NETWORKING FOR SUSTAINABLE AGRICULTURE: LESSONS FROM ANIMAL TRACTION DEVELOPMENT

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Introduction

In an ideal world, agricultural development networks would not be necessary. Individuals and organisations involved in similar areas of farming, research, development, training, extension and infrastructural support would be well linked. They would be in touch with farmer reality, policy implications, new research initiatives and experiences in other places. They would be aware of the advantages and disadvantages of the many technological, biological, socioeconomic and administrative options available for agricultural development. They would have the resources to undertake their work. They would collaborate with colleagues whenever this would be beneficial. Government, organisations and farmers would listen to them when they had some valuable recommendations to make.

In the real world, those involved in agricultural development experience very separate realities. Many are isolated from the wider experiences of others by their day-to-day problems. This is so whether they are on a farm, or in an NGO office, international research centre, government ministry or aid agency headquarters. Any information flows tend to be top-down and narrow, restricted to single disciplines, limited geographical areas and the prevailing organisational persuasion. When an agricultural development initiative (plant, animal, farm input, technology, training scheme, research idea etc.) is required, individuals or organisations use whatever is immediately at hand or design something new. They do this because they have neither the time, vision, experience or facilities to compare what is actually needed, with what options are available worldwide, nor to consider how these could be obtained locally in the available time.

Networks can help overcome such problems by allowing people and organisations to exchange information and experiences and to cooperate with those outside their immediate working environment. A network is any group of individuals or organisations who, on a voluntary basis, exchange information or undertake joint activities in such a way that their individual autonomy is strengthened by the interactive process of networking. Although networks have been classified in many ways: by their membership, their geographical scope, their main activities, their objectives and their organisational structure (Figure 1: network models), it is the multi-directional *process* of networking that is vital, and more crucial than the network structure itself.

It should be noted that some formal, centralised networks have arisen entirely as a result of top-down planning by international research centres, aid agencies or NGOs. These are not true networks based on the active participation and interaction of autonomous members. Many have been no more than dissemination units for information, technology or genetic materials. Some have provided the parent institution with multi-country research or technology evaluation facilities. In these cases, the term network has been employed for public relation purposes only. The abuse of the network concept in this way should be strongly discouraged.

This paper explores the value of true networking by describing and assessing the experiences of animal traction networks in Sub-Saharan Africa. By discussing the problems and benefits associated with the
networks, the paper seeks to direct those involved in the formation of networks, or the strengthening of the networking process, towards an approach which will maximise the role of networking in promoting efficient, effective and sustainable agricultural development.

Background: Animal Traction in Africa

In many parts of the world, animal traction is an appropriate, affordable and sustainable technology, requiring few external inputs. Work animals can be used to reduce drudgery and intensify agricultural production, so raising living standards throughout rural communities. Cattle, buffaloes, donkeys, mules, horses, camels and other work animals can provide smallholder farmers with vital power for crop cultivation, transport and mobility. Draft animals can also be used for water-raising, milling, logging, land-levelling, road construction and local marketing.

Animal traction is an environmentally-friendly technology that is based on renewable energy and that assists the ecologically-efficient integration of livestock and crop-production. Draft animals not only produce manure, they also transport composts to the field. The energy source (mainly pasture and crop residues) is ecologically renewable and neither depletes fossil reserves nor requires foreign exchange. The technology is sustainable within rural areas without the need to transfer wealth to industrialised regions. Individual families and rural production and marketing systems benefit considerably from the economic stimulus provided by animal-powered transport.

Animal traction has been widely used in North Africa and Ethiopia for thousands of years, and in several parts of Africa there has been a long history of using animals for riding and pack transport. However, in much of sub-Saharan Africa the introduction of animal power for tillage and wheeled transport is relatively recent. In most countries the technology slowly spread during the first half of this century. Fastest adoption rates were experienced in areas with relatively developed crop marketing systems, particularly for cotton and groundnuts.

During the 1960s and early 1970s, animal traction received relatively little attention from newly independent governments. This was a period when people thought that the rapid tractorisation recently seen in Europe and North America would also take place in African countries. Animal traction was dropped from the curriculum in Europe and was also often omitted in Africa. A generation of agricultural students graduated with little formal training relating to animal traction. These agriculturalists were often rapidly promoted within ministries and research organisations and became responsible for planning and implementing agricultural projects and programmes.

By the late seventies, higher oil prices, foreign exchange shortages and numerous failed tractor schemes suggested that rapid motorisation was not after all economically viable or practicable in the majority of African smallholder farming systems. Animal traction was now perceived by donors and governments (even in oil-rich countries like Nigeria and Cameroon) as offering considerable economic, environmental and social benefits and
therefore as a serious but neglected development option.

With the inflow of donor funds that followed the well-publicised Sahelian droughts, many donor-assisted projects were established in Africa to introduce (or re-introduce) and/or research animal traction technologies. These projects tended to work in isolation, unaware of each other. Several experienced serious problems, because those implementing did not really understand all the technical, social and economic implications of using animal traction technology in the particular farming system (Sargent et al, 1981; Munzinger, 1982; Starkey, 1986).

Animal Traction Networks in Africa

In 1982, the Food and Agricultural Organisation of the United Nations (FAO) convened an expert consultation on animal traction. This concluded that improved information exchange was extremely important (FAO, 1982, 1984). As a follow-up, FAO, in conjunction with the International Livestock Centre for Africa (ILCA), organised a series of missions to twelve African countries in 1983, 1984

and 1985 to investigate the possibilities of establishing an animal traction network in Africa (Imboden, Starkey,and Goe, 1983; Starkey and Goe, 1984, 1985). These missions found that there was very little information exchange taking place between countries or even between programmes within countries. There were far too many cases of projects, a short distance from each other, `re-inventing the wheel' in almost total isolation. They concluded that a network was not only extremely desirable but also feasible - there existed strong support for the idea at project/institutional level and in the national ministries. It was suggested that a network should be launched first in West Africa (Box 1), to be quickly followed by complementary initiatives in Southern and Eastern Africa (Box 2).

Box 1. The West Africa Animal Traction Network (WAATN)

An opportunity to launch WAATN was created by the convening of a small workshop in 1985 which was organised by the Farming System Support Project of the University of Florida and hosted by a USAID-funded animal traction project in Togo. This was probably the first time that people had come together from several West African countries specifically to discuss animal traction technology, and review it from a farming systems perspective. The participants highlighted technical, economic and infrastructural constraints and debated the preconditions for the successful development of animal traction. Participants elected a steering committee, comprising representatives from animal traction programmes of five West African countries, a representative of the main resource organisation (University of Florida) and a facilitating technical advisor.

Since then, WAATN network workshops have been attended by over 200 people and every West African country has been involved. The workshops have directly stimulated the preparation and publication of about 150 papers. These cover a wide variety of issues and experiences concerning animal traction in different farming systems and related research, development, extension, training, implement production and policy implications. Network publications (in English and in French) have been made available free-of-charge to organisations working in the region (Poats et al, 1986; Starkey and Ndiamé, 1988; Starkey and Faye, 1990; Lawrence et al, 1993).

Other activities include:

@ Regional visits in relation to animals, training or equipment between Sierra Leone and Togo, Senegal and The Gambia, Guinea and Mali, Sierra Leone and Guinea, Guinea Bissau and Senegal, Tchad and Cameroun, Liberia and Sierra Leone and many other similar combinations of countries.

@ Collaborative activities between research and development organisations in Europe and programmes in West Africa. Examples include the Centre de coopération internationale en recherche agronomique pour le développement, France (CIRAD), GTZ and the University of Warwick. They have also been arranged in collaboration with regional programmes such as the FAO Trypanotolerant Livestock Programme, based in The Gambia.

@ Information diffused through workshops or informally through other network contacts. There is no official network newsletter. However, documents produced in Mali, Sierra Leone, Togo and Senegal, for example, are now quite commonly found in other countries in the region. This was not the case when the network was launched.

@ Networking within several countries in West Africa. In some countries this was achieved through projects or programmes operating at a national-level. For example the Sierra Leone Work Oxen Programme helped to coordinate animal traction research and extension through a national animal traction committee, national workshops and national and provincial ploughing competitions.

Box 2. Eastern and Southern Africa Network (ATNESA)

The Animal Traction Network for Eastern and Southern Africa was launched in 1990. The setting was a regional course on planning integrated animal draft programmes, held at the Institute of Agricultural Engineering in Harare, Zimbabwe. The course was arranged by AGROTEC (Programme on Agricultural Operations Technology for Smallholders in East and Southern Africa) funded by the Swedish International Development Agency (Sida). During the course, the experiences of the West Africa Animal Traction Network were presented and there was much discussion about regional networking. The course participants selected six people from different countries to form a committee to discuss organisational details and prepare an action plan for the Network. The first ATNESA workshop was held in 1992 in Lusaka, Zambia with the theme of *Improving animal traction technology* (Starkey, Mwenya and Stares, 1994).

The ATNESA committee resolved from the outset that the network would function largely through the interaction of autonomous national animal traction networks and direct contacts between the different programmes in the region. ATNESA members and the steering committee have therefore endeavoured to stimulate the organisation of informal or formal national animal traction networks in as many countries in the region as possible. The national networks have comparable goals as the international networks but they operate at a national level. They seek to improve information exchange and national collaboration through meetings, workshops, proceedings and publicity materials. They generally aim to influence national policy in favour of animal traction, and are in better positions to `lobby' than the international networks. Formal national networks have been formed in Tanzania, Kenya, South Africa, Ethiopia and Zimbabwe and less formal national networking initiatives have been undertaken in Botswana, Malawi, Mozambique, Namibia, Uganda and Zambia (Simalenga and Starkey, 1996).

ATNESA has arranged international workshops in cooperation with the national networks, and these have followed the pattern and methodology adopted by the West Africa network. A thematic workshop on *Gender issues in animal traction* was held in 1992 hosted by the Mbeya Oxenization Project in Tanzania. The participants reviewed project experiences relating to gender and animal traction and discussed ways in which women can gain more from animal traction technology. As a follow-up, a handbook with gender-related guidelines was published (Sylwander and Mpande, 1995).

A workshop on the *Design, testing and production of animal-drawn carts* which was held in 1993 in Harare, Zimbabwe. Forty participants from ten countries reviewed successful and unsuccessful cart designs, and drew up guidelines relating to cart manufacture and testing, harnessing and related policy issues (IT, 1996).

In 1993, 64 people from 14 countries participated in a workshop on *Weed control using animal power* 1993 hosted by Animal Traction Network, Tanzania (ATNET). Project experiences were reviewed, weeding implements were field-tested and discussions were held with farming families concerning farm-level constraints. Groups of specialists prepared guidelines for the design, testing, manufacture, distribution and extension of weeding technologies and the proceedings including 50 edited papers were published by ATNESA (Starkey, Simalenga and Miller, 1996).

In 1995, the Kenya Network on Draught Animal Power (KENDAT) hosted a wide-ranging international workshop on *Meeting the challenges of animal power* (Starkey et al, 1996). Plans are under way for further workshops relating to donkey utilisation hosted by ENAT (Ethiopian Network on Animal Traction) and conservation tillage and environment issues hosted by SANAT (South Africa Network on Animal Traction).

Workshop Methodology

Perhaps the most visible and popular activity of the animal traction networks in Africa has been the major workshops. The workshops have proved extremely popular, and participants have considered them interesting, helpful and professionally valuable. The detailed evaluations conducted at the end of each workshop have allowed the organisers to learn which aspects of the workshop have been most appreciated. The workshops have used the same general approach and methodology, with variations based on local conditions and on the participant feedback from the previous evaluation:

- *Good publicity* in advance and an open invitation to all those working in the field of animal traction. This has attracted a broader range of attendees than is usual in the closed international workshops, common in Africa, where attendance dominated by official representatives.

- *Conditions for participation*, which include the preparation and submission of a suitable paper and/or poster. Where applications exceed capacity, selections are made on the basis of quality of paper and the need for a suitable balance of different organisations and disciplines.

- *Multidisciplinarity,* with participants from different professional fields (agricultural engineers, economists, animal scientists, agronomists, sociologists), researchers, extension workers, administrators, producers and donor representatives all closely interacting.

- *Presentation of only a few key papers* to stimulate discussion. Although participants receive copies of all the papers prepared, they do not spend much time sitting through long sessions of paper presentations (which people tend to find tedious). Informal discussion is stimulated by *networking announcements* in which people briefly summarise their work and interests and the topics on which they would like to exchange information. This often leads to special evening sessions for those with particular interests. Posters and photographs of different animal traction experiences have also encouraged informal networking.

- *Field trips in small groups* of five to eight people from different countries, who visit villages to watch work animals in use and to discuss directly with farmers. These visits are the most popular element of each workshop. Such in-depth talking with farmers has often been a new experience for participants. They have felt free to ask farmers questions they would never dare ask at home (for fear their juniors would laugh at them). The small groups have also visited village blacksmiths, project sites, research stations and implement producers.

- *Small group discussions* of observations and findings relating to visits and to specific workshop themes. Groups report back to other participants in preparation for open discussion on the key issues. The small group discussions have proved almost as popular as the field visits.

- The opportunity for *network business meetings*, to discuss plans for the network and to elect a new steering committee.

- The *publication of proceedings* in an attractive format and available free-of-charge to people working in Africa. These are useful and easily accessible resource documents for all those working in the field of animal traction.

- An *end-of-workshop evaluation*.

Some Lessons from the African Networks

Network Typology and Membership

Both WAATN and ATNESA have evolved as semi-formal, regional networks that focus on animal traction issues. The networks are open, accepting members from a wide range of backgrounds and disciplines. Both networks have concentrated on information exchange between members as the best means of achieving their objectives. This has led to collaborative activities in training, research and development. While the ultimate aim of the networks has been to benefit the end-users of animal power (the smallholder farmers and transporters), network activities have been designed to directly benefit the work of network members. The networks have some external orientation since they intend to influence non-members (the public, governments, aid agencies) to view animal traction sympathetically and allow policies favourable to animal power users.

While it is intended that the networks will ultimately benefit smallholder farmers using animal traction, such people have only been actively involved in the international networks through the farm-based discussions during workshops and planning meetings. In principle, farmers or farmers' groups could be involved, but in practice farmers' interests have been represented by those individuals and organisations working with farmers (directly or indirectly; perfectly or imperfectly). However, farmers are directly involved in the activities of national networks.

Perhaps the strongest feature of the two networks is that they are informal African organisations. They did not arise from project documents of donors, nor were they created by any one resource institution. They have grown up from strong member interest and close collaboration with a variety of donor organisations.

The networks have received support from several donors and international institutions, but they are not dependent on, or controlled by, any single one of these. Such flexible structures should allow the networks to survive the inevitable changes in the policies and financial support strategies of particular resource organisations. The multi-donor support also reduces the genuine risk of any one funding agency using its financial muscle to impose its particular policies and priorities on the network.

Network Benefits

While all those associated with these networks can point to the advantages to individuals and to programmes of improved knowledge and understanding, it is extremely difficult to actually measure the benefits. If one looks back to the years of work `wasted' in the past on unsuitable technologies in Africa (such as wheeled toolcarriers which were `perfected yet rejected'), one can see the great potential for savings through networking (Starkey, 1988). To take another example, one project spent about two million dollars attempting to introduce Asian water buffaloes for work in part of the Sahelian zone of West Africa (Starkey, 1990). This animal traction project (planned before the start of the networks) lacked a farming systems orientation. It did not benefit from networking
interactions with colleagues familiar with other (failed) attempts to introduce exotic work animals into sub-Saharan Africa. In retrospect, it seems likely that the money allocated to the project could have been much better utilised had those responsible for planning and implementation been exposed to the experiences and perspectives of network members.

It is clear that other comparable initiatives have been made more relevant and productive because people have been able to learn from the networks. While it is impossible to know just how many programmes and projects

have benefited, some clear examples of network influence can be documented (Box 3).

Box 3. Some Benefits of Networking

To illustrate the genuine yet elusive nature of the benefits, one can take the example of an animal traction project in Guinea. This has not yet itself participated in any `formal' network activity such as an international workshop. Nevertheless, the leaders of this project made use of some of the network publications mentioned here, to learn of, and then to contact colleagues working in Mali, Senegal and Sierra Leone. This led to a training visit in Mali and the testing of Senegalese and Sierra Leonean implements in Guinea. It also resulted in detailed discussions on technical, economic and organisational issues and the obtaining by the project of documents on a wide variety of topics. Moreover, each contact led to others: for example, the people in Mali were able to discuss the experiences of their colleagues in Togo, whom they had met at a workshop. Such information exchange would have been almost impossible a mere five years before, simply because people in one country were almost completely unaware of each others' activities. As a result of its networking and its dynamism, the project implemented some well-proven animal traction strategies, and so achieved in two years an output that, in more `normal' circumstances, might well have taken a project three to four years (Starkey, 1991). The suggestion is that significant savings in human time and project costs were achieved in this one project through networking. Planners can place a financial value on such savings.

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From WAATN and ATNESA experiences, it is clear that, depending on their specific objectives, membership and activities, networks orientated towards agricultural development can provide benefits in several interrelated ways. Some immediate and rapid benefits are likely to be reflected in the work of the network members themselves. Longer term benefits become apparent as development and research programmes become more effective, know-how is transferred and farming systems evolve.

The major benefits of networks can be summarised as follows:

Information exchange. Networks facilitate the exchange of information, skills, knowledge, experiences, materials and media, through meetings, workshops, publications and cooperative programmes. This increases the overall competence of individual or organisational members.

Less duplication. Network information exchange and coordination reduces unnecessary duplication of work and effort, thus facilitating faster progress and a wider overall impact.

Linkages. Networks can effectively link people of different levels, disciplines, organisations and backgrounds who would not otherwise have an opportunity to interact.

Awareness. Networks can create an awareness for members that many other people and organisations have similar concerns and development problems.

Critical mass. Networks can provide the critical mass needed for local, national or international advocacy, action and policy change.

Complex problems. Networks can help address complex development problems and issues that seem overwhelming to those working at village level.

Cooperation. Networks can bring together funding and technical cooperation agencies with those in

need of resources and support.

Peer support. Networks can provide members with a source of encouragement, motivation and professional recognition. This can be particularly important to those outside the normal hierarchies of government, education and international research.

Some Practical Problems

In setting up the WAATN and ATNESA networks and by comparing these networks with others, it has become clear that networks, despite their benefit potential, can face many organisational problems. Some of the most significant are summarised below:

Lack of clear objectives. Without specific objectives, networks find it difficult to develop dynamic, monitorable programmes, with distinct targets that can be met and free of the manipulation of dominant individuals (Moelinono and Fisher (1992)).

Membership disparity. Large, resource-rich agencies and institutions with well-educated, confident staff may dominate smaller organisations; members who are closer to farmer reality may be less well heard than international staff.

Domination. Networks can easily become dominated by particular organisations and interest groups.

Centralisation. Centralisation can occur when a network coordinator, secretariat, steering committee or network board starts to control and run the network for its own sake rather than coordinating and facilitating the activities of its members.

Lack of resources. Networks often suffer from lack of funds for network activities and coordination. Where networks do have funds, considerable tensions can be generated through the way the funds are administered and dispersed.

Misinformation. While networks can disseminate valuable information, some information being shared may be of dubious reliability. An atmosphere of questioning and self-criticism is required.

Competition. Competition from networks or organisations with overlapping agendas can lead to creative collaboration but also to competition for recognition, limited resources and membership.

Donor interference. Network members tend to be intimidated by donor and resource institution representatives. Network core groups seldom argue with such people, being concerned not only for network funding but also for their own careers and programmes.

Monitoring and evaluation. There seems to be very little experience relating to the monitoring and evaluation of networks. Some centrally established networks have tried to undertake evaluation exercises to define reliable indicators of network success and to quantify the benefits of networking - but with limited success (Nelson and Farrington 1994; Smutylo and Koala 1993).

Political constraints. National and international networks have to operate within the political realities of the country or region. In some countries, information exchange and criticism of government policy is unwelcome and all contributions to newsletters, field trips and attendance at workshops requires government clearance.

Both the WAATN and ATNESA have avoided these major problems to a large extent, but neither network has been problem free (Box 4).

Box 4. Major Problems Faced by the African Networks

The following constraints have been most keenly felt:

Postal services and telecommunications between African countries can be very slow, difficult and unreliable; air schedules and connections within Africa are such that committee members or workshop participants seldom arrive and depart on the same day. **Communication problems** reduce progress rates and can significantly increase costs and work days lost.

During the enthusiasm of workshops and meetings, participants often take on responsibilities which are difficult to meet when they return to the practicalities of their own demanding jobs. **Conflicting work pressures** have also made it very difficult to bring together all members of the steering committee at the same time, or even in sufficient numbers to allow binding decisions on the future organisation of work to be made.

There has been a tendency for **network inbreeding**. While a constant steering committee can offer calculable continuity and stability, this may also bring with it a lack of vision and new dynamism.

Certain **resource organisations have tended to be inconsistent** with their support of the networks - due to alterations in institutional policy, to deteriorating budgetary situations or to the changing whims of particular individuals.

Most major edited **publications have taken about two years to produce;** while this problem is not uncommon, rapid publication remains an important objective for the networks.

The problems highlighted above should be seen in perspective, since despite them, the international and national animal traction networks in Africa have achieved a great deal in the past ten years. Many lessons can be learned that could benefit future networking initiatives and detailed analyses of network strengths and weaknesses have been circulated to network members, with this objective in mind (Starkey, 1992 and 1994).

Conclusions: Network Guidelines and Policy Implications

Based on this experience of networks for animal traction development in Africa, the following general guidelines are presented. Whilst these are by no means comprehensive, they do address some of the major areas in which networks can be supported and strengthened to contribute to sustainable agricultural development.

Objectives

Networks need to establish clear objectives, which will determine the direction of the network, the core activities and the types of individuals and organisations likely to be active members. The objectives should be formulated with a wide cross-section of members (to prevent domination). Network objectives should be periodically reviewed, to assess progress made and their continued relevance. Networks should be prepared to evolve with time and change their objectives as circumstances change, and their initial goals are met. Networks may be temporary arrangements to tackle particular needs. When these are achieved the networks may have to transform themselves radically to tackle new objectives, or even to dissolve themselves.

Structure

Networks need committed core groups of individuals or organisations to devote time to initiatives, network coordination and management. Since almost all individuals and organisations involved in agricultural development feel pressured by excessive demands on their time and resources, network

business will only receive adequate attention if it is considered a priority. The people (or organisations) volunteering for, or assigned to, a network core group should consider the success of the network as an explicit objective of their professional lives and work. The global impact of some social movements (ecology, women's rights, democratisation, etc.) has been largely due to highly effective networking organisations run by small groups of committed volunteers (Korten, 1993).

The highly committed core group must be representative of the network members. They must regularly interact with a variety of ordinary network members to keep up with their ideas and changing needs. Without such interaction, network core groups tend towards centralisation and increasing isolation.To help networks maintain a realistic approach, clearly orientated towards their ultimate beneficiaries, creative ways of including farmers, or farmers' representatives, in network management systems should be considered.

Linkages
There is scope for complementary networks. These should be linked both horizontally and vertically to enhance information exchange, encourage collaboration, avoid competition, reduce duplication of services and improve targeting. Linkages let networks benefit from the different comparative advantages of farmers, national networks and international resource organisations.

Participation
Networks thrive on enthusiastic member participation in specific activities that allow interaction and sharing. Sustained willingness to undertake voluntary duties depends on explicit interest in network objectives and/or wide recognition of the network value. Networks orientated towards improving sustainable smallholder agriculture need to make an effort to encourage farmer participation in networking processes. Agricultural research and development networks would be more likely to achieve their aims if they developed appropriate ways of ensuring that farmers' views and experiences are considered or represented in all relevant aspects of networking. National and international networks are likely to gain from close association with area-specific or national farmer-based networks. Farmer-to-farmer exchanges between different parts of a country, and between countries, could be highly beneficial and could be facilitated and then followed-up.

Resources
Networks do need resources to be effective. Funding is not everything, and this is illustrated by the low impact of some resource-rich networks established by international institutions. By contrast, some networks without any central funding have achieved a remarkable impact, due to the willingness of their members to dedicate their time, effort and personal resources to network activities. Nevertheless money is required for international network participation, and the combination of member enthusiasm, involvement *and* adequate funding seems ideal.

The more a network can be user-supported, the stronger it will be. User-supplied resources do not have to be financial. One research-development network has made it a point that although membership in developing countries is free, all members *must* regularly contribute `in kind' through written articles and professional feedback (Farrington, 1992).

Networks can benefit from being associated with a sympathetic local and/or international agency, that can provide access to resources, additional contacts and institutional support services. Safeguards may be required to prevent such institutional arrangements leading to centralisation and/or domination. A network that depends on a single institution or funding agency is highly vulnerable to domination, and even to the sudden termination of its resources at the whim of that agency.

Legitimacy
Social and political legitimacy attracts participation and facilitates funding. Legitimacy is assisted by

involvement of influential organisations, effective programmes, an easily recognisable name or logo and well-targeted publicity.

Monitoring and Evaluation

Networks, like all organisations, require regular and thorough monitoring and evaluation. Not only should work plans be continually assessed relative to network objectives, but also network progress and achievements should be periodically evaluated. For many reasons discussed previously, the monitoring and evaluation of networks is extremely difficult. Despite, or because of this, the very process of attempting to assess the effectiveness of network activities is likely to be educational to all involved.

In conclusion, networks can be extremely valuable and cost-effective mechanisms for enhancing agricultural development whether they are international or national and whether formal or informal. They are particularly effective for sharing information, stimulating interaction, strengthening professional support and raising of awareness.[I think this would be a good place to add something about why policy-makers and donors would be justified in supporting and prioritising networks as a tool for agricultural development]

" The ideal network...[is based on]...a system which encourages broad participation and decentralised initiative, but with a collective, guiding purpose. While it may seem contradictory to recommend core group initiative ***and*** *decentralised participation, concrete objectives* ***and*** *flexible responsiveness, low overheads* ***and*** *adequate resources to sponsor frequent, sharing opportunities, the real challenge in successful networking is encouraging this delicate balance of complementarity" (Moelino and Fisher, 1992).*

A light, facilitating approach to network coordination is likely to prove most effective. This should be based on concrete objectives, delegation, decentralised initiative, broad participation, flexible responsiveness and regular monitoring. Networks can survive on low overheads but do need adequate resources to sponsor regular sharing opportunities. The network members, committees and sponsors should ensure that networks evolve and develop effectively in order to meet changing needs. If network objectives are appropriate and
inter-institutional linkages are in place, active, decentralised programmes of farmer-orientated network activities can continue to make a significant contribution to agricultural development.

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