

Conclusions, Evaluation and Follow-up



Title photograph (over-leaf)
West Africa Animal Traction Network Committee at planning meeting at Debre Zeit, Ethiopia in September 1987
(Photo: Fadel Ndiamé)

Workshop conclusions and resolutions

Technical recommendations

The final workshop session was mainly concerned with the future of the Network and discussing organizational aspects of this. Most of the specific technical recommendations had been contained in the reports of the discussion groups. However two important technical recommendations that were restated during the final session of the workshop were as follows:

- It was recommended that animal traction projects in West Africa should adopt a more holistic or global attitude to animal traction development. This implied a farming systems perspective, so that, in addition to the technology being developed or promoted, greater attention should be paid to the *impact* of animal traction, the key constraints, and to social and economic issues.
- It was suggested that animal traction projects should give more attention to effective traditional animal husbandry practices, including indigenous remedies.

Recommendations for the Network

The following comments, suggestions and recommendations were made by the various discussion groups.

- This networkshop has already promoted useful exchanges of experience and other initiatives should further strengthen the cooperation. Follow-up activities should be investigated.
- The Network should stimulate the exchange of information and experiences through networkshops, such as the current one, and a newsletter produced every 3-6 months. There should be exchange of

prototypes between countries and the standardization of evaluation procedures.

- There were important networking opportunities for effective information and training exchanges between projects. Such exchanges would provide the shaping of valuable experience related to farming with oxen, the identification of common needs to make projects more effective and the stimulation of interest in ox farming that comes from visiting another's work.
- Networking would be most useful if liaison were mainly between groups operating within similar agro-economic zones. A newsletter should be produced. In addition to the periodic major meetings, such as the current networkshop, three types of networking activities were foreseen.
 - Planning sessions for coordinated problem identification and definition, and for the elaboration of pertinent methodologies.
 - Periodic informal on-site evaluations and discussions.
 - Formal end-of-project evaluations producing written reports.

During the final workshop session it was specifically recommended that:

- The Network should be reinforced and strengthened. In particular, the options to formalize the Network with a secretariat and to produce a newsletter should be investigated.
- The Network should encourage and facilitate the holding of meetings on key problems of animal traction in the region. For example it was specifically recommended that a meeting should be held between those responsible for the development,

manufacture and promotion of animal traction equipment in the subregion.

Committee nomination

Nominations were made for the new steering committee. There was no formal election and all the following nominees were considered elected by acclamation:

- Adama FAYE, Senegal
- Stephen O. ADEOYE, Nigeria
- Kossivi V. APETOFIA, Togo
- Arthur S. GEDEO, Liberia
- Bai H. KANU, Sierra Leone
- Dawda M. SARR, The Gambia
- Abou BERTHE, Mali

The Committee's Technical Adviser (Paul H. STARKEY) was asked to continue to facilitate network activities.

The ILCA scientist designated to be responsible for ILCA's work relating to animal trac-

tion networking (Michael R. GOE) was nominated as ILCA's Representative on the Committee.

It was agreed that other relevant organizations, including international centres (such as ICRISAT), national research centres (such as CEEMAT) and donor agencies (such as GTZ), might be invited to send observers to committee meetings if they expressed particular interest in supporting the Network and its activities.

Role of the Committee

The committee was charged with planning a third animal traction networkshop and preparing suggestions for the future structure and organization of the Network for presentation at the next workshop. It was suggested that the committee might meet in 1987 in Mali, Senegal or Ethiopia and combine a planning session with field visits.

Follow-up to the Workshop

Introduction

It is possible to make use of the time lapse between the workshop and the publication of these proceedings to add a brief note on follow-up activities. Initial brief accounts of the workshop were published in the FSSP Newsletter and ILCA Newsletter. The Network Technical Adviser started work on the workshop proceedings and the Institut Sénégalais de Recherches Agricoles (ISRA) allocated the services of an animal traction researcher for three months to help edit those workshop papers that had been prepared in French.

In the year following the second workshop, various information exchanges took place within the region, directly or indirectly stimulated by the Sierra Leone workshop. These were funded by a variety of organizations within and outside West Africa. Examples are the visit by Gambians to study the use of animal traction for rice production in Sierra Leone, and the visit by a Sierra Leonean to Togo to study animal health programmes for draft animals. Information was also exchanged through consultancy visits and the preparation and dissemination of reports and documents.

Activities of the Steering Committee

The Steering Committee met in September 1987 in Ethiopia to plan the Third Animal Traction Workshop and to discuss the future orientation of the Network. The meeting was funded jointly by ILCA and FSSP. The Committee reviewed the work of the Network and came to the following conclusions:

The West African Animal Traction Network has not been formally established, but its existence has stimulated much exchange of information within West Africa, and between West Africa and elsewhere. The changes that have taken place can be

illustrated by the difficulty the organizers of the first workshop had in bringing together a representative group of West African countries, and the fact that the second networkshop had a broad attendance, with most West African countries represented by African nationals working in animal traction programmes.

- The Network has been open, with several different donor organizations funding the different activities. The first initiatives were taken by FSSP, but as this project neared the end of its funding period, other organizations have increasingly been involved. The lack of a single donor has meant that there has been no centralization or secretariat. This has made it difficult to clearly identify or focus what the Network is, and what it is achieving. It has also meant that much of the organization of activities has been undertaken by the Technical Adviser and the various donor agencies.
- To date, the Network has achieved many of the objectives set for it through Networkshop recommendations. In particular if has stimulated improved information exchange through meetings, publications and informal liaison. It has also made the relevant international agricultural research centres (IARCs), national agricultural services (NARS) and donor agencies aware of its existence, in such a way that many appear willing to assist with specific network activities. The Network has not yet been able to rapidly organize all its recommended activities. This appears largely attributable to the fact that no single person or organization is formally charged with Network coordination, and that all the persons involved in planning and implementing activities have their own very busy professional programmes.

The West Africa Animal Traction Network

At its meeting in September 1987, the Steering Committee discussed the present and future role of the Network. In the following extract from the Committee's report some ideas relating to Network structure and function are summarized.

Overall goal of the Network

The aim of the network is to improve the productivity and stability of West African farming systems, and the quality of rural life, through the appropriate use of animal traction.

Objective of the Network

The objective of the network is to strengthen the capabilities of those individuals and organizations directly or indirectly involved in appropriate initiatives designed to assist the introduction, intensification and diversification of the use of animal power in West African farming systems.

Activities of the Network

The Network promotes information exchange relating to animal traction research, development, training and extension. This is achieved through correspondence, exchange of documents, study tours, training visits, meetings, workshops and publications.

The Network organizes West African workshops, bringing together professionals from many different West African countries, international agricultural research centres (IARCs), aid agencies and other relevant organizations.

Present structure of the Network

The network is open to all concerned with the development of animal traction in West Africa. There is no formal procedure for membership, and so those individuals and organizations that cooperate in network activities may

be considered as the members of the network, without prejudice to their autonomy or status.

Organizations within West Africa participating in Network activities include government ministries, research and educational establishments, agricultural development projects, non-governmental organizations, equipment manufacturers, international research centres, sub-regional organizations and aid agencies. Organizations outside the region assisting or participating in Network activities include international and bilateral aid agencies, international and national research centres, universities, non-governmental organizations, development projects, and complementary networks.

The Network provides a broad framework in which many different activities can take place. Emphasis is placed on direct member-member contacts and cooperation between organizations in the region. Centralization of the network is limited, and many activities, including information exchange and study visits, are arranged directly between two or more of the Network members.

A Steering Committee is charged with planning major Network activities, including the West African Animal Traction Workshops. The committee at present comprises a multidisciplinary team of seven West Africans nominated by the 1986 Animal Traction Workshop. A member of Animal Traction Thrust of the International Livestock Centre for Africa (ILCA) is invited to participate in committee meetings, and major organizations involved in network funding are invited to send observers. An expatriate specialist in animal traction currently acts as Technical Ad-

viser to the committee, and facilitates Network liaison.

Finance and support for Network activities come from a variety of sources. Initially most of the funding, technical and logistical support came from the USAID-funded Farming Systems Support Project (FSSP). More recently support has come from several organizations including ILCA, the International Development Research Centre (IDRC) of Canada, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH and donor-supported projects within West Africa. It is considered that a broad spectrum of donor support is appropriate in view of the open nature of the Network.

The future of the Network

Planning and decision-making

The Committee considers it necessary for the Network to have formal statutes in order that a secretariat can be established to facilitate Network liaison. Specific proposals for Network statutes will be discussed by a working group comprising members of the Steering Committee and representatives of potential donor agencies. This group will meet at, or immediately prior to, the 1988 Workshop, and present its conclusions to a plenary session of the Workshop for possible adoption. In drawing up the statutes, particular attention will be given to the statutes and experiences of other networks.

Establishment of a secretariat

The Network will continue to be broadly based and emphasize direct contacts between members. However, a secretariat will be established to facilitate liaison. The Secretariat will be established in association with one of the organizations of the Network. The mandate of the Secretariat will be defined in the Statutes, and practical details will be determined by the

Steering Committee in discussion with the host organization and relevant aid donor(s). It is envisaged that in the first instance the Secretariat will comprise one bilingual West African expert in animal traction who has specific communication abilities. The expert might be assigned from the host organization, but this would not be a precondition. It is also envisaged that this person would be supported by a Technical Adviser, who may, or may not, be a West African national. The Secretariat would require logistical support in the form of clerical staff, computer and photocopying equipment, telecommunication facilities, and a budget that allowed for liaison travel.

Prior to the formal establishment of a Network Secretariat, the Secretariat of the biennial workshop may act as a temporary Network Secretariat.

National focal points for the Network

Within West African countries there will be designated network focal points to facilitate liaison. These organizations or individuals will assist network communications by receiving and disseminating information. While there will be no requirement that all Network communications pass through these focal points, it will be considered courteous if these are kept informed of relevant networking activities.

Steering committee

It is envisaged that the Steering Committee will continue to be elected at the biennial workshop. In the past there have been no fixed rules governing the the size and composition of the committee, or the length of service. Prior to the acceptance of formal Statutes, the Committee proposes that following guidelines should be considered at the time of any election:

The Committee should comprise experienced persons who are actively involved in animal traction research, development, training or extension.

- As far as practicable, there should be a balance between the different ecological zones of the region, between Anglophone and Francophone countries and between professional disciplines.
- The size of the committee should be such that it is relatively easy to arrange meetings, afford the costs of participation and small enough to be efficient at decisionmaking. A five-person committee might be most appropriate.
- The committee will be most efficient if all members understand both French and English.
- Continuity between an out-going and an in-coming committee is desirable.
- The country(ies) likely to host the next biennial workshop should be represented on the committee.
- When required, the Committee will be able to call upon the services of non-Committee members to facilitate its work.

Workshop evaluation

Introduction

At the end of the final session, immediately before the closing ceremony, evaluation forms in both English and French languages were handed out. It was explained that these were to be completed immediately and anonymously, in order to gain an impression of what participants thought were the stronger and weaker parts of the workshop. About fifteen minutes were allowed for them to be completed. A total of 55 forms were returned, 38 completed in English and 17 in French.

The answers were subsequently analysed by Jean Gearing, an anthropology graduate student of the University of Florida. Although Jean Gearing was working as a research assistant for Dr. Susan Poats of FSSP, she had no connection with the workshop, and was thus

considered a suitable person to analyse the evaluation forms objectively, without preconceptions or biases. Her detailed twenty-one page evaluation report included a numerical analysis of the fixed response questions, all the comments made by participants and her conclusions based on these comments. This report (Gearing and Poats, 1986) was circulated to all participants and supporting donor agencies. In the following sections the numerical results of the evaluation are presented in visual form, with data being converted to percentages for ease of comparison. Following this, a summary of the reactions to the more open-ended questions is provided, based on the evaluation report* of Gearing and Poats.

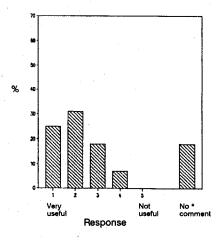
* Gearing, J. and Poats, S. V. 1986. Animal traction networkshop evaluation. Farming Systems Support Project (FSSP), University of Florida, Gainesville, USA. 21p. (E). (unpublished).

Participant evaluation of programme components

Question 1.

How would you rate the Keynote Address by Dunstan Spencer (Friday)?

* Note: Due to late arrival several participants missed the opening session.



Question 2.

How would you rate the Keynote Address by Paul Starkey (Friday)?

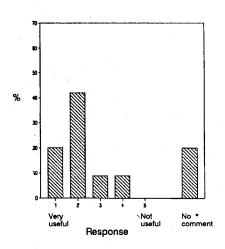
* Note: Due to late arrival several participants missed the opening session.

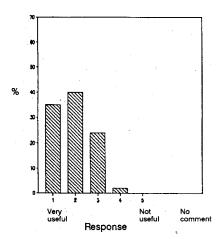


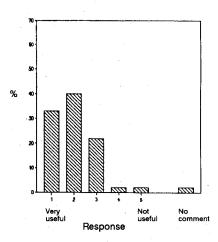
How would you rate the open networking session with participant introductions and announcements (Saturday)?

Question 4.

How would you rate the Work Oxen Project presentation (Saturday)?

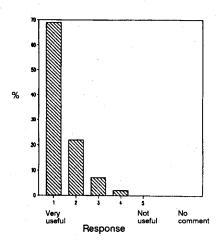






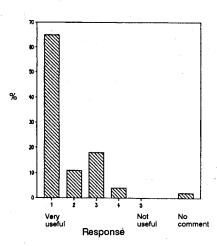
Question 5.

How would you rate the field trip (Saturday-Sunday)?



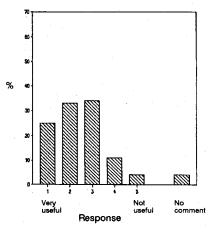
Question 6.

How would you rate the small group discussions about the field trip (Monday)?



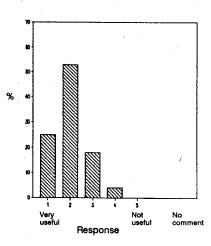
Question 7.

How would you rate the country presentations (Monday)?



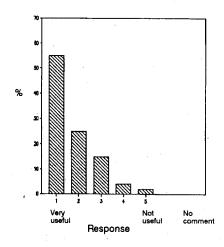
Question 8.

How would you rate the thematic presentations (Tuesday)?



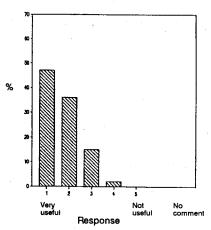
Question 9.

How would you rate the thematic discussions in small groups (Tuesday-Wednesday)?



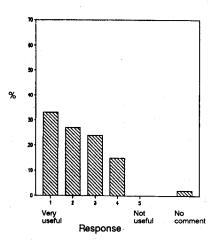
Question 10.

How would you rate the presentations and discussions of thematic groups (Wednesday)?



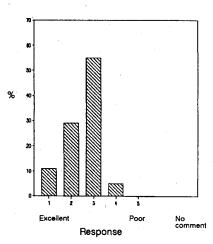
Question 11.

How would you rate the planning session for future networking (Thursday)?



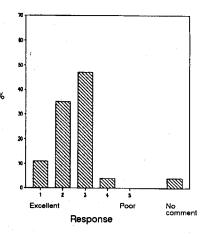
Question 12.

How would you rate the translation services?



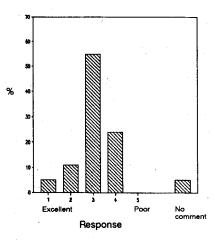
Question 13.

How would you rate the organization and logistical support for the networkshop?



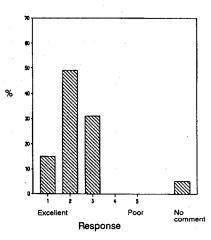
Question 14.

How would you rate the services provided by the Brookfields hotel for the Networkshop?



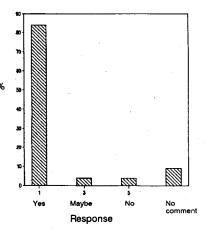
Question 17.

Overall, how would you rate the workshop?



Question 18.

Would you like to attend the next networkshop?



Comments of the participants

The following discussion presents the major themes which occurred in response to requests for:

- comments on the various networkshop activities (Questions 1-11, as displayed in the bar graphs);
- comments about the organization and logistics of the networkshop (Question 13, as displayed in the bar graphs);
- suggested changes to improve the networkshop (Question 16: In your opinion, what would you change in order to improve the Networkshop?);
- an overall evaluation of the networkshop (Question 17, as displayed in the bar graphs).

Responses to all items tended to cluster around several recurrent themes. What one respondent may have listed under the request for additional comments on Questions 1-11, others listed under suggested changes (Q.16), under comments about logistics (Q.13), or under the overall evaluation (Q.17). Since there was this crossover, all of these items are discussed together. These themes represent the summarization of several individuals' comments and are not presented in order of importance.

Question 12, on the translation services, and Question 15, the request to name the most positive part or aspect of the networkshop, elicited different kinds of responses and are discussed in subsequent sections.

Ways to improve the workshop

Programme elements

Recurrent themes in the amplified responses to Ouestions 1-11 included:

- shorten or even eliminate the country presentations;
- clarify the difference between country and thematic presentations;

- have discussion after country reports;
- have more time for thematic presentations and small group discussions;
- have more time for field trip and discussion afterwards;
- have fewer and more selective presentations and more discussions of each;
- narrow the focus of the agenda and make it more structured;
- rotate the role of the chairperson;
- allow more time for informal discussions, making contacts, and more time to rest and assimilate information;
- pre-schedule a donors' meeting and have prepared project summaries (for funding purposes) available.

Improving the logistics

Recurrent themes in the responses to Question 13 included:

- provide adequate physical support (electricity);
- make papers and documents available earlier and in greater quantity;
- make better use of steering committee;
- have different chairperson for each session;
- provide more time for discussions;
- have more rest time.

Suggested changes

Recurrent themes in the responses to Question 16 included:

- have more and longer field visits;
- have more time for questions and discussions after all presentations;
- summarize or make shorter country presentations;
- give more time to thematic presentations;
- have more technical or methodological presentations and fewer theoretical;
- increase the amount of small group discussion;
- present only selected papers and make them more focused;

- make agenda clearer and more focused, and have precise objectives for the networkshop;
- rotate the chairperson of sessions;
- have more rest time;
- give steering committee larger role and reduce the role of the expatriate technical advisers;
- formalize the informal contact-making activities which occur at the networkshop.

Overall evaluation

Recurrent themes in the responses to Question 17 included:

- have a few special presentations;
- reduce number of items on programme;
- rotate the role of chairperson of sessions;
- create a formal mechanism for interregional contacts between participants;
- have more time for discussion.

Translation services

Question 12 asked respondents to evaluate the translation services. Seventeen (17) or 31% of the respondents (8 or 21% of the English and 9 or 53% of the French) answered this item. The French to English translation received three positive and five negative comments. The English to French translation received three positive and six negative comments. Several respondents also mentioned that problems with the electricity hampered translation services. Overall, the translation services received mixed reviews and could have been improved.

The best part of the workshop

Question 15 asked participants to list the best part, or aspect, of the networkshop. Fifty people (91% of the respondents) answered this item.

The field trip was mentioned by 21 participants (42% of the respondents); it is also noteworthy that 50 participants (91%) rated the field trip as very useful or useful (1 or 2 on the scale) in the earlier part of the questionnaire.

Small group discussions were mentioned by 12 of the respondents (24%) and these were paired with the field trip by 6 respondents (12%). In the earlier questions, 42 respondents (72%) had rated small group discussions about the field trip as useful or very useful (1 or 2 on the scale).

The thematic discussions were considered the best part of the workshop by seven participants (14% of the respondents). In the earlier question, 44 participants (80%) rated these as very useful or useful (1 or 2 on the scale).

The presentations and discussions of thematic groups were mentioned by five (Francophone) participants (10% of the respondents). In the specific question on this part of the workshop, 46 participants (83%) had rated these as very useful or useful (1 or 2 on the scale).

The country reports were cited as being the best part of the workshop by only two participants (4% of respondents). The ratings of the country reports in the earlier part of the questionnaire were quite mixed: while 58% of respondents thought them very useful or useful, 39% rated them less than useful and two people (4%) classified them as being "not useful", a rare example of participants making use of the lowest category of the evaluation.

Other recurrent answers as to the best part or aspect of the networkshop referred to the networking aspects of the workshop rather than the actual programme components.

- Making contacts was mentioned by seven participants (14% of the respondents).
- The exchange of ideas, experiences, or technical information was mentioned by ten people (20% of the respondents).
- Informal discussions between participants were mentioned by four participants (8% of the respondents).
- The "integrated approach to animal traction presented"; the "spirit of openness"; and positive reassurance about the "value of animal traction" were each mentioned by single participants.

With the exception of one Francophone respondent who referred to "making contacts" the more general observations were made by Anglophone participants. Enthusiasm for the field trip and the small group discussions was shared equally by French- and English-speaking respondents. The Francophone respondents highlighted the thematic groups and presentations more that the Anglophone ones (nine Francophone respondents referred to the thematic groups and presentations while only 3 Anglophone respondents (8%) did so). Two English-speaking respondents indicated some confusion over the difference between thematic and country presentations and wanted further clarification on what was meant by a "theme".

Conclusion

It is clear that the majority of participants found the workshop valuable. In their overall evaluation 64% considered the networkshop to have been excellent or very good, and a further 31% felt it had been adequate. No one considered the workshop to have been poor or very poor. Only two people (4%) stated that

they did not wish to attend the next workshop, while 46 participants (84% of respondents) stated that they would like to attend the next networkshop.

Reviewing the recurrent themes for ways of improving the next networkshop, those more frequently mentioned included:

- having more time for the field trip;
- having more time for small group discussion;
- having fewer, and more selective,
 presentations, all followed by discussion;
- making the focus of the workshop narrower;
- rotating the role of chairperson;
- allowing more time for rest;
- creating some mechanism to facilitate making contacts between participants.

There was broad agreement that the visits to the villages, coupled with detailed discussions in small groups, had been particularly valuable. A further recurring theme was that the networkshop had allowed many informal contacts to be made and that these were probably at least as significant as the more formal presentation of papers.

List of participants

Senegal

M. Adama FAYE, Chef du Centre de Recherches Zootechniques de Kolda, Institut Sénégalais de Recherches Agricoles (ISRA), B.P. 53, Kolda, SENEGAL.

M. Fadel NDIAME, Chercheur, Economiste Agricole, Département Systèmes, ISRA/Djibelor, B.P. 34, Ziguinchor, SENEGAL.

The Gambia

Mr. Sidi M. JARJU, Principal Soil Conservationist, Soil and Water Management Unit, Department of Agriculture, Yundum, THE GAMBIA.

Mr. Alphu J. MARONG, Senior Scientific Officer, Rice Research Program, Department of Agriculture, Cape St. Mary - Bakau, THE GAMBIA.

Mr. Dawda M. SARR, Department of Agricultural Engineering, The Gambia College, Brikama, Western Division, THE GAMBIA.

Guinea

M. Alassane Kesso DIALLO, Ingénieur Machiniste Agricole, Institut des Sciences Agro-Zootechniques de Foulaya - Kindia, B.P. 161, Kindia, GUINEE.

M. Robert DRAY, Conseiller Audio-visual, Centre de Documentation Universitaire Scientifique et Technique (CEDUST),
B.P. 1003, Conakry, GUINEE.
or: CEDUST,
c/o Ambassade de France en Guinée,
Valise diplomatique, 37 Quai d'Orsay,
75007 Paris, FRANCE.

Liberia

Mr. Arthur S. GEDEO, Socio-Economic Officer, Central Agricultural Research Institute (CARI), Suakoko, P.O. Box 3929, Monrovia, LIBERIA.

Mr. Samuel T. HOOKE, Administrative Officer, Central Agricultural Research Institute (CARI), Suakoko, P.O. Box 3929, Monrovia, LIBERIA.

Dr. S. RAVINDRAN,
Head of Animal Science,
Central Agricultural Research Institute (CARI),
Suakoko, P.O. Box 3929,
Monrovia, LIBERIA.

Côte d'Ivoire

M. Brou Pascal KOUADIO, Responsable Culture Attelée, Projet de Motorisation Paysanne, Centre Ivoirien du Machinisme Agricole (CIMA), B.P. 144 Boundiali, COTE D'IVOIRE. ou CIMA, B.P. 1193 Bouaké, COTE D'IVOIRE.

Togo

M. Ladikpo A. AFANTONOU,
Directeur,
Unité de Production de Matériel Agricole
(UPROMA),
B.P. 111, Kara, TOGO.

Dr. Kossivi APETOFIA, Directeur, Projet pour la Promotion de la Traction Animale (PROPTA), B.P. 82, Atakpame, TOGO.

M. Pakoubatcho LEKEZIME, Directeur, Projet Culture Attelée Kara-Savanes, B.P. 3, Kara, TOGO.

Mr. Arthur S. WESTNEAT, Conseiller Technique, Division Programmation, Evaluation, et Statistiques, PROPTA, B.P. 82, Atakpame, TOGO.

Nigeria

Mr. Hassan Usman AHMED, Research Fellow, Livestock Systems Research Project, National Animal Production Research Institute (NAPRI), Ahmadu Bello University, Shika, P.M.B. 1096, Zaria, Kaduna State, NIGERIA.

Dr. Dayo O. A. PHILLIP, Research Fellow, Department of Agricultural Economics, Ahmadu Bello University, P.M.B. 1044, Zaria, NIGERIA.

Zaire

Mr. Andreas SCHUMACHER, GTZ Staff member, Compagnie de Développement Agropastoral Intégré du Kwango-Kwilu (CODAIK), 11 rue Ituri, B.P. 7555, Kinshassa, ZAIRE.

Mali

M. Abou BERTHE, Coordonnateur volet DRSPR-V/IER/USAID, Institut d'Economie Rurale, B.P. 9030, Bamako, MALI.

M. Christian LADRETTE, Specialiste Culture Attelée, SATEC/DEVELOPPEMENT, 24-26 rue Jean Duplessis, 78150 Le Chesnay, FRANCE.

M. Ruben René MUNGROOP, Chercheur DRSPR volet Fonsébougou, Division de Recherches sur les Systèmes de Production Rurale (DRSPR), B.P. 186, Sikasso, MALI.

Dr. Sanath K. REDDY, Senior Agricultural Adviser, USAID, B.P. 34, Bamako, MALI.

M. Moulaye I. SANGARE, Ingénieur Agro-Zootechnicien, Division de Recherches sur les Systèmes de Production Rurale (DRSPR), B.P. 186, Sikasso, MALI. M. Dramame ZERBO, Directeur, Division Machinisme Agricole, Direction Nationale du Génie Rural, Ministère de l'Agriculture, B.P. 155, Bamako, MALI.

Burkina Faso

M. Soleymane OUEDRAOGO, Ingénieur agronome, Recherche sur les Systèmes de Production, Institut d'Etudes et de Recherches Agricoles (INERA), B.P. 540 Bobo-dioulasso, BURKINA FASO.

Niger

M. Serkin Abzine Salifou HAROUNA, Ingénieur d'Agriculture, Artisanat Rural et Machinisme Agricole, Projet Productivité du Département de Niamey, B.P. 10231, Niamey, NIGER.

M. Roman IMBODEN,
Conseiller technique,
Artisanat Rural et Machinisme Agricole,
Projet Productivité du Departement de Niamey,
B.P. 872, Niamey, NIGER.
ou 50 rue Moutchoisy, 4207 Genève,
SWITZERLAND.

ILCA

Dr. Samuel C. JUTZI, Leader ILCA/ICRISAT/Ethiopia Vertisol Management Project, Highlands Programme, International Livestock Centre for Africa (ILCA), P.O. Box 5689, Addis Ababa, ETHIOPIA.

Dr. Stephen O. ADEOYE, Animal Health and Production Research Officer, Humid Zone Programme, International Livestock Centre for Africa (ILCA), P.M.B. 5320, Ibadan, NIGERIA.

IITA

Dr. Dunstan SPENCER, Director, Farming Systems Programme, International Institute of Tropical Agriculture, IITA, P.M.B. 5320, Ibadan, NIGERIA.

ICRISAT

Mr. Ram K. BANSAL,
Agricultural Engineer,
Resource Management Program,
International Crops Research Institute for the
Semi-Arid Tropics (ICRISAT),
Patancheru P.O., Andhra Pradesh 502 324,
INDIA.

Dr. Michael C. KLAIJ, Soil and Water Engineer, Resource Management Programme, ICRISAT Centre Sahélien, B.P. 12404, Niamey, NIGER.

Mr. Philip G. SERAFINI, Farm Manager, ICRISAT Centre Sahélien, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), B.P. 12404, Niamey, NIGER.

FAO

Mr. R. C. GIFFORD, Senior Farm Mechanization Officer, Agricultural Engineering Service, Agricultural Services Divsion (AGS), F.A.O., Via delle Terme di Caracalla, 00100 Rome, ITALY.

CEEMAT

M. Gérard LE THIEC, Expert Traction Animale, Centre d'Etudes et d'Expérimentation du Machinisme Agricole Tropical (CEEMAT), Parc de Tourvoie, 92160 Antony, FRANCE.

GTZ

Mr. Eduardo R. BUSQUETS, Project Officer, German Appropriate Technology Exchange (GATE), GTZ, Postfach 5180, D - 6236 Eschborn 1, FEDERAL REPUBLIC OF GERMANY.

Mr. Burghard KEHR,
Dept. 17 - Agricultural Mechanization,
Agro-Industries and Food Technologies,
Deutsche Gesellschaft für Technische
Zusammenarbeit (GTZ) GmbH,
Postfach 5180, D-6236 Eschborn 1,
FEDERAL REPUBLIC OF GERMANY.

Projekt-Consult

Mr. Wulf BOIE, Consultant Engineer, Projekt-Consult, Savignystrasse 41, D-6000 Frankfurt /Main 1, FEDERAL REPUBLIC OF GERMANY.

AFVP

M. Philippe ALLAGNAT, Consultant, Association française des volontaires du progrès (AFVP), B.P. 2, Linas, 91310 Montlhéry, FRANCE.

AFRC-Engineering

Mr. David KEMP,
Head of Animal Traction and Small Equipment
Section, Overseas Division,
AFRC-Engineering (formerly National Institute of
Agricultural Engineering, NIAE),
Wrest Park, Silsoe, Bedford, MK45 4HS.
UNITED KINGDOM.

University of East Anglia

Mr. Horatio FREEMAN,
Postgraduate Student,
School of Development Studies,
University of East Anglia, Norwich NR4 YTJ,
UNITED KINGDOM.

Mr. Nick JEZZARD,
Recent graduate of School of Development Studies,
University of East Anglia,
Norwich NR4 YTJ, UNITED KINGDOM.
Present address: 21 The Millbank, Ifield,
Crawley, Sussex RH11 OJQ,
UNITED KINGDOM.

FSSP

Dr. Susan POATS, Associate Director, Farming Systems Support Project (FSSP), International Programs, 3028 McCarty Hall, University of Florida, Gainesville, Florida 32611, U.S.A.

Mr. Paul STARKEY, Technical Adviser, Network Committee, Animal Traction Development, Oxgate, 64 Northcourt Avenue, Reading RG2 7HQ, UNITED KINGDOM.

Colorado State University

Dr. James W. OXLEY, Professor of Animal Science, College of Agriculture, Colorado State University, 121 Shepherdson, Ft. Collins, Colorado 80523, U.S.A.

Tillers

Mr. Richard ROOSENBERG, and Ms. Terry HLUCHYJ, TILLERS Small Farm Program, Kalamazoo Nature Center Inc., 7000 N. Westnedge Avenue, Kalamazoo, Michigan 49007, U.S.A.

Sierra Leone

Mr. Bai H. KANU, Coordinator, Sierra Leone Work Oxen Programme, Private Mail Bag 766, Freetown, SIERRA LEONE

Mr. Abu Bakar BANGURA, Head of Rolako Rice Station and Senior Extension Officer, Sierra Leone Work Oxen Programme, Private Mail Bag 766, Freetown, SIERRA LEONE.

Mr. Jonas J. A. KOROMA, Equipment Officer (Animal Gears), Sierra Leone Work Oxen Programme, Private Mail Bag 766, Freetown, SIERRA LEONE.

Mr. Augustine SAMURA, Research/Extension Officer, Kamabai, Sierra Leone Work Oxen Programme, Private Mail Bag 766, Freetown, SIERRA LEONE.

Mr. Abdul M. SHERIFF, Extension Officer, Northwest Region, Sierra Leone Work Oxen Programme, Private Mail Bag 766, Freetown, SIERRA LEONE

M. Yves SCHWARTZ, Research Officer (Socio-economics), Sierra Leone Work Oxen Programme, Private Mail Bag 766, Freetown, SIERRA LEONE. Mr. Wilson MCKINLAY, Technical Adviser, Sierra Leone Work Oxen Programme, Private Mail Bag 766, Freetown, SIERRA LEONE.

M. Hervé CORBEL,
Monitoring and Evaluation Officer,
Musaia Ox Unit,
Koinadugu Integrated Agricultural Development
Project (KIADP), Kabala,
SIERRA LEONE.
Present address:
7 place Pinel, Paris, 75013 FRANCE.

Mr. Alpha U. S. BARRIE, Officer in Charge, Musaia Ox Unit, Koinadugu Integrated Agricultural Development Project (KIADP), Kabala, SIERRA LEONE.

Mr. Scott M. LEAMAN,
Peace Corps Volunteer,
FAO Swamp Rice Development Project,
Peace Corps, Private Mail Bag, Freetown,
SIERRA LEONE.

Mr. Mathew L. S. GBOKU, Lecturer, Department of Agricultural Economics and Extension, Njala University College, Private Mail Bag, Freetown, SIERRA LEONE.

Mr. Musa J. JAMBAWAI, Lecturer, Department of Agricultural Engineering, Njala University College, Private Mail Bag, Freetown, SIERRA LEONE.

M. Bruno LECAITEL, (outgoing Equipment Officer, Rolako Workshop, Work Oxen Programme), c/o Association française des volontaires du progrès (AFVP), B.P. 2, Linas, 91310 Montlhéry, FRANCE.

Mr. Thomas Mark TURAY,
Farm Coordinator,
Mapaki Descendants Farming Association,
Diocesan Development Office,
Catholic Mission, P.O. Box 1, Makeni,
SIERRA LEONE.

Mr. B. S. MANSARAY, Agriculturalist, North Western Integrated Agricultural Development Project, MANR, Kambia, SIERRA LEONE.

Mr. I. B. KABIA, Work Oxen Officer, Magbosi IAD Project, Private Mail Bag 545, Freetown, SIERRA LEONE.

Dr. Albert AGARD, Chief of Party, ACRE Project, c/o U.S. Embassy, Freetown, SIERRA LEONE.

Dr. Jaswant R. JINDIA, Agricultural Economist, ACRE Project, c/o U.S. Embassy, Freetown, SIERRA LEONE.

Mr. Knut HOLM, Agronomist (GTZ), Seed Multiplication Project, P.M.B. 231, Freetown, SIERRA LEONE.

Mr. Allie Badara MANSARAY, Production Assistant, Seed Multiplication Project, P.M.B. 231, Freetown, SIERRA LEONE.

Mr. Samuel Bockari KUGBEI, Seed Centre Manager, Seed Multiplication Project, P.M.B. 231, Freetown, SIERRA LEONE. Mr. Alpha Bakai KAMARA, Seed Centre Manager, Seed Multiplication Project. P.M.B. 231, Freetown, SIERRA LEONE.

Mr. Alpha B. CONTEH, Farm Manager, Rokupr Rice Research Station, P.M.B. 736, Freetown, SIERRA LEONE.

Mr. Edward Yamba KOROMA, Agricultural Engineer, Rokupr Rice Research Station, P.M.B. 736, Freetown, SIERRA LEONE.

Mr. Momoh B. SESAY, Agricultural Instructor, Swamp Rice Development Project, MANR, Gbinti, Via Port Loko, SIERRA LEONE.

Mr. Paul FRANCIS, FAO Chief Technical Adviser, Swamp Rice Development Project, Moyamba, c/o UNDP, P.O. Box 1011, Freetown, SIERRA LEONE.

Mr. Dramani Andrew TURAY, Project Manager, NIADP, P.O. Box 1435, Freetown, SIERRA LEONE.