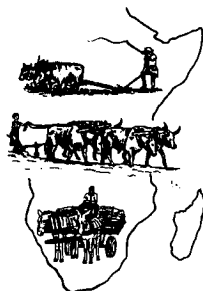


Improving animal traction technology



Workshop reports

An overview of the workshop

Report by P Starkey. Photographs by P Starkey and L Sylwander

Objectives

The overall aim of the workshop was to bring together a wide range of people of various disciplines involved in research, development, extension, training, planning and infrastructural support for the use of animal power in the region in order to stimulate the exchange of information and experiences and to facilitate collaboration and cooperation.

Themes

The overall workshop theme was “**Improving animal traction technology**”. This broad topic was chosen as a development-oriented framework for analysing and discussing research and extension experiences concerning animal draft power. Seven interrelated themes were selected to allow contributors and discussion groups to focus on particular research and development topics:

- Improving the profitability of animal traction
- Improving draft animal management
- Improving tillage and weeding technology
- Improving implement supply and distribution
- Women and animal traction technology
- Transfer of animal traction technology
- Improving animal-powered transport.

Participants

The workshop was open to all persons actively concerned with animal traction who were prepared to submit a paper. A total of 107 people from 17 countries participated. Most were African nationals occupying senior positions in organisations concerned with animal power research, development and extension. About half the participants had an agricultural engineering background, 20 were social scientists or economists, 15 were animal scientists or veterinarians and 15 had an agronomic or general

agricultural background. Thirteen participants were women and 94 were men. The names of participants and the addresses of their organisations are provided on pages 61–64.

Hosts, location and sponsorship

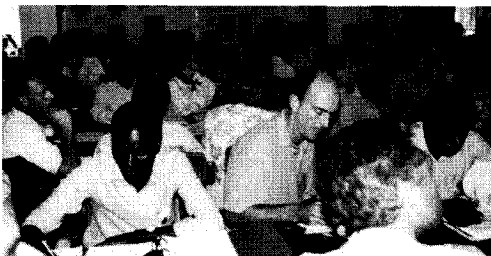
The workshop was hosted by a local organising committee which included representatives of the **Zambian Ministry of Agriculture** and several **Zambian organisations, institutions and donor-assisted projects** involved with animal draft power. The workshop was held in **Lusaka** at the **Intercontinental Hotel**. It had been a condition of registration that all participants stayed in this hotel, and this was realistic due to specially-negotiated rates for accommodation and board.

Most external and local workshop participants were sponsored by their own organisations or by agencies within their own countries. Several participants were sponsored by the **Technical Centre for Agricultural and Rural Cooperation (CTA)**, the **International Development Research Centre (IDRC)** and the **Directorate General for International Cooperation (DGIS)** of The Netherlands. DGIS, in cooperation with **IMAG-DLO**, funded the workshop secretariat and provided organisational support.

Workshop methodology

In planning the workshop, the **ATNESA Steering Committee** and the **Zambian workshop organising committee** had discussed the experiences of the **West Africa Animal Traction Network**. In particular, they had noted the feedback provided by participants through evaluations of previous workshops. This suggested that the workshops should aim to provide a stimulating framework for informal information exchange, with emphasis on participatory activities rather than long plenary sessions. There should be

Workshop plenary session



Workshop discussion group





Workshop opening ceremony

ATNESA introduction: J Omoding (left). Opening speech: Hon Dr G Scott, Zambian Minister of Agriculture (right)

some keynote reviews of important topics, on-farm discussion with smallholder farmers and detailed analysis of specific issues in small working groups.

A workshop programme was planned to provide a conducive and stimulating framework that allowed as much as possible to be achieved in the time available. Several early programme activities were designed to stimulate subsequent informal interactions (participant introductions, networking announcements, reception). A wide-ranging technical review was then presented, in the form of thematic keynote papers. Background information was to be given on animal traction in the host country. Participants then visited farms in small groups, whose composition had been chosen to ensure maximum mixing of countries and disciplines. These groups were asked to work separately towards a common purpose, that of understanding and defining many of the farm-level problems and constraints in terms of the workshop themes. The *ad hoc* field visit groups reported to each other, before people joined with others with similar special interests to undertake in-depth, critical analyses of the main thematic issues. It was anticipated that all groups would engage in

constructive information exchange, leading to better understanding of the topic by all involved. It was anticipated that some groups might also be able to make recommendations or highlight specific needs or areas for further network attention. It was hoped that workshop interactions and working together would generate a momentum during the week, culminating in a final synthesis and summary.

Interwoven into the technical workshop programme, would be a series of network meetings, designed to firmly establish ATNESA, bond special-interest groups and result in a new steering committee with a mandate to implement a network programme based on the needs expressed by the participants.

The unusual decision to hold a six-day workshop running from Saturday to Thursday had been a practical one, made following a study of airline timetables. Most external participants were able to arrive and depart on a Friday. The organisers determined that all participants should stay in the same hotel as this would encourage informal interactions between the different countries and organisations and would allow various interest-groups to meet together easily.

Keynote slide presentation: P Starkey



Programme elements

Opening ceremony and keynote presentation

Welcoming and introductory remarks were made by the acting ATNESA chairman, J Omoding, and the chairman of the local committee, E Mwenya. The workshop was formally opened by the Zambian Minister of Agriculture, Hon Dr G Scott who, in addition to his prepared speech, reflected on some of his experiences as a commercial farmer and on the continuing importance of animal traction.

A keynote slide presentation was given by P Starkey, with colourful images from around the world that illustrated the many systems of animal



Workshop programme

Friday 17 January

Arrival of participants and registration

1930 Welcoming reception

Saturday 18 January

0700 Working breakfast for network steering committee

0900 Organisational matters and announcements

0930 Opening ceremony

1100 Keynote presentation

1400 Open session of introductions and networking announcements

1600 First ATNESA General Assembly Meeting

2000 Optional evening session: project videos

Sunday 19 January

0800 Invited presentations on workshop themes
Improving the profitability of animal traction
Women and animal traction technology
Improving draft animal management
Improving tillage and weeding systems
Improving the supply and distribution of implements
Improving animal-drawn transport
Transfer of animal traction technology

1445 Presentation of Zambian animal traction experience

1630 Outline of field visits and discussions

2000 Optional evening session: farming systems interest group

Monday 20 January

0630 Field visits in small groups to different villages to see animal traction operations and hold discussions with farmers

1400 Field visits to Zambian animal traction programmes, manufacturers and training centres

2000 Optional panel discussion with large-scale, commercial farmers using animal traction

Tuesday 21 January

0800 Small group discussions relating to field visit findings. Preparation of flip-chart or overhead projector presentations of reports and recommendations

1400 Presentations of reports of small groups followed by plenary discussions

1600 Small group discussions on workshop themes

2000 Optional evening session: project videos

Wednesday 22 January

0800 Small group discussions relating to workshop themes. Preparation of flip-chart or overhead projector presentations of recommendations

1200 Presentations of reports of small groups followed by plenary discussions

1400 Presentations of reports of small groups followed by plenary discussions

1600 Second ATNESA General Assembly Meeting
Election of new ATNESA Steering Committee

2000 Optional evening session: panel discussions with implement manufacturers

2000 Working dinner for new and old Steering Committees and resource organisations

Thursday 23 January

0830 Invited keynote analysis of workshop findings and conclusions

"Improving animal traction technology in eastern and southern Africa: progress, needs and priorities in the light of workshop presentations and discussions"

Final plenary discussion

1000 Workshop evaluation

Closing statements

1100 End of workshop

1400 Optional visits to Lusaka

Friday 24 January

Departures



Networking announcements: J Kahumbura

traction use in the different continents. This is summarised on pages 66–81. The presentation concluded with an introduction to the workshop themes and programme.

Networking announcements

During an open networking session, all participants introduced themselves, summarising their work, their interests and ways in which they, or their organisations, could contribute to, and benefit from, the network (see pages 27–31).

Keynote papers

Discussion papers in each of the seven themes were presented by subject matter specialists. It had originally been hoped that all papers could have been jointly prepared by an expert from an ATNESA country and an expert from outside the region, but in many cases collaboration proved difficult in the time available. The authors had been asked to prepare in-depth review papers for circulation during the workshop and subsequent publication. During presentations authors were expected to highlight the main points only, and allow time for a few questions and clarifications.

The first presentation was collaborative, and Dr A Panin and J Ellis-Jones jointly introduced their paper on “Increasing the profitability of animal draft power” (see page 94). This was followed by the lead presentation of L Sylwander on “Women and animal traction technology”, which had been prepared in consultation with colleagues in Tanzania and Swaziland (see page 260). Dr A Pearson summarised the lead paper on “Improving draft animal management” (see page 122). P Stevens highlighted the conclusions of his paper on “Improving animal-powered tillage systems and weeding technology”, prepared in consultation with R Shetto (see page 168). The keynote paper on “Improving the supply and distribution of



Keynote papers: A Wanders

implements” was presented by A Wanders.

M Anderson summarised her review papers relating to “Improving animal-powered transport” prepared in cooperation with R Dennis (see pages 378 and 396). The final thematic presentation was by R Fischer on the topic of “Transfer of animal traction technology” (see page 296).

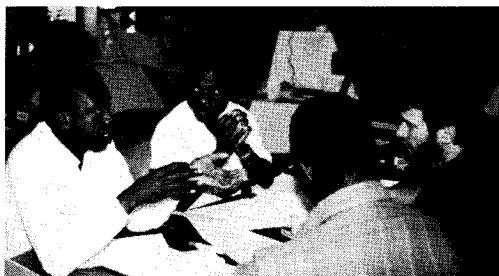
Animal traction in Zambia

The host country had been invited to make a presentation on animal traction in Zambia. The aim was to introduce, prior to the field visits, the organisations involved and some key issues. Several people cooperated in planning the Zambian synthesis, including E Mwenya, H Dibbits and others whose personal papers relating to Zambian experience are included in the thematic sections in these proceedings. Dr W Mwenya made the presentation (see page 469).

Field visits

The third day was devoted to field visits, made in small, multidisciplinary, multinational groups, to a total of 32 villages. The groups were small enough to allow detailed discussions with male and female farmers. The aims of the visits had been given by H Dibbits and P Starkey, and background information on the various villages had been prepared by members of the local organising committee. At precisely 0600, 16 vehicles left the hotel to travel to the various villages. Each group had the opportunity to visit two different farmers, and pose questions on their particular farming systems. Unfortunately, weather conditions made the planned practical demonstrations difficult in some cases, but the heavy rain was welcomed by the farmers.

In the afternoon, participants visited various animal traction organisations including Palabana Training Centre, Magoye Agricultural Engineering Station,



Working groups

the Kasisi Project (run by a local NGO) and the manufacturers Lenco and Gameco.

The following day the same, small multidisciplinary groups discussed their observations on animal traction in the Zambian farming systems, noting the major constraints and the implications of these for the country, the region and the network. The various group conclusions were shared in a plenary session (see pages 32–33).

Working groups on workshop themes

Workshop participants regrouped to allow people to choose the workshop theme most relevant to their work. This allowed detailed discussions between colleagues involved in similar areas of research, development, extension or infrastructural support. The conclusions of each group were presented and discussed in plenary sessions (see pages 34–47).

Workshop conclusions

An invited speaker, M Guntz of GTZ, had been asked to bring together the main issues arising from workshop papers, visits and discussions in a final presentation on the last day. He undertook this work in collaboration with a multidisciplinary group of participants, who met several times and worked

though much of the final night to try to highlight the main points that had been made during the week.

The overview and concluding synthesis that was presented is printed on pages 23–26.

ATNESA General Assembly

During the workshop, two open General Assembly meetings were convened. At the first meeting, background information was given on networking and the history of ATNESA. Draft statutes and organisational arrangements for the network were presented and discussed. A nominated committee reviewed these. At the second meeting, the statutes were formally approved and adopted. A new steering committee was elected and given a mandate to draw up and implement a programme of activities based on the workshop recommendations (see pages 48–51).

Workshop papers and exhibits

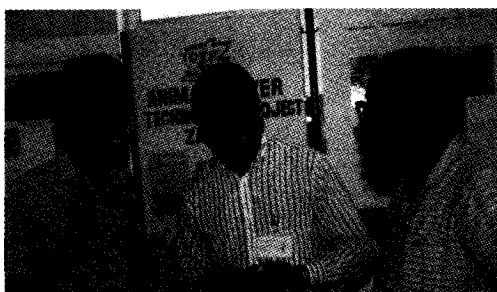
A total of 80 technical papers had been prepared for the workshop. All participants received copies of these, but only the invited keynote papers were presented in plenary sessions. There were at least five written contributions per theme, with emphasis on technology transfer, tillage and weeding, gender

Workshop conclusions: M Guntz



ATNESA General Assembly: L Singogo, Chair



*Informal networking*

issues and draft animal management. Edited versions of all the papers circulated are to be found in these proceedings.

Throughout the workshop, several poster and photographic displays were exhibited. One exhibition, by P Starkey, provided a world-wide view of animal traction. F Inns mounted a poster on harnessing systems. Projects and institutions providing details of their work included the Animal Power Technology Project, the ConTil Project, Mbeya Oxenization Project, the Rural Technology Promotions Department and the universities of Hohenheim, Kassel and Warwick.

A variety of animal traction books and resource publications were exhibited, including publications of CTA, GTZ and ILCA. Several participants, including J Nolle (France) and H Ojirot (Uganda), brought videos relating to their work, and these were shown during evening sessions.

Animal traction implements on show included some made by Lenco, Bulawayo Steel and J Nolle. Some harnessing systems were exhibited by H Dibbits.

Special groups and panels

Various groups of participants with specialised interests met during the workshop to coordinate activities and plan collaboration. Among the groups were people interested in farming systems research and extension, gender issues, local manufacture of implements, donkey power, cart design and animal-powered systems. Other optional sessions included panel discussions with manufacturers from

several countries and with some large-scale Zambian commercial farmers who use animal traction.

Informal networking

Throughout the workshop, informal networking was taking place during meal times, coffee breaks and in the evenings. Towards the end of the workshop, an attempt was made to see whether the informal networking that was going on might lead to any follow-up exchanges. Thus, after one workshop session, people were requested to list specific examples of information exchange that had taken place or cooperation that was being planned.

The results were staggering, for within a short period of time there was a list of over 200 different specific interactions that had already been discussed. For example, Coopibo (Tanzania) was to visit Palabana (Zambia) and obtain training manuals. The Animal Power Technology Project (Zambia) was to liaise with interested colleagues in Tanzania, Zimbabwe, The Netherlands and UK. The conservation tillage project in Zimbabwe was to discuss collaboration with Tanga Project (Tanzania) and Magoye (Zambia). The Tanga Project (Tanzania) was to contact Binga (Zimbabwe) in relation to donkeys. Tool (The Netherlands) was to send information to colleagues in Ethiopia, Zambia, Germany and UK. Organisations involved in cart bearing development in Tanzania, Zambia, Zimbabwe and UK were to exchange information and discuss collaboration and a possible follow-up workshop. Several individuals involved in gender issues in Zambia, Zimbabwe, Tanzania, UK and The

Informal networking

Netherlands agreed to exchange information and, if possible, plan a follow-up workshop. Propta (Togo) was to obtain information on use of cows from ILCA (Ethiopia). The University of Edinburgh and GTZ had lists of people to whom publications would be sent. The many other similar interactions listed were probably only the tip of an information exchange iceberg. Subsequent reports suggest that a very large number of these proposals were actually implemented, with publications exchanged, visits undertaken and collaborative programmes started.

Evaluation

Just before the closing ceremony, 100 participants completed anonymous evaluation forms allowing them to rate and comment on all aspects of workshop and organisation. The results (which were generally very positive) are presented and discussed on pages 52–60.

Workshop outputs

This brief overview of the workshop has summarised an intensive week in which more than 100 people from many countries, backgrounds and disciplines interacted and discussed in formal and informal sessions, exchanging information, identifying priorities and planning follow-ups. The workshop outputs were many and varied, individual and joint.

Some workshop conclusions are presented in the specific summaries, reports and papers that have been referred to in the preceding paragraphs, including the workshop synthesis, thematic group outputs, the network report and participant evaluation comments. These are complemented by the many experiences described in the edited papers. However, the output of the workshop was much greater than all the ideas, experiences and information contained in this volume. About 100 participants returned to their work more highly



Equipment display

motivated and with fresh ideas and approaches. Many organisations and individuals that made contact as the result of the workshop have continued to exchange information and to collaborate. Affiliated national animal traction networks have been formed and ATNESA has held several follow-up workshops.

This volume of workshop proceedings is but one tangible output of the workshop. The main workshop outputs are there to be seen among the individuals and organisations working with animal traction in the ATNESA region.