe (V/R)	Ewe
Anfoega Dzana Oil Processing Women's Group	RPA	Kpandu (V/R)	Ewe
Tanyigbe Beekeepers' Association	RPA	Ho (V/R)	Ewe
Lorlorno Community Farmers' Group	RPA	Ho (V/R)	Ewe
Anyo Oil Processing	RPA	Hohoe (V/R)	Ewe
Dekawowo Habobo	RPA	Hohoe (V/R)	Ewe
Agnasa Youth Association	RPA	Hohoe (V/R)	Ewe
Wliwlinyo Mango Group	RPA	Hohoe (V/R)	Ewe
Ve-Golokwafsi Palm Kernal Oil Processing Group	RPA	Hohoe (V/R)	Ewe
Novisi Oil Processing Group	RPA	Hohoe (V/R)	Ewe

Awisi Tomato Growers and Marketing Assoc	RPA	Wenchi (B/A)	Twi
Nchirra Fish Farmers' Cooperative Society	RPA	Wenchi (B/A)	Twi
Sunyani Fish Farmers' Association	RPA	Sunyani (B/A)	Twi
Bio Intensive Gardeners' Assoc (BIGA)	RPA	Akwapim (E)	Twi
Osupunu Banks Agroforestry Farmers' Assoc (OBAFA)	RPA	Akwapim (E)	Twi
Akwapim Fish Farmers' Association (AFFA)	RPA	Akwapim (E)	Twi

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Appendix J - List of organisations contacted that share agricultural information in Uganda

Ugandan organisations visited and their involvement in sharing agricultural information

	ORGANISATION	ADDRESS	DEFINITION OF WORK	MATERIALS PRODUCED	SAMPLES OBTAINED
U1	Action Aid (Uganda) Head Office, Kampala	Box 676 Kampala	International NGO. Identifies poorest areas and supports community development including literacy, agriculture, women. 5 areas identified in Uganda. 5 yr planning phases all aimed at eventual phase out.	Numerous reports. Overview booklet - *Reflections.* Quarterly newsletter. Well organised, equipped and funded Newsletter in local language for literacy classes in Luganda	*Okwesomera* - literacy primer for Mityana project. *Reflections*

U2	Adult Education Centre	Box 2056 Jinja	Began in 1987 with establishment of library and resource centre to enhance literacy skills.	Small office. Teaching notes and posters copied from *Footsteps* and other newsletters. No funds to produce their own materials. Instead distribute others very effectively	Photos of posters and library
U3	Africa 2000, Kampala	Kampala	Began in 1989 primarily to help community groups prevent environmental degradation. Substantial funding from Canadian and Danish governments. Support indigenous NGOs with funding. Provides training. Expert staff, vehicles and well equipped office.	Quarterly newsletter - *Environews* in English and Luganda. Distribute about 2000 copies per issue.	*Environews*

U4	Agricultural Research Information Centre (ARIS)	Box 11098 Kampala	Previously known as NADIC. Based at Kawanda. Impressive and extensive library and resource centre. Staff very helpful. Regional Extension Agents met were unaware of its services.	Email and Internet links with various specialist libraries. Produce leaflets advertising ARIS and request forms. Now taking over production of materials from Entebbe. Enthusiastic staff-no materials as yet	Photocopies of materials and information leaflet. Copies of NARO booklets
U5	AT U-Press, Lira	Box 406, Lira	Local NGO (Mother organisation is AT in US) with branches in 8 countries. Seed producing grains and their processing. Work closely and efficiently with extension services, local radio and press. For example: ran a soap opera for 7 weeks on local radio.	Series of simple and well illustrated information leaflets (folded A4 sheet) for farmers and seed merchants. Cheap enough to distribute widely at demonstrations and with sunflower seeds etc. In local languages. 300 so far distributed in English, 4,000 in Luo (2,000 go into seed packets)	Small leaflet on instructions for growing sunflower seeds in Luo. Annual report

U6	BAP Project, Bundibugyo	c/o Box 676 Kampala	Action Aid project. Literacy, small scale credit, capacity building and improving social services are priority objectives. Piloted REFLECT literacy technique with success. Over 130 literacy groups, savings groups and micro projects.	Bi-yearly newsletter produced in office though plan to produce using silk screens in villages. Lubwise/English dictionary.	
U7	Church of Uganda, PDR Unit, Kampala	Box 14123 Kampala	Regional headquarters coordinating Zonal offices with support for group enterprises.	Quarterly newsletter - *Service* sent to all projects offices. Various other reports and publications. Printing Dept with good facilities	Several issues *of Service*
U8	Church of Uganda-Zonal Coordinator's Office, Lira	Box 602, Lira	Working with 23 project holders from zone. Tends to favour larger projects. Emphasis on deprived areas. Training workshops	Reports on project holders only	

U9	Community Development Office, Mbarara	Mbarara	Provide Community Development assistants to work with groups in every sub county, especially women's groups, hand in hand with extension staff. Aim - mobilising communities. Pilot literacy projects. Distribute primers (when available) Underfunded.	Would like to produce quarterly newsletter written by adult literacy learners - no funding	None
U10	DENIVA (Development Network of Indigenous Voluntary Associations), Kampala	Box 11224, Kampala	Networking local NGOs, good funding and well trained staff. Excellent resource centre	Quarterly newsletter, very well produced. Other reports and publications.	Various issues of *Deniva News.* Study - *NGOs and development*
U11	Diocese of East Ankole, Christian Rural Service Dept	CRS Dept, Box 14, Mbarara	Small dept within large diocese. Unusual in retaining CRS workers - phased out in most other dioceses in favour of Zonal coordinators. Excellent tree nursery, organises group	None	Lists of tree nursery seedlings available

			farmer's visits		
U12	District Agricultural Office, Mbarara		Lacking resources for materials and transport.	None	
U13	DVV, (German Adult Education Association) c/o Makerere University	Box 7062	International German umbrella organisation supporting adult education and literacy programmes in Uganda. Now handed over all work to UJAFAE	Indirectly supporting several literacy groups and programmes including national	Various literacy primers eg Rukiga Functional literacy curriculum
U14	Environmental Alert		Ugandan NGO founded in 1988. Promotes environmental awareness and sustainable agricultural development. Provide training, networking and farmer research.	Resource centre with numerous magazines and newsletters. Translate relevant articles. So far 3 topics - natural pesticides, compost making and soil conservation typed and photocopied (50 copies). Plan materials in 4 main languages.	Brochure

U15	Family Life Education		Department in Ministry of Information - established in 1989. Funded by UNFPA, FAO and government and coordinated with NGOS and other ministries. Share information about population mainly through radio and video.	Trained 3200 local artists about population issues. So far written 75 drama pieces, 58 songs and 18 stories. Numerous radio broadcasts and weekly TV programme. Plan to produce newsletters, leaflets and posters	
U16	Family Planning Association of Uganda		Though not concerned with agriculture (though they use farming and crop spacing examples) of interest in view of the large number of simple and well illustrated folded A4 leaflets produced and freely distributed nationwide.	Produce about 6000 posters each year and 10,000 leaflets in a number of local languages. Agricultural component now being introduced. Funded by IPPF.	Leaflets on the benefits of family planning in Runyankole and Luganda

U17	FAO		Massive office in Kampala with numerous vehicles. Unable to gain access and talk to anyone. "No we don't produce anything..."	Despite extensive funding, claim they produce nothing in terms of printed material.	Internationally produced *Better Farming* Series of approx 40 booklets
U18	Forestry Research Institute, NARO	Box 1752 Kampala	Government forestry research Department. New staff member in charge of resources. One very motivated individual keen to produce more resources aimed at farmers.	Information sheets on trees/shrubs. Quarterly newsletter - *Fori News* (200 copies) - sharing details of research, researchers, workshops and training.	*F on News.* 3 pages info sheet on *Gliricidia sepium*
U19	Heifer International, Kampala	Box 14225 Kampala	Training and provision of quality heifers to needy families to improve nutrition and income	Numerous publications - many international. Series of 13 booklets on various aspects of animal husbandry and nutrition - English, Luganda and 1 other language	2 manuals-very well illustrated *Zero Grazing Manual* (3600/=) 13 Booklets in 3 languages on Zero grazing (2200/=).

U20	Iganga District Agriculture Office		Team of 14 subject matter specialists working alongside 49 Extension workers. Underfunded, few funds for transport. Good forward planning. Work through already funded groups	No library, just a few newsletters received. Never heard of ARIS. No NARO booklets available. Teaching notes produced for trainers	None
U21	Iganga Girls Secondary School, Agricultural Section		One department in large successful secondary school. Practical demonstrations very poor, providing no encouragement to pursue farming.	Teaching notes	
U22	Ikulwe District Farm Institute	Box 266, Iganga	Run down and under-utilised farm institute. No funds or renovation since 1979. Skeleton staff hanging on in the hope of redevelopment. Virtually no training done except 1 day courses for extension staff	None. Library dates back to 1960s and 70s. No new materials	None

U23	Institute of Adult and Continuing Education, Makerere University	Box 7062	Small department with lecturers involved in several areas of adult education and literacy, some with interest in locally generated materials	Various academic papers and reports	Paper-Problems of University's role in adult education. Leaflet
U24	Jinja Catholic Diocese - Women's Desk	Box 672 Jinja	Desk covers three Districts in eastern and central Uganda. Set up in 1994 to concentrate on women's issues. Work with 184 groups. Train trainers, provide skills training, small scale credit and liase with Government staff. 70 adult literacy classes.	Series of four reading books in Lusoga (2000 copies). Training manuals in Lusoga (over 100 copies). Consult widely before writing at grassroots level.	
U25	Kigulu Development Group, Iganga	Box 619 Iganga	Regional NGO, holistic development including gari, nutritious weaning foods. Work with CBOs, training, skills sharing. Funding from Belgium (COOPIBO),	Large well equipped office. Reasonable library. Produce reports etc. Considering producing other materials	None produced as yet

			Netherlands (NOVID)		
U26	KIIRA Adult Education Association of Uganda	Box Iganga	Regional NGO - first in Iganga in early 1980s. Functional literacy programme funded by DVV. Training for literacy trainers. At present in crisis. Legal battle to separate from founder - new offices. Founder member now working on his own in separate office.	Duplicating and scanning equipment in original office. Produce primers in local language and newsletters	2 issues of newsletter in local language. Early ones hand written and silk screen duplicated
U27	Kisalizi World Vision Project		Sub office of national World Vision. Working to promote health and development. Building clinic - health and agricultural training	Few facilities. None produced	

U28	Literacy and Adult Basic Education (LABE), Kampala	Box 14171 Mengo, Kampala	A national NGO initiated by an individual. LABE works with literacy projects around the country, networking, training and sharing information	Keen to promote locally generated materials. Use of silk screens. Regular newsletter - *The Lit*	Copies of *The Lit* Training notes and background information
U29	Literacy and Adult Education for Development Association (LAEDA)	Box 707, Mbarara	Local voluntary group established by LABE, coordinating literacy training with 24 groups in Mbarara area. Small office	Few facilities. Typewriter, silk screens. Teaching notes for work in training literacy facilitators	Training notes
U30	Mission Moving Mountains (MMM)	Box 1030 Mbale	National NGO with US funding. Agriculture and health promotion. Works with women's groups. Training and demonstration gardens	Use posters and charts in training. Print leaflets, training manuals (1500 copies) and booklets (6000) in both English and Lumasaba. Limited through lack of funding	Samples

U31	Modern Campaign Against Illiteracy (MCAI)	Box 1784 Masaka	Runs academy for young people and produces literacy materials. Initiated by Director Mr Ddumba Joseph. Series of booklets for new literates. Some sponsored by St Pauls Centre, UNESCO. Lacks funds to print 2 new booklets	Prints 2 series each with 7/8 booklets in Luganda aimed at early readers all written by Ddumba Joseph. Distributed through bookshops. 54,000 printed and distributed.	Several copies in Luganda, Mujje, Tusome, Tuyige
U32	Multi-purpose Training and Employment Association of Uganda (MTEA)	Box 93, Iganga	Regional NGO with about 60 member groups in Iganga District. MTEA began in 1986 as a youth organisation, later expanded to all ages for training in skills. Small office funded by members' contributions and run largely by volunteers.	Small but well organised library and resources. Excellent use of small resources. Enthusiastic staff committed to locally generated materials. Silk screen printing for local training needs. Reports	Report - *Multiplication of virus resistant cassava.* Newsletter

U33	National Adult Education Association of Uganda (NAEAU), Kampala	Box 8174 Kampala	Membership organisation promoting adult education. Networking and information sharing. Provides training for adult education instructors, leadership training and some scholarships.	Various publications, academic in nature	Paper - *Role of NAEA in Development*
U34	National Agricultural Research Organisation (NARO), Entebbe		Founded in 1917 when Agriculture Dept took over botanic gardens (founded in 1898). Agricultural Communication Centre responsible now for production of printed materials, booklets, reports and journal for Department of Agriculture	Produces series of folded A4 *Growers Guides* for use by extension agents. Booklets, research journal, monthly *NARO Bulletin* for department staff and researchers	*Naro Bulletin A guide for Fish farmers* -booklet *Growers guides - Sunflowers, Sesame*

U35	National Womens' Association for Social and Educational Advancement (NWASEA),	Box 519 Iganga	Work with women's groups, networking, training and informal support. Literacy, income generation groups. Emphasis on mobilisation. Lacking funds and office equipment. No permanent staff	Typewriter in tiny office space (actually shop front). No materials produced but distribute useful information sent to them.	None except copies of good materials
U36	New Vision Newspaper, Agricultural Features Editor	Box 9815, Kampala	Regular page in daily newspaper usually every Monday	Agricultural page or column each week. Little reader feedback	Some examples
U37	Ngetta District Farm Institute	Box 52, Lira	Farmer training centre for 2 districts. Training in ox ploughing, animal traction, crop husbandry. 89 farmers trained in 1995. Also refresher courses for Extension agents and NGO funded training	Used to receive Dept of Agric booklets to distribute. None received for a long time.	Details of books in library

U38	Ngetta Experimental Station		Satellite research station doing crop trials for oil crops, cereals and grain legumes. Mother station is Serere.	Previously produced pamphlet - *Guide to Upland Rice* for local distribution. Library looted and not replaced.	No samples remaining
U39	Nyamitanga Printing Press	Mbarara	Catholic Printing Centre. Well equipped with well trained staff. Excellent reputation for quality and speed.	None initiated by them but print numerous booklets for Catholic Dioceses. Good distribution system throughout country	Several from different series
U40	On Farm Productivity Enhancement Program, (OFPEP), Iganga	Box 395 Iganga	US-AID funded program aiming to improve farmers access to good seeds, planting materials, improved soil management practices and sustainable yield increases.	International newsletter *Of Soils and Seeds* with African focus Farmer information sheets. Multiplier approach	A4 Seed catalogue lists

U41	Public Libraries Board		Government Dept in charge of all public libraries, aiming to promote reading culture. In 1960s and 70s used postal library services for remote areas with a mobile library serving the East of Uganda and Entebbe. Now only public libraries in major towns primarily for students, researchers and journalists.	Hope to create rural library services, with funding from UNESCO or DANIDA. Pilot phase planned for 3 areas but no recent developments. Produce 100 copies of professional newsletter 3 times a years Not used to full potential.	
U42	Radio Uganda, Rural Farm Broadcasts		1 -2 broadcasts every week translated into 23 languages. Every language has its own slot and time with 15-30 mins a week.	Good working relationship with extension services and Entebbe research station	Weekly broadcasts

U43	Rukiga Agricultural Development Project (World Vision)	Box 867 Kabale	Regional project of World Vision based in Rukiga sub county. Began in 1994. Combined approach in agroforestry, health and agriculture.	Work with individuals and groups in sharing information. No printed materials available though good office	None
U44	SALEM	Mbale	Large, German funded NGO working with health, orphans and agricultural development	Share information through support staff who visit groups. Demonstration farm using mechanisation	Leaflet providing information about the organisation
U45	The Shea Butter Nut Tree Project	Box Lira	Offshoot of COVOL in US. Initiated by US citizen following research on potential of Shea Butter Nut tree. Work with women's groups - producing Shea butter nut oil and income generation	Well resourced office. Reports, teaching notes etc produced.	*Notes for Nursery Workshops* (3 pages). Credit guidelines
U46	Uganda Catholic Secretariat	Box 2886 Kampala	National Centre for Catholic Church	Regular newsletter	News Bulletin

U47	Uganda Catholic Social Training Centre		Established in 1969. Provides courses in Social development, secretarial skills, business administration and Accountancy. Also have an outreach department who offer short community based training courses up country	Plan to begin newsletter to keep in touch with former students and inform them of useful information	Well printed A5 Prospectus 1996-7
U48	Uganda Change Agent Training Programme (UCAA)	Box 2922 Kampala	Founded in 1992. Funded by Quaker Service Norway. Provides residential training courses for Change Agents which includes extensive fieldwork in trainee's home area. Membership limited to development workers who have undergone the training course.	Training booklets Newsletter sent to all Change Agents (over 600)for support, new ideas and networking.	CA Booklets: *Small Group Savings and Credit Schemes*- English and Runyankore/Rukiga

U49	Uganda Community Based Health Care(UCBHC)	Box 325, Entebbe	Training and materials in CBHC around Uganda. 350 member groups approx. Excellent and motivated staff. Initial funding from UNICEF. Now more precarious from international donors.	Series of quite excellent training manuals and visual aids. Well illustrated and designed. International appeal. Simple language but expensive. Quarterly newsletter - *CBHC News.*	Complete set of manuals. Several issues *of CBHC News.*
U50	Uganda Joint Action for Adult Education (UJAFAE)	Box 11380 Kampala	National NGO networking existing adult education associations and institutions. Seminars, workshops, publications. Inherited funding capacity of DVV.	Academic reports and journal Introductory leaflet	First issue of *Journal of UJAFAE.* Leaflet
U51	UNFA-Kampala	Box 6213 Kampala	NGO bringing together farmers and agro-related industry. Founded in 1992. Supported by Govt. Objectives: improve farmers income and welfare, provide farmer services,	Produces magazine *The Farmer's Voice* and a national newsletter.	*The Farmer's Voice* (sold for 1000/=)

			promote agricultural interests. Funded by members.		
U52	Uganda National Farmers Association (UNFA) Iganga	Box 266, Iganga	District branch networking with farmer groups. Provide training and link up with extension services. Under-resourced. Work through Front line workers	No locally generated materials produced	
U53	Uganda National Farmers Association (UNFA), Lira		District branch networking with farmer groups. Use Key Contact Farmers. Provide training and link up with extension services.	Twice produced a newsletter in Luo - 6 pages long. Few facilities but enthusiastic. Distributed about 200 copies	Duplicated training notes
U54	Uganda Soil Conservation and Agroforestry Pilot Project (USCAPP)	Box 8, Mbarara	Pilot project funded by SIDA using staff seconded from Dept of Agric. Well funded and organised. Good library with spare copies passed onto schools and training centres	Plan to produce notes in local language in mandate - but not yet begun	None

U55	Uganda Womens' Finance and Credit Trust Ltd (UWFCT),	Box 6972 Kampala	National NGO organising savings schemes for women and groups. Credit and loan system	Information pamphlet	None
U56	VI Tree Planting Project	Box 1732 Masaka	Swedish funded national NGO. Tree nurseries, workshops, training on need for reafforestation. Run seed store in Masaka town. Initiated large reafforestation project.	Numerous simple handouts in several languages. Well illustrated, printed on card. Notes on compost making, fuel saving stoves, liquid manure, natural pesticides	Handouts: useful agroforestry trees, direct sowing, termite resistant trees, teaching notes

Other sources of locally generated materials seen or collected without a personal visit

U57	Dept of Agric, Kitgum - Veterinary and Forestry Section	PO Box 26, Kitgum	Team of subject matter specialists. Main contact Mr Abwola Grace. Produced *Yoo Maber* series which was greatly appreciated. No copies available.	*Yoo Maber*- series of four booklets in Luo and Acholi- vegetable production, beekeeping, poultry and tree planting. 200 copies printed in 1989 and 1990 and funded by an Italian NGO.	All four booklets in *Yoo Maber sews*

U58	Mushanga parish, Mbarara - 4 authors (1 German)	Catholic Diocese, Mbarara	Excellent booklet on sustainable agriculture in local language. Well illustrated. Printed at Marianum Press, Kisubi, Kampala. Out of print.	*Ohingye Otungye (Cultivate and Grow/Rich)*	Photocopy of cover and sample pages
U59	Marianum Press Catholic Printing Press	Box 11 Kasubi, Kampala	Large and well run printing press run by Catholic Diocese. Commercially run.	Several series of booklets on morality and development issues in local languages. Sold in Catholic bookshops nationally for 200/= or 300/=. Popular with priests.	*Nooyetwa Kuboneza Ensi (Work and responsibilities), Abagyenda Bareba (Those who travel learn)*
U60	Uganda Farmer	Box 10436 Kampala	Bimonthly farming magazine, privately produced. Good range of articles. Many agricultural adverts.	*Uganda Farmer* - 2000/=	*Uganda Farmer*

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Appendix K - List of organisations contacted that share agricultural information in Ghana

Ghanaian organisations visited and their involvement in sharing agricultural information

	ORGANISATION	ADDRESS	DEFINITION OF WORK	MATERIALS PRODUCED	SAMPLES OBTAINED
G1	Action Aid	Box 1057 Tamale	International NGO with regional offices in Tamale, Bawku and Chereponi. Community based initiatives on food security, health, water, income generation and adult education	Well equipped offices. No materials produced except for reports and strategy papers	Country profile

G2	African Centre for Human Development	Box 0273 Osu, Accra	National NGO promoting rural and human resource development with 5 regional offices. Involved in health, agriculture, micro-enterprise and counselling services in rural areas.	In the process of developing training materials. Reports	None available
G3	Agricultural Information Service	Box 1188 Tamale	Presbyterian Church of Ghana agricultural information and networking service.	Well produced booklets and Fact Sheets, though lack illustrations. Quarterly newsletter - *Labaari for* N Ghana.	*Labaari* Fact Sheets: *Ho 9 - Compost Ho 2 - Rabbit diseases*
G4	Catholic Secretariat	Box 9712 Accra	Dept ofSocio Economic Development with national office in Accra coordinating Agricultural Coordinators in each diocese and field officers in most parishes. Focus resources and training on most deprived areas.	Weekly newspaper produced by Dept of Social Communications. Printed training materials have low priority	Handbook with information about SED and contacts *Workshop Report - Sustainable landuse*

G5	Centre for the Development of People (CEDEP)	Box 5601 Kumasi	National NGO. Emphasis on women's development. Workshops, training, ongoing support for groups. European funding	Well equipped offices. Various reports and papers. Newsletter	*CEDEP Update*
G6	Christian Council of Churches	Box 919 Accra	Coordinates 40 member churches. Development and Environmental Dept works on small scale business advice, health, environment, agroforestry, waste. Provides workshops, training.	Excellent and illustrated training notes for workshops using the facilities within Christian Council.	T*raining in Sustainable Agric Skills for Youth Oct-Nov 1996*
G7	Crops Research Institute - Ghana Grains Development Project	Box 3785 Kumasi	Research institute under the Ministry of Agriculture.	Excellent series aimed at farmers. Mostly illustrations and clear text. Good quality production.	*12 Steps to a Good Maize Harvest, 10 Steps to a Good Cowpea Harvest*

G8	Dagbani Literacy Project	Box 378 Tamale	A GILLBT project working with the Dagbani language near Tamale. Work with literacy training, health care and agriculture.	Produce various materials in Dagbani - health booklet, moral teachings, primers and readers.	*Kawana Sanzi (Growing maize and beans), Shiguliba ben na piini Buku (Beekeeping)*
G9	Department of Adult Education	Accra	Original aim to provide distance learning materials for to enable adults to continue into tertiary education. With restructuring of educational system much of their work is now redundant.	Presently print four local language newspapers. Plans to produce 24 follow up reading materials in each language. Dept has extensive printing facilities, though many machines out of action.	Newspapers
G10	Department of Linguistics, Accra University	Box 38, Accra	Department teaches in a number of local languages depending on the availability of local staff. Some involvement in NFED work.	Help produce newspaper in Buli language.	

G11	District Agricultural Extension Office, Wa	Box 21 Wa	Subject matter specialists based in Wa supporting 75 front line staff in the district. Work mainly with farmer groups.	Produce booklets and handouts aimed at FLS during training days - not at farmers.	Booklet - *How to keep good farm records*
G12	ECASARD (Ecumenical Association for Sustainable Agriculture and Rural Development)	Box 772 Madina-Accra	National NGO networking sustainable agricultural groups in S Ghana. Training, information sharing, skills training, workshops and demonstrations.	Ran workshop on rural journalism. Quarterly newsletter. Various reports.	Newsletter - *The Sustainable Farmer*, Report on SARDFair
G13	Environmental Concern Office (ECO)	Box A 148 Adisadel Cape Coast	Christian NGO seeking to provide a religious basis for environmental care. Netwroking of denominations, meetings, training programmes offered.	Publish leaflet, papers.	Introductory leaflet and workshop paper

G14	Environmental Development Youth Movement (EDYM)	Box 5 Have	National NGO aimed at youth involvement in environmental protection. Various regional projects. Works with schools, youth groups and colleges in particular. Tree nurseries.	Produces literature to distribute and training notes	Report and leaflet
G15	Farm Implements and Tools (FIT) Programme	Box 1423 Accra	Technical assistance programme with ILO and TOOL, funded by Netherlands. Support services to small scale metal working and food-processing enterprises. Technical information, tools and training courses provided.	Provide training, information and enquiry service. Produce various reports and information leaflets. Glossy brochures	Good quality pamphlets and booklets
G16	Farming Systems Development and Training Project (WFSDTP)	Box 71 Wenchi	Research into extension methods and community based organisations	Reports and research findings	Reports

G17	Friends of the Earth-Ghana	Box 3794 Accra	National NGO with international links. Campaigning for reduction of pollution, improved sanitation and rubbish collection and environmental protection	Quarterly newsletter - *FOELINE,* Various reports.	*FOELINE*
G18	Garu Agricultural Services	Box 44 Bawku	Began in 1967 by Presbyterian Church. 9 extension agents with other central services. Work with over 90 groups.	Small resource centre with various newsletters. Teaching notes and reports.	*Report on Women's Activities 1993*
G19	Ghana Organic Agriculture Network	Box 6342 Kumasi	National NGO (linked with Henry Doubleday Assoc, UK) promoting organic and sustainable agriculture and agroforestry. Resource base, networking, training and demonstration farms, workshops	Various research reports. Story book, *Farming in Ghana* - very well illustrated. Printed in Holland	*Farming in Ghana*

G20	Ghana Rural Reconstruction Movement	Box 14 Mampong Akwapim	Began in 1974 as part of Philippines NGO IIRR. Now independant. Sustainable agriculture. Practical training courses and demonstrations - nurseries, poultry, bees, snails etc. Dedicated staff - low funding	Several materials - flip chart in local language for family planning using agricultural examples, *Agroforestry in Ghana* kit and book - *First aid in plant medicine.*	Photocopied sample pages
G21	GILLBT (Ghana Institute of Linguistics, Literacy and Bible Translation)	Box 378 Tamale	Huge literacy project with overseas funding from SIL. Nationalised in 1980. 15 translations of the New Testament. Aims: literacy, Bible translation and promoting use of local languages. Work outside the 15 'official' languages recognised by the government.	Have their own extensive printing department - cheap, functional materials. Literacy primers, readers, booklets and newspapers. Critical of NFED primers and find their grammar often leads to confusion. 28 literacy projects.	Newspapers in various languages *Tikpaal Nan? Konkoma Farm* book 3 primers in Lusoga

G22	Green Earth Organisation	Box 16641 Accra N	Formed in 1983 in direct response to catastrophic drought and effects. Now a national NGO networking and informing wide range of NGOs and government departments both within and outside Ghana. Emphasis on youth awareness.	Monthly newsletter - The *Green Dove.* Very informative combining news from wide range of NGOs and govt depts in Ghana	*The Green Dove* Price 3400 cedis
G23	GTZ Sedentary Farming Systems Project	Box 473 Sunyani	Promoting sustainable agricultural practices through target group and farmer training.	A4 teaching notes in English with illustrations. Fairly technical language.	*Manure management, Producing mineral salt licks.*
G24	Ho Farms Project, Evangelical Presbyterian Church	Box 751 Ho	Agricultural Extension and Training Centre, one of 6 projects supported by the EP Church in Ghana. Work with farmer groups in 8 communities.	Well equipped office. Teaching notes and reports. No training materials.	Introductory leaflet
G25	Hunger Project	Accra	Food security projects.	No materials produced except reports etc.	

G26	IFARM	Box 1490 Accra	Food Security project - closely linked with World Vision. Works in collaboration with research institutes	Quarterly newsletter with international distribution and audience. Various reports	Copies of *CRSP Technical Bulletins* and newsletter
G27	Integrated Social Development Centre (ISODEC)	Box 8604 Accra North	National NGO offering technical inputs relating to water, sanitation, public health, nutrition, training and resource material production in urban and rural areas.	Well equipped offices. Plan to produce video materials. Provide resource materials on public health. Research and report papers.	Leaflet and newspaper insert
G28	Literacy House, NFED programme	Box M45 Accra	In charge of NFED national literacy project in 15 languages funded largely by World Bank. Print primers and follow up materials. Impressive materials (but little evidence of good distribution of them among groups visited). World Bank funding withdrawn in	All 15 languages should have primers, follow up reading and regular newspapers. Aluminium book boxes on display. 150 follow up reader titles available.	Various primers and readers. Silkcreen newsletters in Ewe and Twi. 14 different newspapers.

			1997.		
G29	Ministry of Agriculture - Information Support Unit	Box 299 Accra	Collaborate with Research Institutes to produce information for front line staff and farmers. Publications all in English.	Three types of publication: leaflet, booklet and flipchart. Well produced and targeted. Plans for more translations.	Several samples of each
G30	Ministry of Food and Agriculture, Upper West	Wa	Office coordinating agricultural and extension services.	Quarterly bulletin aimed at staff and front line extension agents.	*UWADEP News*
G31	Nandom Agricultural Project	Box 14 Nandom	Began in 1973. Main emphasis on animal traction. Work mainly with groups. Farm store. Work closely with credit and loan programme run by Catholic Cooperative in Nandom.	Teaching charts and notes. Various reports.	Copies of reports
G32	National Agricultural Extension Services Department	Box M37 Accra	Coordinate and train 1,500 Front line staff (maximum of 15 per district). Recent World Bank funding has provided motorbikes, housing, an impressive video-producing centre and air	Training and printed material produced in response to farmers' problems. Excellent information leaflets (folded A4), largely produced by regions during training. Plan to coordinate and	Samples of leaflets: *Post harvest losses, Dry season fodder, Mango.* Booklet: *Seed yam production.*

			of optimism.	improve.	
G33	National Council on Women and Development	Box 304 Sekondi	Independent governmental organisation. Resource and information centre in the Western region.	Provides information. Various reports.	
G34	Ofuman Agricultural Project	Box 43 Wenchi	Began in 1978.300 hectare model farm now providing graduate training and centre for new Outgrowers Programme in maize production with 72 farmers. Produces hybrid maize.	Informal extension programme and farmers association formed around Wenchi area. No materials produced.	
G35	Suntaa Nuntaa	Box 207 Wa	Regional NGO promoting agroforestry. Works with over 50 womens groups in particular encouraging savings and credit. Tree nursery, networking, training, skills sharing.	Uses drama, radio and information leaflets. Well equipped office.	Handouts and newsletter.

G36	Technoserve	Box 135 Accra	Large international NGO. Huge, well funded offices (USAID). Main focus is enterprise development. Work with groups or encourage their formation to give training and loans. At present about 60 groups.	Newsletter - technical and donor orientated.	*Boafo (Helper)*
G37	Wenchi Farm Institute	Box 3 Wenchi	Began in 1962.140 students of which 13 are female. 12 teaching staff. Training is 80% practical. Students all have own plots and carry out practical projects.	Well stocked library. No locally generated materials produced. Teaching notes.	Brochure
G38	World Vision, Head Office	Box 1490 Accra	Agricultural Coordinator responsible for regional agricultural extensionists. Concentrate on projects in poorest areas. Credit and loan scheme	Main publication available is large book - *Farmer's Guide*. Well produced with plenty of illustrations. Translated into Portuguese, French and English with over a million	*Farmer's Guide*

				copies.	

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Appendix L - Samples of newsletters and locally generated materials


EKITABO EKY'OKWEGA OKUSOMA MU LUSOGA
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