

Final workshop analysis: progress, needs and priorities

Invited keynote synthesis of workshop presentations, discussions and conclusions. Prepared by M Guntz

Improving animal traction technology

During the six days from 18 to 23 January 1992, 107 professionals directly or indirectly involved in promoting animal traction in eastern and southern Africa met in Lusaka, Zambia, for the first workshop of the Animal Traction Network for Eastern and Southern Africa (ATNESA).

This synopsis is based on an analysis of the papers, presentations and discussions (informal as well as formal).

The workshop

The workshop was characterised by a balanced representation of participants with a wide spectrum of professional backgrounds. This facilitated cross-linkages between various issues in animal traction. The multidisciplinary discussion groups exposed individual participants to different perspectives. Besides "broadening the horizons" of participants, this resulted in mutually beneficial "cross-fertilisation".

No profession was over-represented or dominated the discussions. In fact, all participants emphasised the pleasant atmosphere and excellent personal relationships which developed during the workshop. This environment greatly facilitated cooperation among the participants and resulted in constructive and productive group sessions dealing with common problems.

The workshop organisers found an appropriate balance between formal presentations and informal discussions and activities, which was commended by participants. The field visits, organised in small groups, were stimulating and strongly reinforced the farmers' perspective during the workshop. They provided an opportunity for many participants to gain hands-on experience in, for example, harnessing oxen or walking behind a plow. The field visits also made many participants aware of their own inability to provide solutions to the farmers' pressing problems.

After the seven keynote presentations and the field visits, the following themes were discussed in small groups:

- Animal management
- Profitability
- Tillage and weeding
- Implement supply and distribution

- Gender issues
- Transfer of technology
- Transport

These topics are priority issues in the ATNESA region. Other important topics, such as institutional aspects, credit, marketing, access to information and child labour, could not be covered.

Every participant prepared a paper on one of the workshop sub-themes. Not all the papers could be presented during the sessions, but they constitute a unique and up-to-date source of information. All contributions have been professionally edited for the proceedings, which will act as a regional resource book on animal traction.

Illustrative quotations

The following quotations were collected by the author during the formal and informal workshop activities. They are included here to assist reflection on some key issues before proceeding to a discussion of identified needs and conclusions.

"The West Africa Animal Traction Network (WAATN) has flourished for more than five years despite the absence of a permanent secretariat"

"There has been a huge change in information exchange relating to animal traction in West Africa in recent years, much of which is directly, or indirectly, attributable to the activities of the West Africa Animal Traction Network"

"Labour productivity in the ATNESA region is extremely low"

"Draft animals are by far the most economic power source for agricultural production in the region"

"75% of agricultural work in the region is done by women; we have a female farming system"

"Women do not have much access to animal traction"

"Traditional beliefs and local customs hamper the introduction and use of draft animal power"

"Let's be realistic. Donor support will be required for a long time to come to firmly establish animal draft power in the region"

"When I started four years ago I had 22 cattle and 2 wives. Now I have 2 cattle and 4 wives"

“The cattle just die even though I spray every week. Neither the government nor anyone else helps me”

“This planter is still in good condition, but I cannot use it because I cannot get a replacement of the metering disk. I have to buy a new planter”

“There are often no credit facilities to purchase animals and implements”

“Donkey power is a potential, yet gravely neglected, technology”

“The network should ensure that government policies favour animal traction technology”

“The extension service is unsatisfactory”

“You can see that the machines work perfectly. Yet it has been written that they have been rejected”

“We saw very little evidence of any recent improvement in animal traction on the farm: indeed the contrary was the case”

“Animal traction cannot be viewed in isolation. It must be part of the system”

Progress

Animal traction plays an important role in the eastern and southern African region. It is recognised as an appropriate, affordable and sustainable technology requiring few external inputs. It is used mainly for crop production (plowing, weeding) and transport. These applications result in the highest economic returns for investment in animal traction.

Workshop participants estimated that animal traction technology is used by approximately 40 % of the farmers in the ATNESA region. However, its application varies from approximately 5 % in the Tanga region of Tanzania to about 95 % in smallholder systems in southern Zambia and Botswana.

The use of animal traction is reported to have increased by about 5 % annually, ie, the animal power growth rate has been higher than the population increase in the region.

Despite expansion, progress achieved in animal traction during the past decade or so has not fulfilled expectations. The major reasons for the shortfall are highlighted below and covered in detail in the workshop papers.

Major constraints

The overall economic and infrastructural environment has a significant impact on animal traction technologies. Economies and national infrastructures have been deteriorating in many

countries in recent years. The overall economic situation has increasingly been a constraint to the introduction and/or expansion of animal traction technologies.

As a consequence, many small-scale farmers do not get sufficient incentives, through agricultural prices, to produce more than their subsistence requirements. Added constraints have been imposed by the severe droughts in most parts of the region during the past few years.

Government policies do not sufficiently encourage the adoption and use of animal traction. If governments proclaim support for animal traction then this is often limited to “lip service” rather than to actual support in terms of credit, extension, veterinary services, etc. However, changes in attitudes on this aspect have become evident during the past year or so.

Farmers keen on adopting animal traction face serious input constraints. The limited availability of animals, as well as of suitable implements and spare parts, restricts wider application.

Lack of animal health services is yet another problem in some areas. Insufficient awareness, lack of know-how and poor availability of suitable chemicals and drugs, especially among the small marginal farmers, can cause heavy economic losses. (One farmer in Zambia reported losing 20 of his herd of 22 cattle within four years; this was not exceptional.) However, large-scale commercial farmers demonstrate that health risks can be minimised through proper management.

Donor interventions can themselves impose constraints on the transfer of animal traction technology. Examples were cited where donors supplying large numbers of implements have forced local production companies to cease business.

Future Needs

Local

When investing in animal traction technology, farmers expect to improve their living standards through increased agricultural production and increased profitability. Other desirable effects, from the farmers’ viewpoint, include reduced drudgery, improved productivity and improved timeliness.

The farmers’ principal needs are good prices for their produce and access to essential services. These include marketing, credit and veterinary services as well as a reliable supply of spares, equipment, information and infrastructural facilities such as roads and communications.

Special mention was made of the need to help farmers to articulate their needs to partners, government institutions and development organisations. This will be particularly important in the coming years, in view of expected future financial constraints throughout the region in the public sector(s). There will be an increased need to use limited resources more effectively. Structural adjustment programmes will have consequences for farmers through cuts in subsidies, extension and veterinary services.

National

In order to facilitate the use of animal traction technologies, there is a need to create a suitable economic climate that favours investment in animal traction. In addition, the following improvements are needed at national level.

The national policy environment should encourage the use and adoption of animal traction. National "pressure groups" might be formed for this purpose. Policies should stimulate the production of equipment based on locally available resources.

There is a need to improve coordination of animal traction activities and programmes at a national level. There should be more exchange of know-how, more learning from regional experience and greater coordination among the various donor organisations.

National planners need to be encouraged to formulate realistic and sustainable goals for animal traction and to identify the resources required to achieve these goals. Requests for external inputs can often be forwarded to donors who appreciate and value such local participation.

Regional

Information exchange is seen as a practicable and highly desirable regional need. Effective information exchange and successful coordination will, to a large extent, depend on the formation of national networks to facilitate networking within and between the member countries.

The regional ATNESA network must facilitate collaboration, linkages and the exchange of know-how. ATNESA should become a highly influential organisation in order to support and strengthen national networks and achieve relevant and consistent animal traction policies throughout the region. The workshop decided, as an immediate activity, to create a data bank of animal traction resource persons, institutions, manufacturers and others involved in animal traction in eastern and southern Africa.

Recommendations

The following recommendations summarise the output of the workshop sub-theme discussion groups. They reflect the priorities identified by the groups, the plenary reaction to their presentations and their subsequent endorsement by the workshop.

Management

- Disease is a fundamental issue in the region, (although not specific to animal traction) and needs to receive prime attention
- Feeding is not perceived as a major problem. However, most draft animals would increase power output if they were better fed. Work on grazing systems needs to be intensified and introduced to improve fodder quality and controlled grazing
- Awareness needs to be created of the valuable role donkeys can play in animal traction
- Cows are increasingly used for work. This is an important and entirely farmer-led process, of which researchers and extension workers seem largely unaware.

Profitability

- Profitability is an overriding issue affecting all other factors relating to animal traction. Animal traction will be sustainable only if it is profitable to all concerned (including equipment manufacturers and parts suppliers).

Tillage

- Tillage systems are not a major constraint: a wide range of implements is available which achieve acceptable results. Design work should therefore not focus on new developments but on the adaptation of existing solutions to suit local agronomic conditions and manufacturing capabilities
- Animal-drawn weeding provides an important scope for expansion. Not all farmers who plow with animals also use animals for weeding.

Supply and distribution

- There are severe marketing constraints as a result of farmers' lack of purchasing power
- The supply and distribution systems for animal traction technology and the marketing infrastructure in eastern and southern Africa need improvement
- More local blacksmiths need to be trained in the production of tools and implements
- The supply of raw materials to manufacturers and blacksmiths needs to be improved

- Emerging private industries need to be protected from international trade distortions
- Governments need to ensure that donor activities (including supply of equipment through projects) strengthen, rather than weaken, local industries and distribution systems.

Gender

- Gender implications in animal traction technology have in the past been neglected. They should be considered sensitively in all future programmes and methodologies
- More information on gender issues is required, especially on aspects of specifically addressing women and on how to make animal traction technology more accessible to them.

Transfer of technology

- There should be no “blind” transfer of technologies. More information needs to be shared on systematic technology transfer approaches and the Hows and Whys of introducing animal power
- As most technology is transferred informally between generations, families and migrants, more attention should be paid to this
- In areas of widespread use of animal traction, formal extension services appear to have minimal effect. Formal extension agents are more effective during the introductory phase and should therefore focus their limited resources in these areas
- Extension services, research institutions and manufacturers of equipment need to pay more attention to farmers’ needs and constraints in order to be more effective
- Extension agents should be trained in participatory methods and the farming systems research/extension approach.

Transport

- Animal transport is a fundamental and major aspect of animal traction, bringing cash returns and social and agricultural benefits
- Animal-based transport offers much potential for further expansion and development
- There is a mutually beneficial synergy between animal transport and agriculture that needs to be emphasised and encouraged
- Animal-based transport in the region has primarily been a farmer-led activity, using carts based on scrap axles
- Governments and donor-supported projects have been largely unsuccessful in promoting

“appropriate technology” carts using wooden wheels and bearings. In contrast, expansion of animal-based transport has occurred when carts using machined bearings and pneumatic tyres have been promoted

- Future needs should focus on the dissemination of known and proven technologies rather than on “reinventing the wheel”
- The artisanal sector needs support to overcome the chronic shortage of wheels and axles.

Networking priorities

Networking appears to be a most efficient and cost-effective means of supporting animal traction in eastern and southern Africa. The following issues have been identified as priorities for immediate attention. ATNESA should:

- influence the national and regional policy environment to encourage the enhanced use of animal traction
- encourage exchange of information and proven technologies
- facilitate personal contacts and animate professionals to organise regional group meetings and discussions on common problems and topics of interest and benefit to the region
- facilitate regional collaboration and coordination of national and regional activities, and those supported by donor agencies
- provide encouragement and appropriate support to national networks.

The above recommendations and priorities resulted, at the end of the workshop, in the definition of the following activities. Some will be dealt with in informal working groups and others will be coordinated by national network representatives.

- Formation of national networks
- Preparation of a regional directory of animal power organisations, individuals and resources
- Formation of formal or informal groups to further consider policy, transport and gender issues and the need for pressure groups.

Based on the positive experience of the WAATN, ATNESA too will be rooted in existing national administrative structures and not have a permanent secretariat. It will therefore be less dependent on outside support.

This strong local involvement and participatory approach is expected to enable ATNESA to mobilise existing local know-how and resources, be need oriented and produce sustainable results.