INTELLECTUAL PROPERTY

The knowledge in this report remains the intellectual property of the people and communities from which it came.

DEDICATION

This study is first and foremost dedicated to our animal health colleagues in southern Sudan; the local specialists and experts among the Dinka and Nuer who so generously shared with us their knowledge and science. We also want to warmly acknowledge and thank the ordinary women, men and children of Southern Sudan for their hospitality, patience, and good humour as they answered our numerous questions. These people made the study an extremely enjoyable experience. This study is also dedicated to the health and welfare of the animals of southern Sudan whose livelihood is inextricably tied to that of the people.

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The study would not have been possible in its present form without the interviewers and the translators who will all be mentioned by name in the resource manuals. We thank SRRA and RASS for their support and assistance in Sudan and Lokichokio.

As with all studies of this nature, the report results from the work of many people.
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EXECUTIVE SUMMARY

This report contains the findings and recommendations of a study of ethno-veterinary knowledge amongst parts of the Dinka and Nuer people of southern Sudan. It was commissioned by UNICEF/OLS for the Livestock Section of the Household Food Security Programme. The study was undertaken by a team of three consultants over a two month period finishing in December 1996.

The report is in three parts, and accompanied by two databases of information about local animal health terms. The first part records the process of the consultancy, interprets the findings, and makes recommendations for the programme. The other two parts record the information given by local people about their diseases and animal health practices; together with the databases, these can be added to and further developed.

The study and integration of ‘ethno-veterinary knowledge’ (EVK) is important for two main reasons. Firstly, there are many useful local practices and treatments for a range of conditions or sicknesses, that complement the vaccines and treatments being introduced by the livestock programme. Secondly, by recognition of, and integration with, local animal health practices, local cultures will be validated and supported. This point recognises that veterinary services exist in a wider context, and that the short term goals of animal health service delivery can contribute, if conducted sensitively, towards strengthening of existing ‘local institutions’, and towards a peaceful and positive strengthening of confidence in local culture in the face of changes brought from outside.

The study was carried out using semi-structured interviews with individuals, groups and ‘animals’, ranking exercises, and direct observation, during field visits to locations in Tonj County, Bahr el Ghazal Province (for Dinka informants), and Leich State, Western Upper Nile Province (for Nuer informants). In each location, additional disease interviews with a selection of women and men were conducted in the local language by interviewers trained by the study team. The Dinka community in Kakuma Refugee Camp was also a valuable source of information; two workshops with locally recognised ‘animal health specialists’ were held there, and their information is included in the Dinka resource manual. A brief comparison was made with Zande knowledge of medicinal plants by interviewing informants in Lokichokio.

Both Dinka and Nuer have a rich vocabulary of animal health terms, and identify a wide range of animal health problems. A high level of animal health knowledge is distributed unevenly through both societies; as with most pastoral groups there is a much higher general level of knowledge than in settled and agricultural groups. Both groups use with confidence a number of plant medicines, although the Dinka, who live in an area of greater plant diversity, seem to use a wider variety of medicinal plants; both also practise successfully a number of minor surgical procedures. There is variation in the way the vocabulary of animal health is used both between and within ethnic sub groups. There are Dinka and Nuer specialists (called, generically, atet and leert respectively) whose assistance is sought for setting bones, cutting lumps, dystocias (including the use of foetotomy), and in some cases, for castration. These specialists are often also more knowledgeable than most about the medicinal use of plants. Among the Dinka there are herbalists called ran wal who are few and difficult to find.

Women are traditionally considered to take a subsidiary role in the care of animals, and it was often stated by informants (especially men) that they do not know much nor treat animals. However many are knowledgeable about diseases, they may collect and prepare treatments, and some also administer them. As women are responsible for milking the animals, they are often the first to notice signs of ill health. Girls as well as boys are taken to the cattle camps, where they may remain until adolescence, so both have the opportunity to observe treatments and procedures. Girls may assist their fathers, particularly when there are no boys present, and this may have become more common as a result of recent social changes. Female headed households, in which women take full responsibility for the household livestock, are emerging in some areas at least, partly as a result of the war.

EVK in these extremely livestock orientated cultures, is very much a part of everyday living. It appears to lie mostly in the public domain and most information is shared widely and readily. Diagnosis is often a group activity, particularly among the Dinka, and local specialists are said to receive little or no material payment for their assistance.

The OLS livestock programme has focused on identifying the few ‘most important’ diseases, providing access to vaccines or treatments for them, and training vaccinators or Community Based Animal Health
Workers (CAHW) to use these correctly. In these commendable endeavours, the livestock programme has had some considerable early success with rinderpest control, and this has brought the programme justifiable praise and goodwill from both local communities and donors alike.

Recognising the dangers of subsidising the sale of pharmaceuticals, the programme is moving towards full cost recovery for drugs by 1998 and charging for all vaccines including rinderpest in 1997.

Some disease syndromes require further elucidation from both local and western perspectives, and this is an area in which western veterinary science can make a valuable contribution towards improving animal health.

EVK is discussed briefly during training but remains peripheral. Animal health problems that can be dealt with successfully using traditional methods are, understandably, generally considered ‘less important’. Despite attempts to conduct sensitive community dialogues using some of the latest development methodologies such as Participative Rural Appraisal, traditional specialists and much traditional knowledge has stayed outside the programme. An un-integrated CAHW system will tend to take veterinary knowledge out of the public domain; and the focus on the fewer, ‘most important’ diseases and their modern preventions and treatments, could undermine, and encourage the replacement of, traditional treatments. Although not official policy, drug sales appear to be considered in some places an indicator of programme success, and this also could lead to undermining of traditional practices.

The OLS livestock programme appears to be very ‘action orientated’ in that trips to the field by programme staff are always to ‘do’ something directive (this includes PRA exercises), rarely just to learn. Unfortunately this approach does not mesh well with local animal health practices which, because they are entwined with all other aspects of local culture, require gentle teasing out and cannot be accessed on demand.

At present, the livestock programme acknowledges the presence of ethno-veterinary knowledge but gives it a peripheral role. However there are many opportunities for it to root its work more firmly within a framework of local animal health practices, and to involve local specialists.

The study team consider it inappropriate to recommend plant treatments used elsewhere (using indigenous or exotic plants) until there has been a more thorough investigation of the treatments already being used.

The Livestock Programme also has an opportunity to work more closely with the education programme, and with programmes to rehabilitate those displaced or traumatised by war, by assisting in the running of local ethno-veterinary knowledge projects, alongside other local knowledge projects, in schools (see Annex 4).
Summary of Recommendations

It is recommended that the livestock programme redefines its work to make EVK central, always presenting its work within the wider context of existing local knowledge, and always presenting any inputs as complementary to existing practice.

This process will require a number of smaller steps. Initially the programme should:

- discuss, and gain support for, building on EVK, with SRRA, RASS and others in local administrative positions;
- discuss with donors the long term advantages of taking time to integrate EVK work, and try to get approval for longer, less ‘action orientated’ funding cycles;
- discuss with donors the acceptability of qualitative measures of programme benefit based partly on the perceptions of local people, to complement ‘hard’ data such as vaccination records, treatment records, and drug sales;
- make the EVK policy clear to communities (leaders as well as any individuals) and that the policy will mean continuing learning visits to the area, as well as visits for running more structured activities;
- make contact with local specialists and investigate their possible roles in the programme;
- in all locations, and in any future baseline work, spend time learning in a relatively unstructured manner from local people (specialists and non-specialists) about what they do with respect to animal health.

The programme should continue the investigative work started in this study, by:

- continuing to work with some of the trained interviewers (who will need further coaching), and train new interviewers in other locations, to build up the database of general livestock disease knowledge;
- continue to talk to both EVK specialists and non-specialists in the communities on an informal basis to learn from them about animal health;
- work with linguists (initially contacting local experts, in the education programme, in church organisations, and by contacting SIL) and local EVK specialists to standardise use of language within the programme, developing dictionaries of animal health terms for each ethnic group, which will contain accepted spellings and variations, and the various commonly used definitions of these terms;
- translate the resource manuals both now and as they are updated (on an annual basis if possible);
- employ a good professional field botanist towards the end of the next rainy season, who should visit a number of locations, identify confidently used veterinary medicinal plants, and check them against existing medicinal plant databases to establish whether their medicinal properties are already recognised, and whether their active chemicals have been analysed.

In implementing its activities, the programme should:

- build relationships with specialists in all project locations;
- investigate through these relationships the efficacy of specific treatments and practices;
- facilitate workshops for specialists to encourage sharing of experience and development of good practice;
- involve these specialists in all training activities;
- modify its training curricula, baseline survey methods, and approach to community dialogue, to take account of EVK;
- evaluate any existing ‘gender programmes’ within the livestock programme, and build on any successful approaches;
- work towards involving women more fundamentally, possibly through focus on small stock, chickens, or as ‘experts’ in the early diagnosis of ill health, or through other opportunities that present themselves as a result of wider community dialogue;
- continue to investigate indicators of programme benefit;
- monitor levels of understanding about its current activities amongst the beneficiary population;
- continue to develop its ability to diagnose disease both in the field and in the lab in Lokichokio, so that refinement of diagnosis becomes another definable benefit provided by the programme.

Both for its own benefit, and to assist in a wider understanding of the process of development, the programme should investigate why it is that despite good development practice, traditional specialists and much local knowledge has stayed outside the programme.
In order to achieve some of recommendations, the programme:
- should discuss EVK policy at the next co-ordination meeting, if possible inviting one of the study team to attend the discussion;
- should allocate responsibility for following up specific recommendations to specific individuals;
- should discuss the follow up to agreed actions and progress at subsequent meetings;
- and may need to provide further training to some of its staff, in for example the use of Participative Rural Appraisal techniques.

The programme should evaluate its progress in these endeavours after one year.

If the programme feels it does not have the capacity to achieve integration of EVK at this stage, it may need to employ consultants to undertake specific pieces of work in the short term.

Finally, the programme should ensure that copies of the report, or at least the resource manuals, are sent to all those named as having assisted in the study, and to the Kakuma specialists.
INTRODUCTION

This report contains the findings and recommendations of a study of ethno-veterinary knowledge amongst parts of the Dinka and Nuer people of southern Sudan. It was commissioned by UNICEF/OLS for the Livestock Section of the Household Food Security Programme (henceforth called the livestock programme; the term OLS livestock programme will be used to refer to the confederation of livestock programmes operating under OLS/SS, which includes UNICEF and other non-governmental organisations (NGOs)). The study was undertaken by a team of three consultants over a two month period finishing in December 1996.

The livestock programme has been committed to a community based approach to veterinary service delivery since at least 1992, and during the course of its discussions with community members has been exploring local knowledge on an ad hoc basis. Recognising the importance of local knowledge, funds were sought for a more thorough investigation of local animal health knowledge; resulting in this study.

The study was undertaken by a team of three consultants (two full time, one part time) over a two month period finishing in December 1996.

The report is in three parts, and accompanied by two databases of information about local animal health terms. The first part records the process of the consultancy, interprets the findings, and makes recommendations for the programme. The other two parts, 'Resource Manuals', one covering Dinka knowledge, one covering Nuer, record the information given by local people about their diseases and animal health practices; together with the databases, these can be added to and further developed. The Resource Manuals should be translated back into the local languages and returned to the local communities.

As well as recording local knowledge and practices as an end in itself, it is hoped that this study will assist the livestock programme and help affirm the value of the local cultures and their animal health knowledge.

TERMS OF REFERENCE

Annex 6 contains the Terms of Reference for this study.

ETHNO-VETERINARY KNOWLEDGE AND EXISTING LOCAL VETERINARY KNOWLEDGE

Ethno-veterinary knowledge (EVK) includes all local knowledge and practices, intrinsic to the local culture, that pertain to animal health. In practice, communities have usually integrated some extrinsic knowledge with their own, 'intrinsic', knowledge, for example about the use of some drugs, and this state of affairs can be covered by the term 'existing local veterinary knowledge' (ELVK).

As 'knowledge' resides within individuals, is unevenly dispersed, and is constantly evolving, the distinction between 'intrinsic' and 'extrinsic' is to a certain extent artificial. However, in the context of a study such as this, it is useful to distinguish between knowledge associated with the recent livestock programmes (even though there has been some knowledge of 'modern drugs' for the last forty years), and that residing in the community already.

Usually, within the community, there are some people who are recognised as being particularly knowledgeable or skilled, whether they have an institutionally formalised position or not. This study attempted to look at the knowledge and perceptions of 'ordinary' people (ie anyone who is not thought of as a specialist in some aspect of animal health practice), as well as at the knowledge and role of any specialists.
RATIONALE FOR EVK

There has been in the last decade in western countries an increased interest in herbal or alternative remedies. This is due to many factors including a desire to view the living organism more holistically rather than as a collection of parts and symptoms which can be treated on that basis. Drug companies after focusing almost exclusively on drug synthesis in the laboratory have taken to the forests and woodlands to look for plants with medicinal properties. Those collecting information in the field of ethno-veterinary medicine continue to discover that many ethnic groups who have raised animals have also found rather effective ways over the years to manage those animals and keep them healthy. To paraphrase from the chapter titled "Traditional and Reapplied Veterinary Medicine in East Africa" by Dean Ropke... ‘Many local people have many traditional remedies which parallel Western techniques. Some of these ethno-veterinary practices appear to be just as, or more, effective than their western commercial equivalents and they are also much more accessible. Unfortunately much of this information is in danger of being lost or suppressed with the advent of commercialisation and modernisation.’ D. Ropke concludes that ‘ethno-veterinary medicine can offer a much needed alternative or complement to western style treatments. The erosion of this knowledge in favour of western technologies and commercial drugs may leave many stockowners with neither traditional or modern weapons to combat disease. They will have lost the knowledge to apply the traditional remedies and the modern medicines may be too expensive or unavailable.’ (Ethnoveterinary Research and Development edited by Constance McCorkle et al pp 256, 257)

The study and integration of local, or ethno-veterinary knowledge can be considered important for two main reasons.

Firstly, there are many useful local practices and treatments for a range of conditions or sicknesses, that complement the vaccines and treatments being introduced by the livestock programme.

Secondly, by recognition of, and integration with, local animal health practices, local cultures will be validated and supported. This point recognises that veterinary services exist in a wider context, and that the short term goals of animal health service delivery can contribute, if conducted sensitively, towards strengthening of existing ‘local institutions’, and towards a peaceful and positive strengthening of confidence in local culture in the face of changes brought from outside. These changes include new information and technology, and different values, and are being brought by the war and by OLS/SS amongst others.
METHODOLOGY

Methodology of field work

1. The OLS Livestock Programme selected Tonj County in Bahr el Ghazal Province for the Dinka study, and Leich State in Western Upper Nile for the Nuer study. Within these areas, the actual study was carried out around Ngabogok, Ananatak Payam, and Marial Lou, Makuac Payam, in Tonj County, and around Wichok and Nyal in Western Upper Nile. The locations in Leich State were chosen to allow comparison between two sections of the Nuer tribe, and between two slightly different ecological areas. Wichok, in the north of the state, is a Western Jikany area and open and wet, with almost no trees or shrubs; whereas Nyal, in the south, is Dok, mixes patches of forest with expanses of swamp, and offers a greater diversity of plants for medicinal use.

2. An additional resource for the study were the inhabitants of Kakuma Refugee Camp, (34,000 of whom are Dinka.) There are many displaced specialists among these, some of whom were interviewed and brought together in a series of workshops.

3. The study also included a superficial comparison with the Zande tribe who, although mainly agriculturists not livestock keepers, are renowned for their knowledge of medicinal plants. A field trip to Western Equatoria was not logistically feasible within the study period, so Zande resource people in Lokichokio were interviewed, among whom was one herbalist.

4. At the start of the study, the team contacted each NGO active in the OLS livestock programme, especially those working in the study areas, to request any information on EVK that had already been collected, and where possible, to discuss this, together with any organisational policy on EVK. (see Annex 5).

5. Two members of the team visited both field work areas initially to finalise methodology, after which one member of the team concentrated on Dinka, one concentrated on Nuer, and the third provided support to the other two both with field visits and in Kakuma and Lokichokio.

6. In each study location, separate groups of men and women 'brainstormed' to provide full lists of local disease names and terms, for all the local domestic animals. This list was known as the 'master disease list' for the area.

7. Then groups of between two and four interviewers were trained in each location to conduct interviews with ordinary local people, both men and women, on each of the diseases on the master disease list, using a question list, and recording answers as given in the local language, into notebooks. (This methodology and the 'ethno-veterinary question list' used, have evolved from those initially developed by Barbara Grandin in Masailand, Kenya; Grandin B. pers comm).

8. The interviews were then translated into English and entered into a database. Together with other information supplied and recorded, this information was compiled into the two resource manuals appended to this report.

9. Meanwhile, the team were conducting other interviews using participant observation, semi-structured question lists, ranking exercises and other PRA methods, with other individuals, key informants and groups. The details of the question lists and ranking exercises are given below.

10. Where possible, specialists were observed at work, and plants used for medicinal purposes were collected for identification.
Ethno-Veterinary Knowledge Question List

Introduction State that you are collecting information about the livestock programme.

Note: Name  Sex  Age  Clan
      Cattle Camp / Village  Payam / Parish  Date

The EVK question list

Select, or ask informant to select, a disease / animal health problem.

1 a) What species of animals are affected by this disease / problem? (cattle, sheep, goats, donkeys, dogs, chickens)
1 b) What age of animals are affected by this disease / problem?
1 c) What sex of animals are affected by this disease / problem? (male or female)
2. Does this disease / problem occur at any particular time of year, or time of month, or any other particular time?
3. Does this disease / problem occur at any particular place?
4. Does it usually affect one animal or a group of animals at the same time? Does it spread from animal to animal?
5. What causes the disease / problem (natural/physical causes, supernatural/non-physical causes, combination of both)? Describe.
6. Are there ways to prevent, avoid, stop the spread of, this disease / problem? If so, what are they?
7. Describe the main symptoms, if possible, in order of appearance/progression. What is the symptom, or combination of symptoms, that makes you decide it is this specific disease / problem?
8. Have you ever used traditional treatments?
   If so, what were they? Where/How are they obtained? What happened after it was used?
   If not, have you heard about any traditional treatments, and if they work?
9. Have you ever used modern treatments?
   If so, what were they? Where/How are they obtained? What happened after it was used?
   If not, have you heard about any modern treatments, and if they work?
10. What usually happens if the animal is not treated?
11. When did you last have an animal with this disease / problem? What did you do? What happened to the animal? Did it live or die?
   (If you haven't had an animal with this disease, when did you last hear of a case, and what happened)
12. Can this disease / problem spread from animals to people or from people to animals?
13. Are there any other diseases that look like this disease?
14. What does the name of this disease mean, or how did the disease get its name?
Castration:
1. What species do you castrate?
2. Why?
3. How do you choose which animals to castrate?
4. What age do you castrate?
5. What time of year do you castrate?
6. Who does it?
7. What method?
8. What special treatment do you give the animal while it is recovering?
9. Have you ever had problems after castrating an animal?

Colostrum:
1. Do you allow your new born animals to drink colostrum (the first milk)?
2. If so, why? If not, why not?
or
1. Is colostrum good or bad for the young?
2. Why / Why not?
or
How soon after a calf is born do you allow it to drink from its mother? etc

Gender based differences in animal management and husbandry, and in knowledge and practice: Check list
In the traditional Dinka / Nuer lifestyle:
1. What is the work of women?
2. What is the work of men?
3. In relation to animals, what are women best at?
4. In relation to animals, what are men best at?
5. In relation to animals, what do women never do?
6. In relation to animals, what do men never do?

Specialists
Are there women or men who are known to be specialists, or particularly good at any tasks related to livestock? If so, what are the specialities or skills?
or
Who would you go to if you had an animal to be castrated / with a broken leg / with a swelling etc?
Is it possible to meet him / her / them?
What are these people called?
How do specialists fit with the CAHW programme?
Diseases Confidently Treated by Traditional/Local Methods

Materials required- index cards with a disease name per card (taken from the master list), marking pen and writing pens
Do the process with at least one group of men and one group of women

Part A
Read out name on first card-have a short discussion of the disease-signs and symptoms which would help ensure that everyone is talking about the same disease-also it would help the facilitators clarify their info on the disease.

Then ask the group if the disease has a traditional/local/herbal treatment which they are confident is effective. Explain that there are three piles possible. The first is for the diseases that the group agrees has a local treatment which can be used with confidence that it will be effective. The second (and middle pile) is for diseases where there is a local treatment which may be moderately effective. And the third pile is for diseases where there are no effective local treatments.

It is important to give the card to someone in the group to handle and put it in the appropriate pile that the group agrees.

Do this for all the diseases.

Part B
Then go back to the first pile and have the group rank the diseases in the first pile by effectiveness of the treatment for that disease. Do the same for the second pile. No need for the third pile.

Treatment details check list

For each treatment ask:
1. Ingredients: What are the exact ingredients; if plants, what parts; if mixtures, what proportions etc;
2. Preparation: How the medicine is prepared from the ingredients;
3. Administration: How the medicine is administered;
4. Dosage: How much to give, how often, and for how long;
5. Toxicity: Any dangers of toxicity from over dosing (some medicinal plants are also poisonous);
6. Recovery: How rapidly do animals recover? How many animals recover?
7. Availability: Where do the various ingredients come from? How common are they? Are they seasonal or are there any other difficulties in obtaining them?
8. Where possible ask to see plants, take photos and specimens;
9. Where possible check veracity of information by cross checking within population;
10. If possible get plants identified and check if medicinal properties recorded in other areas or databases.

Other lines of enquiry pursued:

Changes over time especially with reference to the war.
Differential diagnosis.
Costs of traditional treatments.
Role of vectors: birds, insects, ticks.
Selection of animals.
Discussion of methodology

1. It was important in an introductory study of this nature to conduct field work in a number of locations, and to pursue a number of lines of enquiry at the same time. Inevitably therefore, a disproportionate amount of time was spent on physical logistics, and on organising translators both in southern Sudan for field work, and in Lokichokio where they were needed to translate the interviews collected in the local languages. However, the methods used to generate discussion and to collect information worked well and, if adopted by the agencies working within the OLS Livestock Programme, could be integrated with other continuing activities, thus requiring little extra organisation.

2. Kakuma Refugee Camp was an unexpectedly rich source of information. There are approximately 34,000 Dinka resident in the camp much of the time and as they are generally not about their traditional pursuits such as herding cows and growing crops they have lot of time to talk. As they are also displaced they feel keenly the potential of losing their culture and thus are eager to meet and discuss and have their knowledge preserved. Most of the specialists had left their homes before the start of the present livestock programme, and being away from home, had a different view on the value of preserving their culture. It was a moving sight to see about 30 young boys and men listening with respect and complete attention to a specialist talking about disease diagnosis and herbal treatments. There are far fewer Nuer in Kakuma, fewer specialists and less of a community; it was therefore not possible, especially within the time available for the study, to conduct a similar process for Nuer.

3. Amongst the Nuer, women tended to be more enthusiastic and animated informants than men, consistently coming up with more disease names and using more body language. This made the discussions easier to follow, and allowed the team to pick up points missed by the translators. Amongst the Dinka, men and women both became enthusiastically involved. Specialists, whether Dinka or Nuer, were enthusiastic, willing and generous informants.

4. The ethno-veterinary question list has been tested in a number of ethno-veterinary studies and is able to provide good background information about local diseases, perceptions about disease, and about the distribution of animal health knowledge within the community. The use of interviewers for the ethno-veterinary question list allowed more people to be interviewed in the short study period. This was particularly important because the lack of good translators available to the study team limited the number of direct interviews conducted. Interviewers working in the local language can also make the process of interview less tiring for the informants because all translation is done separately from the interview. Ideally, interviewers should include both men and women. Of the interviewers used in Tonj County, two were women; unfortunately it was not possible to find any female Nuer interviewers. To conduct good interviews, the interviewers need to be interested, and able to write well in their own language. They also need to be coached to improve their understanding, sort out misunderstandings, and refine their skills. In this introductory study, with limited time to train and interview, the quality of interviews varies considerably. It is hoped that NGOs will wish to continue the process started, until there is good quality information available about each disease from at least two men and two women interviewees in each area.

5. If the interviews are to continue, it is recommended that interviewers are paid by the number of interviews done, with a premium for good quality interviews, and that payment is made after the interviews have been translated into English, with the interviewers having to help the translator if necessary with the translation, to sort out ambiguities and to highlight problems as they arise. It will also be necessary for the one reading the English translation to interact with the translator so as to clear up any language problems. It was found for example in the Dinka translations, that the word backbone was used for shoulders and chests and that a word used by the Italians "snivel" is used to talk about nasal discharge and also a scab on a sore.

6. It is possible for one informant to answer the full question list on up to three diseases at one sitting, without exhausting the interviewer, and without losing information quality. For some reason in this study, interviewers would rarely ask more than one disease of any single person, which slowed the process. With further training, this could be increased.

7. With adequate time and good, trained interviewers, it is possible to add some questions on another subject, such as castration or the use of colostrum, onto the end of the question list. This was not possible with the Nuer interviewers, so all other information was collected by the study team.
8. The structured question lists worked well as a framework from which to develop a discussion on the particular subject. Gender difference discussions were held early on in the study, and gave valuable insights that were explored and referred to afterwards.

9. In the Nuer areas, it became apparent early on that specialists were called upon for a number of conditions, and that these specialists were relatively common. The question ‘Who would you go to...?’ was useful in finding some of these people. The Dinka areas as well have a number of types of specialists who are easy to find. The exception to this are the ran wal or herbalists who are few and difficult to contact.

10. The diseases confidently treated ranking exercise allowed rapid focus on conditions that were dealt with confidently. The exercise was conducted at a number of different levels. Initially the full ‘master disease list’ was discussed and sorted into the three main confidence categories (‘very’, ‘not very’, and ‘not at all’). By the time people had gone through the full list, they were too tired to continue further. Subsequent discussions concentrated on the confidently treated diseases, and on different treatments used for a single condition. In all these cases, the discussion, based round the card as the physical representation of the disease or the particular treatment, was as at least as valuable as the ranking positions into which they were put.

11. Other lines of enquiry were pursued when discussions allowed. The points and questions above were used as checklists rather than being followed rigidly.

12. Interviews with specialists, interviews around animals (known in PRA texts as ‘interviewing the animal’, and including questions from, for example, ‘progeny history’ interviews) and direct observation of specialists at work, were particularly fruitful. Specialists tended to be knowledgeable on most aspects relating to animal health, and ‘animal interviews’ were particularly useful in understanding symptoms and prognosis for specific diseases. Group interviews with key informants were particularly useful for exploring differential diagnosis and understanding subtleties. These points were true for Dinka and Nuer; the best illustration of the last point being the Kakuma Camp specialist workshops.
DISCUSSION OF EVK FINDINGS

GENERAL

First and foremost, we were surprised and heartened by the level of enthusiasm and support with which this study was received among the southern Sudanese. In one case one of us was introduced to the Tonj County Commissioner as “one of the people who is doing the wonderful study to preserve our culture”. The Chairman of Kakuma refugee camp, Mr. Deng Dao, opened the workshop with the specialists by emphasising how important it is, especially for people who have been scattered and displaced, to work to preserve their culture and document the elders’ knowledge.

Overview

Both Nuer and Dinka have, as expected and partly known already, a rich tradition of animal health care that encompasses good husbandry, active avoidance of situations that might compromise the health of their animals, diagnosis, treatments and minor surgical procedures. Many decisions that relate to health care are taken collectively through the process of discussion particularly amongst men. This includes when and where to move herds and, amongst the Dinka at least, diagnosis of specific illnesses. Within both tribes are specialists, people who through experience have particular skills in some aspects of animal health care, who are called upon by other members of their community.

Within the wide spectrum of activities and skills that affect animal health, the OLS livestock programme has been most involved with the prevention and treatment of the small number of ‘major’ diseases for which there is an apparent lack of effective local remedies.

Traditional animal health specialists are still working in parallel with the OLS livestock programme, and it is unclear why there have not been more linkages between the two ‘systems’. This is discussed further in the following sections, particularly under ‘Specialists’ in the Nuer section.

Animal Health Problems

Most of the animal health terms collected are listed in the Resource Manuals, together with definitions, descriptions and treatments as far as possible. With the study period short, and the study area geographically limited, it is unlikely that these lists are comprehensive. Nevertheless the broad range of conditions gives a glimpse of a rich vein of knowledge based on careful observation, and wide experimentation with, and refinement of, treatments.

Within the broad field of animal health knowledge, some problems are adequately controlled or treated, while others remain a cause of great concern. The OLS livestock programme has successfully identified many of the latter group, and is able to provide vaccinations against, or treatments for, some of these.

The diseases most confidently treated traditionally using either materia medica such as plants, or minor surgery, are considered, perhaps not surprisingly, to be less of a problem. Overt recognition of the skills involved in dealing with these problems is part of the process of integrating EVK into the programme.

Even when traditional treatments are not effective, the psychological value of doing something should not be underestimated (see Kwacakworo 1994). In many of these cases there may not be practical modern treatments either.

Vocabulary and Language

The study of word usage was one of the most fascinating aspects of this study. However the team recognise that linguistics is a complex area of study by itself, and the process of translation will have clouded interpretation. The points made are therefore presented for discussion and are not to be considered authoritative.
In the Nuer areas, there appears to be considerable variation in the use of the same or similar disease names, not only between ethnic groups, but within local populations. There is greater consistency between groups of local specialists but even between these, there was not always a consensus. NGOs have collected widely different disease lists (see, for example, the spreadsheets at the end of the Nuer Resource Manual), and these have in some cases been interpreted into western disease terms differently.

While there are some local names that seem to correspond closely with western 'diseases' (e.g. the Nuer gieng which is used fairly consistently to describe a disease that is probably Rinderpest), some words are not used for a particular 'disease', but for a syndrome or pattern of symptoms, which can lead into others or change, depending on the course of the pathology (e.g. the number of terms for wasting diseases which have different aetiologies and likely outcomes). Other words seem to describe a single symptom or manifestation of disease (e.g. the Nuer sheth meaning diarrhoea, or sor meaning abortion), but are used in a general way, (in much the way that 'dysentery', which is the specific symptom of bloody diarrhoea, is used by lay people in the west as if it was a disease).

While it initially seemed that there was more variation than consistency in the naming of Dinka diseases particularly among the "lay" people it became clear during the two day specialist workshop in Kakuma that diseases are named carefully and "not for nothing" as one of the participants informed a fellow participant from a different Dinka section. There was intense and heated discussion on the naming of diseases between the seven Dinka sections represented in the workshop and it was evident that these specialists have clear and rigorous ideas regarding disease names and their symptomology. It was also demonstrated during the course of the workshop how it is that diseases ideally are diagnosed. Each disease description from all the groups began with a scene in the cattle camp. "If the cow has this and that symptom you call together the elders in the camp and tell them what you have seen and have them look at the animal, examine the animal, and discuss the problem and then they will know and decide together what the disease is". Thus disease diagnosis is done by consensus and discussion as well as from the history and by physical examination. This very much resembles a modern day "rounds" in a hospital. These experts in disease diagnosis have been thinking about diseases and common presenting symptoms and less common symptoms, disease progression and prognosis for many years and presumably taking part in the daily "rounds" of disease diagnosis and treatment recommendations. Thus it would seem advisable to include them and rely on them for assistance in understanding the various names.

The livestock programme is conducting its training courses, commendably, using local terms for disease as far as possible. The differences in interpretation between NGOs and individuals need to be clarified, and definitions standardised, to prevent the possibility of confusion.

Standardisation of the spelling of an oral culture, particularly when there are gradations in dialect, is difficult, but is a necessary first step to recording its knowledge before it is lost under new information. There are parallels with other languages, such as Arabic and Chinese, where the written form is standardised but the oral form has wide differences.

The OLS livestock programme, working with linguistic and animal health experts, both local and with organisations such as the Summer Institute of Linguistics (SIL), should start to record words that relate to animal health and standardise their spelling. This standardisation would apply to usage by the OLS livestock programme, other ‘external’ agencies, and when writing; this recommendation does not imply that there should be any attempt to influence actively the way the words are used by local people in speech.

The first steps in this process are to record all the different words and pronunciations together with their various meanings. In conjunction with linguists, single, or acceptable alternative, spellings of words, can be matched with the various meanings and usages of the word or words to form a dictionary of animal health terms. The two resource manuals with this report are an early stage of this process.

One example of a confusion in the Dinka is with the prefix ma. In general this means disease, we were told. Thus we were aware that maliei and liei are the same disease as are matuntun and tuntun. However it turned out that matak and atak are not the same disease. Atak is a form of mastitis and matak relates to the spleen. This could also be confused with Jong tak which sounds like black quarter and presents with a swollen spleen. Jong also means disease.
If there is any uncertainty, or dialectic variation in use of words, local and western disease names should not be paired. Until then, people should learn more about the way the words are being used in the vernacular, and try to go along with that.

The Resource Manuals

The resource manuals attached to this report contain the bulk of the information gathered during the course of this study. They are organised as follows:

- An overview of the contents of the resource manual.
- The results of the interviews with groups of women and groups of men about each others roles.
- A comprehensive disease list or grid containing all the disease names or variations that our study team gathered or heard about during the course of this work.
- Summaries on each of the locally named diseases. These are a compilation of the information that we have on each disease, from local people. This information includes that gathered by the local interviewers, richly supplemented by specialist interviews and other sources.
- A section which lists plants used in herbal treatments and their Latin names where we know them. These treatments, both herbal and non-herbal are also referenced in the above summaries.
- Electronic versions of the databases of the translated interviews with ordinary local people. These are the interviews based on the EVK Question List and the Master Disease List as described in the methodology.
DINKA

Background to the Dinka

The Dinka are the biggest tribe in southern Sudan numbering about two million. They are Nilotic speakers and practice transhumant agro-pastoralism moving between cattle camps near the villages and sorghum fields and the dry season grazing areas, the swampy toic. Dinka have large numbers of big, long horned cattle to whom they devote their lives. The name Dinka was not known to their foreparents and is not part of the Dinka vocabulary. It came about as a result of a misunderstanding. It seems an early explorer travelling in the south Sudan reached a village and asked the people who they were. Assuming that everyone must know what tribe they were, they instead responded with "We are people of Ding Kak" (the name of their chief). The name of the tribe living along the Eastern bank of the White Nile was henceforth known by outsiders as Dinka. They call themselves the Muonyjang as do the tribes who live around them.

As part of this study an initial attempt was made to include the disease vocabulary from the different Dinka dialects. During a workshop in Kakuma these were divided into 8 main groups, the Dinka Bor North, Dinka Bor South, Ngok, Agar, Ciec, Twic, Malual and Rek dialects. Participants chose to group several together as they were very close. Thus the Agar and Ciec were put together, and the Rek and Malual. A point to cause further confusion is that the Dinka Bor North group have under them several subgroups which include the Twic, Atuot, Thac, and Ngok. The Twic and Ngok found under the Bor group are completely different apparently, from those in their own sections. (Grouping and explanations of sections was done by the workshop participants at the beginning under the direction of the Chairman of the Camp, Mr Deng Dao. The authors make no claim to accuracy or ethnographic precision).

Study Context

The study initially focused on the Dinka Rek who are the inhabitants of Tonj County, Bar el Ghazal Province. The interviews took place in Ngabagok, in Ananatak Payam, and Marial Lou, in Makuac Payam. World Vision with Unicef, and VSF-B in Marial, provided much support and assistance. The timing of the study allowed the team on the first trip to visit several cattle camps many of which were very close to Ngabagok. Unfortunately, by the second visit a few days later, all the camps were deserted and the trek to the toic well underway. Lack of water was cited as the major reason for the somewhat sudden decision to move so early.

Generally the rains begin around May to June and the people come home from the toic to the permanent cattle camps, villages and farming areas. Planting, weeding, and harvesting sorghum, ground nuts, sim sim and many other crops are the major activities during the rains. By October the rains have finished and the harvesting is done. The Dinka begin to start thinking about the toic, the swampy areas inaccessible during the rains. The cattle are moved to the toic as soon as the grazing and water become insufficient. This is often around December and January. Some of the women stay home in the village and others go to the toic. Grass is burned in December to allow fresh grass to come up. By February most of the people are in the toic. The swamp waters dry up rapidly under the blazing dry season skies and the grass withers and fades. By April, the grazing and water are again in short supply and the cows and people are hungry. Fishing is one of the main activities in the toic. The rains come in May and June and the move home commences again.

Methodology

As discussed earlier, a brainstorm session was held with a mixed group of about 30 people in an attempt to elicit a current working ‘master disease list’. This list of about 80 diseases was then tested and checked against other disease lists which have been generated regularly in the livestock program to compare spelling, and look for synonyms and missed diseases. The next step was to translate the EVK question list into the Dinka language. A major focus of the study was to get a handle on the average, or ordinary person’s, level of EVK. This was done by training local interviewers to ask and write the questions down in Dinka in an open ended format in an exercise book. Some of the interviewers did not speak English. These books were then brought to Lokichokio where a translator wrote the answers in English. The diseases were then entered into the data base. This information was supplemented and enriched by follow up interviews and discussions with specialists and experts of
various types. The final step in this process was to pull together the information from the general population and from the experts into a summary on the particular disease or animal health problem. These summaries also attempt to pull in other pieces of information gathered from the various programs working in South Sudan.

A total of eight local Dinka (two of which were women) at various times in the study were trained to interview and they all were able, with varying degrees of success, to complete some interviews. The total number of interviews per interviewer, ranged from 6 to about 80 diseases in total. The final number of interviews completed was 245. Of these, 78 were with women and 167 were with men. Several specialists were contacted in Tonj although most had already moved to the toic, while about 25 were interviewed and or brought together for a workshop in Kakuma.

Findings

A Master veterinary disease list for the Dinka Rek group has been generated and refined several times and is probably still in the beginning stages. There are 87 disease (or animal health problem) terms of which at least 9 are synonyms. At this point it appears that there are 6 diseases or problems which definitely have one or more synonyms, which would make a total of 78 unique disease terms.

Ideally, there would have been approximately the same number of interviews on each of the diseases on the list. Unfortunately this did not happen and some of the diseases have a disproportionately large number of interviews while others just have one or two. It was explained by the most industrious and committed interviewer that when he asked a potential informant about a more obscure disease, they often said they knew nothing about it. (It would perhaps have been best for them to go ahead and interview on what the person did know about the disease, rather than asking people first if they knew all about a particular problem). He would then ask the person which disease they knew about and more often that not the informant wanted to talk about about pou or awet! And so they did. There are thus 11 interviews on about pou and 7 on awet. Thus the numbers of interviews on each disease seem to reflect the ones which are often ranked as most common or most important. There was not time to sort out the various categories of what is a disease vs another kind of problem. Hence ticks, infertility, and infectious processes such as CBPP, are all lumped into the list. Of the 78 disease or problem terms there are at least 50 for which someone mentioned a local herbal treatment.

Disease lists by species for the other dialects were generated in Kakuma and can be found in the resource book. Each group was asked to list the top ten diseases and for those the workshop participants, after intense discussion, came up with a spreadsheet of what each of those diseases was in their dialect.

Problems with the EVK Question List

In the Dinka area, the locality question was not particularly useful, and it is unclear where the misunderstanding arose. Occasionally there were answers such as ‘the toic’, or ‘the cattle camp’ but usually the answer was that ‘this disease affects cattle owners all over the world!’

Another place where some useful information was lost was on symptomology. There were cases where the informant did not mention the most obvious sign of a particular problem as it was assumed that everyone must know that. Thus for matengic, which is widely understood to be bloat in cattle, one informant did not mention bloat as a sign at all.

Some useful information was also lost in what was meant to be the post mortem question which is the second part of the signs and symptoms. Unfortunately, this was usually answered only in terms of whether the meat could be eaten and what it tasted like!

Notwithstanding some of the problems encountered in this first attempt to use the question list in the livestock program, there was much that was learned. It appears that there is generally a fairly high level of awareness and understanding of veterinary animal health problems in the general population. This is especially true of the more common and important diseases such as awet, (probably rinderpest) and about pou, (CBPP). However this knowledge is not spread evenly through the community, as there are those who know much more than others about disease diagnosis, symptomology and treatments.
The sample is too small and the translator bias too great to attempt at present any kind of comparison between men's and women's knowledge.

Before discussing some of the findings, all of which will be found in the Dinka resource manual, the authors would like to point out that this is not a complete treatise on the topic. The time was short and the geographical areas limited, and thus the remarks are simply initial observations based on the interviews, conversations held with various community members and NGO personnel, and various project reports, particularly from SCF, VSF Belgium and Unicef. Without doubt the work would have been improved from input from those who know more of the topics. The authors do not claim to have done a comprehensive literature review. Literature on the subject was scarce in Lokichokio and a main documentation centre, which we had hoped to access, has not been available for some months.

Perceptions of disease

The 'species affected by a particular disease question' yielded unexpectedly long and detailed lists of the various types of wildlife, kinds of gazelles, antelopes etc, who are affected by the disease. The Dinka Rek have a high awareness of the diseases in the wildlife populations. It would have been interesting to include a question on transmission from wildlife to the domestic population. The 'species' question also brought to light those diseases which are also thought to affect people. At times it was not clear whether the interview was dealing with a cattle disease or a human disease.

Causes of disease

There are a number of diseases, particularly the more dramatic ones, which are thought to come down from the sky (nhial) or be sent by God (nhiallic).

However there are several diseases such as liei, liny and acak which are thought to be directly due to lack of hygiene and poor management.

Informants are aware of the role of insect vectors such as mau (widely thought to be tsetse fly), which causes a condition called mau, and thoor, which is thought to play a role in liei. The Ngok also say that nyur, an insect that swims on the swamps, is the one which brings awet. Several of the informants commented that their lives are ruled in some ways by the insects!

Floods, and more specifically swampy waters, are thought to be a cause of ill health in animals and people. Swamps are the cause of guao and breed the snails which are responsible for jong acom. (Has schistosomiasis been considered by the livestock programme in the differential diagnosis for some of these water borne diseases?)

Hyenas hold a special place both in disease causation and in treatment. A disease called jong angui (hyena disease) is caused by cattle sniffing an animal which has been killed by a hyena. Athat is treated by burning a hyena skin for the affected cattle to inhale. Interestingly, Gabra pastoralists of Northern Kenya, also have a disease which they feel is caused by hyenas, and another one which can be cured or alleviated by breathing the smoke of a burning hyena skin.

There is a disease called kwet kwet which is named after the woodpecker. The affected cow presents with a tail that resembles a tree that a woodpecker has pecked. The tail is bitten or wounded all the way around. They say that no one has seen a woodpecker attacking a tail and yet "who can know?"

There are other diseases which are caused by the soil or grass that is being eaten. One, atwiny, comes from eating the new green shoots of grass on the toic when the rains have come. Other diseases come when the cattle are grazing on burnt grass and eating ashes. Still other grass such as abar is thought to be very toxic to cattle.
Contagion

The Dinka have a keen awareness of contagion and understand the importance of isolation and quarantine, unlike some of the Kenyan pastoral groups. Diseases are spread by smelling urine, dung, or even the smoke from the dung of an affected cow. Diseases can spread through drinking water together, and some diseases are airborne. There are also many diseases which they accurately do not feel are contagious.

Prevention

As mentioned above the most often mentioned means of prevention is to move one’s animals far from any affected animals. Dung from an affected cow in the herd will be collected and taken far from the cattle camp and buried rather than being dried and burned. In one case, after an animal is diagnosed and treated for dat or acony, it will be pegged and a sort of trench dug around it, so that the disease does not travel from the affected animal to the rest of the herd.

There are several diseases for which there are preventive remedies which are administered when the disease is found in a nearby herd.

Insects and insect borne diseases are prevented by scrupulously cleaning the sleeping area of the cows, drying and burning the dung at night. The smoke from the fires keep the numbers of mosquitoes down in the night, and in the morning, tick and other ectoparasites are repelled through the daily dusting of warm dung ash all over their bodies.

Signs of ill health

While signs such as tearing, limping, shivering and loss of appetite are of course noted and mentioned, it was interesting to read how often the sign of ‘hair standing up on end’ was mentioned. This and the coat colour changes are thought to be a key sign pointing in the direction of a number of different diseases.

On the subject of wounds, informants were unanimously concerned not about the wound per se, but about the chances of the wound becoming infected through dirt or through flies laying eggs in the wound. All informants said that wounds would heal without any special treatment as long as there were no eggs laid in them and as long as they did not smell bad. There are many herbal treatments which prevent flies from coming to a wound and from laying eggs in it. There are others which can kill the maggots once they are there and ‘take the bad smell away’.

Dinka are aware that high body temperatures can cause abortions or fatal seizures. There is a form of athat for which the treatment is to put the cows into the river. If the cows are recumbent and cannot reach the river, wet swamp grass is brought to place on them to bring down the dangerously high body temperatures. There are also herbal treatments which are used to bring fever down and it is understood that treating the fever is different from treating the disease.

Ticks (acak) are considered to be a problem mostly because they attach to the cow's udder and cause damage. Thus the treatment for mastitis (atak) is also a treatment for ticks. Somewhat surprisingly atak is thought to be a problem in both sexes.

Other practices....

Withholding water

There are many pastoral groups who treat various disease by withholding water. This was not mentioned by any of the 246 informants for any of the diseases and was also not mentioned in the Kakuma workshop. One of the authors specifically asked about the practice, and no one in the workshop had heard of it. (Apparently this is not consistent with other observations. Tim Leyland (personal communication) reports that Kwacakworo had found that many of the groups do withhold water from livestock for diarrhoeal diseases.) Kwacakworo found this to be a common practice for human ailments.
Withholding Colostrum

There are also many groups who feel that colostrum is bad for the new born calf and will prevent it from nursing until the milk comes in. Many of the Dinka informants agreed with this position and suggested that drinking colostrum causes a disease, called deny by the Rek, which presents with bloat, constipation and death. However many others said that colostrum is necessary for the new calf to allow it to grow strong and the problem is a matter of quantity. (More on this in the resource manual).

Traditional Treatments

There is a high level of botanical knowledge and uses spread through the community. Most of this knowledge appears to be in the public domain. We did not find any cases, with one notable exception, where an informant was reluctant to disclose information. More than 100 plants were found which are used as treatments for animal diseases.

There are also many other types of remedies such as ghee, sim sim oil, beans and dung ashes. Urine which has aged for 3-4 days in the sun is called keth, and is used as a powerful disinfectant and treatment for some conditions; it is also used to tan hide for rope making.

Wild animals such as porcupines, ostriches, sitatunga, hyena, termites and vultures play their part in disease treatment. Vultures are the main ingredient used to cook a soup which is given to sick cattle. In the same way that chicken soup has been found to have a clumping effect on leukocytes and thus act as a common cold remedy, so perhaps vulture soup does the same.

There are at least 10 treatments, plants and others, which are used as galactagogues, or substances given orally to boost milk production. One of these is beer, and another is fermented and sprouted sorghum seeds. Other groups in East Africa also use beer to increase milk production in animal as do women all over the world.

Many of the remedies are to be administered at 4 AM when the rumen is at it's emptiest. Some are given once and others repeated over a period of days.

Many of the treatments are carefully and confidently used. Informants, particularly the specialists, are realistic and pragmatic about the treatments. Some they use because they don't know what else to do and they must do something. Others treat symptoms and thus offer the animal a chance to survive the disease and still other treatments are used because they will most certainly cure the animal if used properly.

Although there were some informants, particularly in the towns, who gave the impression that now that modern medicines had arrived they had no time or use for traditional medicine, generally those who used them, and the specialists who discussed them, appeared to have confidence in many of the treatments.

Modern Medicine

Although the focus of the study was not centred on knowledge, attitudes, and uses of modern medicine, the subject was touched on in the ethno-veterinary question list where the informant was asked about modern treatments after the query on traditional treatments. All the responses to this question, along with all of the rest of the information, will be found and summarised by disease in the Dinka resource manual. One example that might be of interest are the answers on awet, commonly considered to be rinderpest.

In spite of the success of the livestock program in controlling rinderpest, the most significant animal health problem of southern Sudan, just one of the six informants interviewed on rinderpest mentioned vaccination. Four out of six were aware of some type of modern input for awet. One of those said that the vet people had brought in medicine to stop awet but nothing could. Another said that the modern medicine for awet was a white medicine from those who sell them. She thought it was effective. Still another informant said that ttc (tetracycline) capsules, bought from the market and injected, are effective for awet. This same informant said that one preventive measure is to buy the ‘medicine for
awet' and carry it with you and if you have a cow with the disease, treat it and the rest of the herd. The fourth informant said that VSF-B sell a medicine that is supposed to be effective for awet but 'it did not save my cow'. The other two knew of no preventive measures (other than moving far from affected herds) and knew of no modern treatments.

In another interview on nyok, thought to be lice, the informant said that the traditional treatment of urine and soil was quite effective. However, there was a new medicine which could be found in the medical clinics which was used for termites in houses. This one could be rubbed onto the udder of the cow and was effective in killing nyok.

Although in some cases the sample size is small, the responses to some of these questions might be a useful aid to Unicef and NGOs in the planning of training. It is unlikely that any CAHWs were interviewed and no attempt was made to randomise the informants in any way. The authors are aware that these answers on modern medicines are not necessarily reflective of the knowledge of the general population on the subject, or that they reflect on the effectiveness of the livestock and veterinary inputs.

Specialists

There are various specialists among the population. There are those who castrate (atet ruc ruc) dogs, smallstock and cattle. There are also people who do bone setting both among people and animal. Sometimes they are the same person and sometimes not. There are those who cut various types of swellings such as cual, the hygromas. There are also the experts in dystocia and the rarer experts in foetotomy. Some people have the reputation for the ability to treat infertility. Others are called upon to shape horns (atet nguat) and treat the horn disease, kiec. There are also people who happen to be very good at disease diagnosis and treatment in general and these are often called on for cattle camp consultations.

A slightly different category from the above appear to be the ran wal. These are the medicine people or herbalists. They are fewer in number than the above and have the reputation for secrecy. There is another group of people called pouwet weng who are thought to be related somehow to cattle and possess some healing powers with cows particularly in regard to infertility. Another type of healer are the spearmasters who sacrifice chickens or sheep to send diseases away. (More on the specialists in the Dinka resource book).

Public vs Private domain

With one exception, the ran wal from the Kakuma workshop, it seemed from the responses of those interviewed in the study, that many of the herbal treatments and other remedies are in the public domain. The technical / manual procedures used by the specialists are all discussed freely and without any seeming attempt to withhold information.

Gender roles

From the very few discussions with women and men done in the course of the study it is difficult to make many / any generalisations. However the single and mixed group interviews showed none of the rancour and hostility between the sexes that was present in some of the Nuer interviews. There was a sense of warmth and affection as the women and men discussed and reminded one another of their various roles. Much of the work is shared such as house building and cultivation and the tasks are interdependent.

There were five women present in the Kakuma specialists workshops. Two of them were older women who reminded the group regularly that they and other women know nothing about animal diseases. Whatever they know they have learned from their husbands so they are not the ones to ask. Three other women (younger) would then politely respond that things are different in different areas and where they come from the young girls grow up in the cattle camps too and if they want to learn about cattle treatments they have equal opportunity with the boys to do so. These younger women felt that they knew quite a bit about diseases and treatments. They contributed regularly and productively to the discussions on treatments. It is not clear why the two older women were chosen by the camp
‘community’ or the local authorities to participate although it was helpful to the general discussion to hear the different opinions expressed.

**Relations between the Young and the Old**

The civil war in southern Sudan has caused, either directly or indirectly, the death and displacement of many people, including children, and many are refugees. The effects of the loss of a generation's culture skills and sense of place has yet to be fully felt and understood but will certainly be significant. We did note the interest and attention given the elderly interviewees in Kakuma by the local youth. Several of the individual interviews were held outdoors under a tree and at one point there were more than 40 young boys listening to the interview with rapt attention and respect.

**Kakuma Work**

The chairman of Kakuma refugee camp, Deng Dao, was enthusiastic when approached about the idea of interviewing animal health specialists in the camp, and facilitated an initial formation of a list of more than 10 specialists. Originally it was anticipated that these would all be interviewed individually, but after the first several interviews it seemed most efficient to have the discussions in a group workshop. Thus five animal health specialists of various types were interviewed individually and then a larger group of about 20 was convened, to participate in a two day workshop. The full results of the workshop and the individual interviews are to be found in the Dinka resource book.

The workshop began with an opening by the Chairman. He spoke about how very important it was to the Dinka collectively, to retain their traditional knowledge. This was something that was of particular concern for those of them who were displaced and had lost their animals. Maintaining their culture was something they must strive after. This was followed by introductions.

After that, the participants divided into what they considered the most appropriate groupings. There were eight groups: Dinka Bor South, Bor North, Ngok, Agar, Ciec, Twic, Rek, and Malual.

In each of these groups the mandate was to brainstorm all the diseases and animal health problems by species. They were then to choose the top ten most important or common diseases. After re-convening much of the remaining time was spent in group discussion on those top ten diseases. The first group to go gave the name of one of their diseases and then described the disease as carefully as possible. After the first person presented the disease others in the same group were asked to add anything to make the picture more complete. After this was done, each of the other groups were asked their name of that disease based on the description they had heard. The names across the groups were written down on newsprint. Following that, participants were asked first to talk about symptoms, aetiologies etc, before the floor opened up for treatments.

When all had been said on the one disease than the next group took it's turn to write a disease from their list and give the description. This was a richly rewarding process with much passionate and intense, though polite, discussion on the diseases.

Finally, there was some discussion and description on some of the specialities, including castration, horn training and treatment, dystocia and foetotomy. Not all the specialities were covered due to time considerations.

Participants were understandably curious as to how this information would be used and if they would get some sort of feedback. We told them we would ask Unicef to ensure they have a copy of the resource manual on the Dinka. They are keen to have some animal health training to give them some extra tools when they return home and this has been in the IRC plans for some time.
A final comment

A Samburu pastoralist from Kenya who has been working among the Dinka for a month said... "I thought that we Samburu were experts in cattle keeping. We are the ones who love cattle above all else. But now that I have seen the Dinka I feel that we know nothing about cows. Those Dinka and their beautiful cows... when the cows come home in the evening each one has its own rope and its own peg. Each one is examined as it is tied for the night. If one is missing it is known immediately. The Samburu simply herd them all into a boma and a cow can be missing for some days before it is known. With the Dinka cows... each day the place where they sleep is cleaned, with all the dung dried and ready for burning. The fires are lit to keep mosquitoes from the cows through the night so that they sleep well. And then in the morning, the songs begin to the cows. And the cows are rubbed and cleaned all over with the ash of cow dung. The long horns are oiled and shined. I thought we knew about cows but I was wrong."
NUER

Introduction

The Nuer, who call themselves Nath (plural) or Ran (singular), are a Nilotic people who live in southern Sudan, in the swamps and open savannah that stretch on both sides of the White Nile south of its junction with the River Sobat and the Bahr el Ghazal, and on both sides of the banks of these two tributaries. They are related, and are culturally and linguistically similar, to the Dinka. Their culture is based around livestock, particularly cattle, which they husband with great skill and care. They are a dispersed and anarchic society of trans-humant agro-pastoralists. During the wet season, they congregate in kinship groups in their more permanent home places on higher ground, to grow crops. As the dry season progresses, some members of the household disperse more widely into the loci (seasonal swamps or water meadows) to optimise use of fishing and grazing resources. (Evans-Pritchard 1940).

Cattle are their most treasured livestock, but they also keep sheep and goats, some chickens, and in some places, donkeys. They also keep dogs for hunting, security and companionship.

There are linguistic differences within the Nuer tribe. There are two main dialects west of the Nile (Leich State), the dividing line between which lies north of Ler, separating mainly Western Jikany Nuer in the north, from mainly Dok. The two study sites, Wichok, in northern Leich State, and Nyal, in southern Leich State, allowed comparison between the two. There are wider linguistic differences between Nuer west and east of the Nile, as can be seen from the table of disease names, collected by NGOs at different Nuer locations, which can be found at the end of the accompanying Nuer Resource Manual.

Wichok is a location in an area of long, low sand bank islands separated by meandering swampy water courses. Lines of mainly kinship group homesteads lie along these islands, widely dispersed. Permanent settlement in the area is recent, precipitated by war insecurity. The security of its isolation outweighs the disadvantages of its being an unhealthy place to live; it is very wet (and peculiarly beautiful).

Nyal is also a relatively recent centre. A couple of years ago it was just a hamlet of homesteads on a large area of scrub forested ground, raised above the adjacent swamps. It has built up around the airstrip, again for reasons of security.

Both locations have therefore attracted a diverse range of ‘new’ inhabitants. Both areas have also suffered their worst flooding for many years.

Methodology

Methodology is described and discussed in the general section at the start of this report. Many of the comments mentioned in the Dinka section are also true for the Nuer areas.

In the EVK question list, the answers to some of the questions suggest that more time could be spent refining the translations so as to gain greater benefit from the interviews. For example, the locality question, and the question about the exact meaning of the disease name were poorly understood, at least early on. Symptomology was not asked in a systematic enough manner and, possibly because the name implies the appearance of the disease or is assumed to be known as with the Dinka interviews, often appears to leave out the main symptoms, which were often described in another part of the interview. And the questions on what happens to animals with the disease, were answered too generally without reference to specific interviewee experience.

Detailed differential diagnosis is best explored by and with people with a keen interest in animal health. The priorities and interests of some of the people who are settling around some of the NGO centres appear to be changing away from livestock husbandry, and the best discussions often took place further afield.

Both Nuer locations are covered for animal health work by Veterinaires Sans Frontieres - Switzerland (VSF-CH), which does not maintain a permanent presence on the ground, compared to the Dinka study area in Tonj County which has two animal health NGOs permanently resident. While this may have
long term advantages with respect to working more sympathetically with local knowledge, it complicated logistics during this short study. There is also a particular shortage of literate or English speaking Nuer. These two factors, and the unexpected benefit of Dinka specialist workshops in Kakuma refugee camp, explain the more limited information collected about Nuer knowledge, compared to Dinka.

Two interviewers were trained in Wichok, and four in Nyal. It was not possible to recruit female interviewers, which may have affected the quality of information collected from women; although, as with the Dinka, no attempt has been made to compare the information collected from men with that collected from women because such detailed analysis would be premature with the current data.

The total number of interviews collected by the local interviewers was 98. In addition to these, 48 disease descriptions collected by NGOs were included in the analysis. The Nuer database therefore has 146 entries.

Approximately 90 terms are described in the accompanying resource manual. Many of the more common terms are supported by three to five database entries (the largest number of interviews, six, was done, for some reason, on nyaliny, which is lice). However many descriptions are based on only one or two pieces of information. The interviews conducted directly by the study team concentrated on some of the more confusing differential diagnoses, on the process of disease description, and on some treatments.

At the time of the study, cattle had already started to move away from the main centres, which limited the number of animals accessible during the study period for logistical and security reasons, and limited the amount of direct observation and ‘animal interviewing’ possible.

If the livestock programme integrates further study of ethno-veterinary knowledge into its routine work, good constructive working relationships, built over time, with translators, specialists and herders, will reduce these constraints.

**Husbandry**

Husbandry and management of livestock underlie all other aspects of animal health care. As the Livestock Programme has already been asking people the local detail of their seasonal movements and other aspects of their husbandry, little time was spent during this study on these areas of traditional animal health care. However they are central, and this part of the programmes work is commended, should continue, (particularly in finding out the reasons why things are done), and should be the background to all discussion and training.

**Vocabulary**

The spreadsheets at the end of the resource manual give all the different names of diseases collected by the livestock programme in the various Nuer locations, and recorded in documents shown to the study team. As far as possible, different phonetic spellings of the same term have been grouped together but there may be some errors. Conversely, where some terms initially appeared the same, but later proved to be different, for example with bac and bak, or wath and waath, they have been separated.

Where definitions or descriptions were available, or could be investigated during the period of this study, they are included in the resource manual. The manual contains all the information collected on diseases, treatments, specialists and the division of labour between men and women, as far as possible without interpretation. Any interpretations are contained in this section of the report.

**General levels of understanding**

Levels of understanding, knowledge and interest, (at least in the study), varied enormously. In general, interest, and therefore ability to sort out minutiae, was greater in Wichok and in the countryside away from Nyal centre. It is unclear to what extent the variations of word use result from translation difficulties, or from mixing of ethnic sub-groups in the study locations, but the variation in use of words
and understanding of disease terms was unexpectedly high. As with the Dinka areas, there was
greater consistency of understanding about the more major diseases, and also between specialists.

**Causes and perceptions of disease**

The causes of disease given were very pragmatic, and little was said about supernatural associations
with disease. It is likely that there is a supernatural dimension to the way people perceive health and
disease (because there is in most societies; and Kwacakworo (1994) describes the metaphysical
beliefs that overlie interpretation of human illness in several southern Sudanese tribes, including Nuer),
but this was not explored during the study. The only allusion to a metaphysical dimension to disease
causation was with reference to *kaithual*, snake bite; it is thought that treatment of those bitten by
snakes are people who were born as twins to snakes. However the explanation of this was not
elaborated.

Ill health generally, and many specific diseases, were associated with water and insects, which are
recognised as a major, but ultimately unavoidable, problem. Insects and other arthropods are seen as
both a nuisance, as capable of causing direct physical damage (see *chak*), and as potential vectors of
disease (eg *magwar*). Snails are also associated with disease (see eg *jok tak*). The collection and
burning of cow dung, and the use of the resulting ash, to keep insects and other external parasites
away, are central activities.

Poor nutrition and poor hygiene are also recognised as important (see *manyuany* and *nyaliny*);
*luaks* and *chireys* (byres and the pegging areas outside the byres) are generally kept scrupulously clean.

As with the Dinka there is a clear understanding of contagion, and of the importance of isolation and
quarantine (diseases of dogs are generally dealt with by killing affected animals to prevent possible
spread to others, see eg *dengber*, *gom* and *waath*). There is also awareness that several animals can
be affected by a disease at the same time without it necessarily being a disease that can spread
between animals.

Plants are known to be capable of causing ill health both because they are poisonous (eg *tap yaca*
causing *liei* in goats), and for digestive reasons, (eg the overeating of new grasses at the start of the
rains). It is also known that therapeutically useful plants can be poisonous (eg *njal*).

Many diseases are known to have very specific causes (eg *rieny* is associated with castration) or
modes of transmission (eg *yung hok*). *Rol* is thought of as a different from other diseases, and is
known to come through the mother.

Disease risks are balanced; for example, smoky *luaks* are known to precipitate respiratory problems,
but this is better for the animals than the torment and possible disease transmission from mosquitoes
and biting flies. *Dang dang* and *ngony* are known to be potential dangers that result from the practice
of burning old grass to encourage a flush of new growth, and to avoid them requires careful husbandry.

Environmental hazards are recognised as dangers to health, as are behavioural traits; eg most broken
bones are caused by animals falling down holes, or from animals fighting. Bulls that persistently fight
may be castrated.

Other causes of disease mentioned include wind, droughts, wild and other animals.

**Specialists**

Within the community there are people who are acknowledged as being particularly skilled at certain
things. People who are known to be particularly good at something are known as *leert* (literally means
worker). Animal health problems with which people may seek the assistance of a *leert* include bone-
setting (repair of broken bones), castration, dystocias, and the cutting of lumps and lesions. Dystocias
are commonly dealt with but embryotomy was reported to be a skill known only to a few. Of lumps cut,
*banjaer* is the one for which *leerts* are most commonly called.

The term *leert* is not used as a title, but as a description which may be qualified; so a *leert buoty* is a
‘worker with wounds’ (also known as a *mur buoni*, ‘one who applies compresses to wounds’). Unlike
the Dinka who have horn specialists (to go with their cows with special horns), Nuer men deal with their own cows' horn problems. Other terms used for animal health *leerts* include *kim*, the Arabic word for doctor (especially for bone setters), and *gam whore*, (‘mid wives to cattle’).

*Leert* gain their reputation within the community through their interest and success. Some have learnt their skills by observation, trial and error; others learnt from their fathers. The *leerts* spoken to said they would teach their children if they were interested, and would be prepared to teach anyone else who was interested too. One *leert* is assisted in his work by his daughter as his sons are away at school, cattle camp, and elsewhere.

It seems that most livestock owners (ie nearly everyone) will try most practical things on their own animals, and resort to *leerts* if they do not have much success, or feel something is particularly difficult or complicated. It is not clear if Nuer make collegiate diagnosis as described for the Dinka, but this process would allow specialists to become prominent and be on hand to assist if necessary.

The *leert* met during this study claim they are called upon with variable frequency, some months not at all, but sometimes twice or more in one week. They will generally walk several hours to assist, further for more complicated things if they have a particular speciality. The work is apparently done as a favour, not for money. One who treats people and animals said he is paid for his human treatments, but his ability to treat animals is a gift from God which he is happy to share for free.

All *leerts* spoken to were in favour of the livestock programme but expressed an interest in becoming more involved. Those asked, said they would be prepared to teach on CAHW training courses, though one expressed worry that he would be held responsible if animals die. At present, the *leert* consider themselves complimentary to the CAHWs, but it was unclear how much co-operation there was between the two groups. They feel that the CAHWs should be taught to castrate, and that modern medicines would assist animals that got sick afterwards to recover quickly; nevertheless, most castrated animals survive, which is why people continue to ask the *leert* to do the job.

The impression given in the discussions is that *leert* are innovators in their community; for example, one had taught himself blacksmithing as well as animal health.

It is unclear why the animal health *leert* are not more involved in the OLS livestock programme. The impression from the OLS side is that the ‘community’ should put them forward if that is considered appropriate, either as CAHWs or in some other role, and that they are given the opportunity to do so during the process of community dialogue. The impression gained during the consultancy is that the community in general, and the *leerts* in particular, feel it would be a good thing if they were involved. *Leerts* seem to be highly respected members of their communities, and there was no reason to think that the communities would be deliberately excluding them from a programme that was so clearly in their own area of interest and specialisation. Other Community Based Animal Health Programmes have faced similar situations, finding themselves unintentionally working in parallel with traditional healers without much point of contact (eg ITDG, Kenya, personal experience), and have had to make specific arrangements to involve these people. It may be that the community views the process of setting up a CAHW programme, including the use of the latest Participative Rural Appraisal methodologies and ‘community dialogue’, differently from the implementing agency, and has its own assumptions about what is expected. This is something that would be worth investigating further, across a number of CAHW programmes.

Without the benefits of specific research into the reasons behind this problem, the authors believe that community animal health specialists ought to be involved in CAHW programmes, and that this should be made clear to communities from the start, in case they feel they should be starting this ‘new’ activity with a clean slate. It could also be made clear that if they feel there are active reasons why they do not want their traditional specialists involved, that also is their choice. Underlying these comments is the assumption that the background study of any CAHW programme would involve making contact with local animal health specialists, and getting some feel of their place within the community, so that their role can be dealt with sensitively during the process of ‘community dialogue’.
Traditional Treatments

Knowledge about almost all traditional treatments appears to be in the public domain. On only a small minority of occasions did people say that knowledge of a treatment was known only to a few. It seems that some people know more about plant identification and usage than others, and although not the norm, may, in some instances, decide to keep parts of this knowledge secret. Someone explained that there are publicly known treatments, then there are certain plants that people try by themselves and have confidence in for a range of conditions; and it is these plants that are often not divulged, even to family members, so that the knowledge dies with the person who discovered it.

Minor surgery, for example on a range of lumps (see eg banjaer), was the most confidently used type of traditional treatment.

Cows urine is used a lot as a disinfectant, for example for cleaning wounds and other lesions. Unlike some other pastoralist groups, there is no apparent distinction between the use of fresh or stale urine. Many people refer to the use of fresh, boiled and cooled urine. Stale urine was not referred to particularly; one informant said the urine should be left for a few hours in the heat of the sun.

Plant treatments were mentioned in 21 out of the 98 local interviews. Although not initially talked of very positively, enthusiasm for plant treatments increased during discussions. The reason for this is not clear. It may be that the study was associated with the supply of modern drugs, and therefore plant treatments were played down, or it may be that the Nuer have limited access to, or expertise with, plant medicine. In much of Nuer land, there is limited plant biodiversity, compared to the more varied ecological terrain occupied by the Dinka or Zande. Discussions with local specialists about which plants they would use for what and why, led the author to believe that in the hands of some people at least, some local plant medicines would be efficacious. This is certainly an area that needs further investigation.

Modern treatments

As with the Dinka, modern medicines are not well understood within the local community. The medicines available are tried on most conditions, although this is not completely random. Some CAHWs seem to be using combinations of trypanicides and flukicides on most animals with chronic or wasting conditions, and although this is a pragmatic approach, it makes modern treatment more expensive and therefore less sustainable for the majority of owners. Although difficult, any means of refining diagnosis, by for example greater use of the laboratory in Lokichokio, is to be encouraged.

Other practices

The method of castration discussed and observed during the course of the study was always open. The description of how to do it was consistent between informants and, apart from the details of aftercare, was consistent with that observed. The castrators observed were as proficient as any western castrator, and (given that many western vets do not use any anaesthetic when castrating) no more painful to the animal. There was no mention of closed methods (eg using sticks or rocks to destroy the cord or testicle). From this study, there seems little reason for the OLS livestock programme to be introducing new methods of castration, particularly using equipment (Burdizzos) that can with time become damaged and potentially inefficient, at least in the geographical area visited. Any blanket introduction of such new methods should therefore be avoided.

As with the Dinka, water was not reported to be withheld from sick animals (although Kwacakworo (1994) mentions this practice for people), and there are differing messages about colostrum. Although the first comment about colostrum is often that is causes sickness and should be withheld, further questioning about husbandry of neo natal calves suggests that they are allowed to suck from the cow from the first day, but the amount they are allowed is strictly controlled. Someone made the point that access by the calf to the cow is carefully controlled through until it is weaned.
Gender roles

Traditionally it is said that men take responsibility and most of the decisions about livestock, especially cattle. Yet women are responsible for milking, and for the collection of cow dung in the mornings, and it is recognised that they therefore may be the first to notice signs of ill health. Women also may assist in the gathering and preparation of traditional treatments; and they are also responsible much of the time for sheep, goats and young stock. They are therefore quite involved in animal husbandry, and animal health care.

When discussing roles, it is possible for groups of men (and women, as happened in Nyal) to claim that women have very limited responsibility for animals. However, in Wichok, the women were a very lively and animated group, and said ‘the men say we know nothing about animals, but we know very well’, and proceeded to volunteer more diseases, and more about the diseases, than any of the men’s groups.

Particularly in view of the social changes taking place in Nuer society, the role of men and women in animal care is likely to become less clearly defined, particularly for female headed households, or households which have lost sons to the war, or to education (not only does modern education at local schools lead to children spending less time looking after animals, but some informants reported children moving to Khartoum, or to refugee camps in Ethiopia, Kenya or Uganda, for periods of up to several years, in search of education).

The further involvement of women in the livestock programme would be beneficial, but would have to fit with their already full lives.

There were no women leert met and it was regularly said they do not exist. However, it was mentioned once that there was a traditional birth attendant in Nyal, an old woman, who also helped sheep and goats in difficulty giving birth. Unfortunately it was not possible to find her, or indeed hear any other mention of her.

Social changes

Nuer society is changing. The war is ‘killing young children, women and men; many men join the military and die. Sometimes if the women is strong enough and if her husband is killed in war, the woman becomes household head. The husband’s cattle are not taken by the brother but are left for the woman and children - the wife does everything’.

According to a war widow in Wichok, who chose to stay independent, she ‘does everything for her family, yet some men still go to her for food. However I am helped by neighbours, for example with making tie ropes for the cattle which only men make’. She also seeks advice on animal health matters from neighbours although she knows how to do a lot from having watched her husband in the past. Apparently there are ‘lots of widows since the war started; traditionally they would go to live with their husband’s brother (though not necessarily as a wife), but not so possible now as too many widows’.

For security, people have moved to places where they never used to live permanently, and where they do not necessarily know about the local plants, or how best to husband their animals. Many of the medicinal plants used in Wichok are still brought from the Mankien area (Bul 1). As one man said, ‘Wichok is not the motherland of Bul; previously, people used to be in Bul 1 (around Mankien) but came to Wichok for safety because it is so isolated’.

War is not, however the only factor bringing social change. Because of the lack of schools in southern Sudan, young men are going away to find a ‘modern education’.

As a result of these factors, many young men are spending periods of many years away from their families. Not only are they no longer always available to learn traditional skills, but they may end up feeling that their new experience and knowledge is somehow better than traditional knowledge. In there place, girls (some of whom have probably always assisted their fathers) may play a more substantial supporting role, and may be a valuable resource in the preservation of local knowledge and skills.
ZANDE

Zande Ethno-medicine

The Zande tribe number about 100,000 and live in Sudan, Western Equatoria, Zaire, and Central African Republic. The area in which they live is extremely rich in a wide variety of flora and wild fauna. The Zande have very few livestock and are primarily agriculturalists. They are well known for their sophisticated agricultural systems and adaptations as well as their knowledge of wild plants for human medicines. The study hoped to look at the Zande EVK for two main reasons. The first was to have an agricultural group to contrast to the Nuer and Dinka as primarily cattle people. And the second was that due to the Zande reputation for herbal medicine there are some Dinka informants who report (William Mogga personal communication) that they sometimes go to the Zande to find medicines for their cows.

Unfortunately, due to several delays and difficulties in the Dinka part of the work it became impossible to travel to Yambio as planned. Fortunately, during the course of the study there were several Zande who visited Lokichokio. During the conversations it was learned that one of them, Moses Takpafe, is a herbalist of some renown from Yambio. (although he feels that there are many more knowledgeable than him). He kindly agreed to a interview conducted in Pazande here in Lokichokio.

The details of the interview are to be found in Annex 1.

Comments

Moses was ready and able to give complete and detailed recipes for all of the herbal treatments that he mentioned although time and the scope of this study did not allow. The impression of the interviewing author is that Zande ethno-medicine is rich, detailed and probably as intricate and sophisticated as their agricultural knowledge. The human medicine programme could do worse than to look into this rich source of ethno-medicine present among the Azande.
PROGRAMME ACTIVITIES INCLUDING TRAINING

Introduction

The livestock programme conducts a number of different types of structured or semi-structured activities. These are:

- baseline surveys
- community dialogue workshops
- training courses.

The training courses include:

- training of rinderpest vaccinators;
- training of Community Based Animal Health Workers;
- refresher training of Community Based Animal Health Workers;
- training in Participative Training Techniques;
- training of Animal Health Assistants.

Background

These activities are central to the programme, and the way they deal with EVK largely defines the programme's approach to local knowledge. The study team examined available curricula, guidelines, supporting literature or reports from all of these courses and activities.

The programme's aim is to control and treat the most important diseases in southern Sudan, so as to improve livestock production and food security, and strengthen the social environment of the livestock owners. So far the plan has been to teach the use of 'modern' drugs and vaccines to CAHWs, who treat animals and charge for the drugs used. The cost of drugs will be gradually increased to full cost price by January 1998; all vaccines except Rinderpest are being paid for, and it is planned to start charging for Rinderpest vaccine early in 1997.

The programme's approach to EVK has been to elicit lists of 'the most important diseases' in an area, which are then ranked in order of importance, and discussed to get symptoms, and to find out, if possible, the etymological derivation of the word in the local language. Traditional treatments are discussed as they arise but are not investigated, and local specialists are only used in the programme if they are selected to be trained as CAHWs. Where individuals have had a particular interest in EVK, they have investigated the subject further but have not had the time, or a structure, to use the information. Training courses use local disease names, and draw on participants' knowledge of disease diagnosis to a certain extent. In general, the programme has acknowledged the existence of EVK but has, possibly through pressure to 'get started and make a noticeable impact' by both local people and donors, given it a peripheral role. Training focuses on the top few 'most important' diseases.

General comments

Local livestock husbandry practices are central to animal health; and traditional treatments will remain for the majority of people, and for the majority of conditions, the only affordable and available treatments. This will become increasingly apparent as the cost of the livestock programme drugs approaches full commercial rates. It is therefore important that activities support confidence in local knowledge and support the processes by which it is passed on. If the OLS livestock programme ensures that it is doing this, it will be contributing in the long term towards its own aims.

Also, there are social reasons for operating in a way that encourages the respect shown traditionally to older people in the community.

Unfortunately the introduction of new knowledge, including through 'modern schooling' or during development programmes, often seems to undermine traditional knowledge and the newly educated often feel their knowledge is 'better'. This is particularly unfortunate when the knowledge of the older generation has not been investigated before new knowledge is offered in its place. The CAHWs are often (although not always) young men (it is one of the criteria suggested by the programme for selection, when discussing the selection procedure during 'community dialogues') and traditional
specialists are often (although not always) older people. Using specialists as teachers within the programme would help to maintain traditional attitudes of respect. The war in southern Sudan has already fractured society; any practices adopted by development agencies to repair these rifts would be of great value.

If the programme is to develop its approach to EVK, modification of the programmes training courses and activities would provide an obvious starting point.

The programme is to be commended for using the latest participative and community development methodologies as far as possible. Nevertheless, traditional specialists and much traditional knowledge have remained largely outside the programme. This may be because, while the programme assumes the community will volunteer information about traditional systems, the communities may assume the programme must already know and have chosen to work apart from them. (This would be analogous to why interviewees for the EVK question list seem not to give the main symptoms when asked about symptomology, instead offering minor symptoms, possibly assuming main symptoms are ‘obviously’ known.) Another contributing factor maybe that both baseline work and community dialogue are treated as ‘active’ processes; livestock programme personnel generally visit the field to ‘do’ something specific, rather than just ‘hang out’ and have their learning directed by the local people. Unfortunately active, pre-planned investigation may not necessarily mesh well with local animal health practices which, because they are entwined with all other aspects of local culture, require gentle teasing out and cannot be accessed on demand.

(It would be worthwhile investigating the previous point further, both for the programme’s benefit, and also for improving development practice universally.)

This need to ‘do’ arises partly because OLS is categorised as an emergency operation so receives much short cycle emergency funding, which is supposed not to be used for development work, and which demands quickly measurable results; partly as a result of OLS logistical restraints which encourage ‘productive’ use of limited time in the field; partly because local people push for quick results; and partly out of habit, even when donors (such as Comic Relief, pers comm) actively encourage a more low key attitude.

Each of these require different solutions. The authors of this study recommend to donors who are looking for rapid results in southern Sudan, that they take a longer term view, because OLS is a complex emergency that will require well founded programmes to pull it through its problems. Some donors already advocate this approach, and these are to be commended.

With respect to local people, the study team found that once they had made it clear why they were there, calls for more drugs or whatever quickly died down, and interesting discussions took place. It seems that by getting rinderpest more or less under control so efficiently, the programme has created space for itself to investigate EVK without having to feel the need to achieve urgently yet more. Programme personnel should be able to spend time in the field learning from local people in a more ‘passive’ role (though this does not exclude the practice of ‘active learning’, ie learning by doing and participating).

Specific comments

1. Baseline surveys

A baseline survey has two objectives, to collect baseline information against which the progress of the project towards its overall goal can be measured, and to collect information to be used in designing appropriate activities. In practice, particularly in a war zone, the first objective is difficult to realise, and the main effort should be directed towards the second.

Guidelines to the information to be collected in the baseline survey are contained in the ‘Questionnaire for Baseline Survey to Generate Data to be used for Training CAHWs’. This document is presumably to be used more as a structured question list than a questionnaire. The document contains some good lines of enquiry. However much of the information could be collected using a range of PRA techniques, together with short, specific, semi-structured interviews. It contains very little about EVK, and it is suggested that some or all of the methodology used in this study be included. Certainly some effort
should be made to contact and talk to local specialists; and to investigate their possible role in livestock programme activities.

2. Community Dialogue Workshops and Community Dialogue

Both these activities have become quite formalised, and tend to include mainly community leaders, mostly male, although wider involvement is encouraged since the programme realised that community leaders were not necessarily representing or passing messages to their communities.

The programme should spend more time on genuine 'community dialogue' ie taking time for informal or semi-structured conversations with a wide cross section of the community, the ordinary women and men, about a range of animal health issues.

At the initial community dialogue workshops, it is important to emphasise that the programme intends to combine the best of traditional knowledge with the best of local knowledge, in order to get the best results, and that this will involve continuing study within the community.

3. Community Animal Health Worker (CAHW) training

The CAHW training is one of the main pieces of training undertaken by the programme. Unfortunately it was not possible during the course of this study to examine curricula for CAHW training, because the official version had not been finalised, and the NGOs contacted used informal notes. It is therefore not possible to make detailed comments.

In order to reinforce the place of modern medicine within a tradition of good animal health practice, the CAHW training sessions could be started with a larger session on context. This would include an overview of husbandry and migration practices, the full range of disease conditions identified (and listed in the resource manuals), together with discussion of the different approaches to treatment. As far as possible, local specialists could be brought in for these sessions, and the CAHWs will be able to observe that the OLS livestock programme personnel are learning from local people and that education can be a two way process. As EVK studies continue, more background information will be accumulated, the resource manuals will improve, the picture will become clearer and more complete, the more confidently used local treatments can be taught alongside modern drugs, and specialists brought in to teach some parts.

The imperfect fit between local disease names and western disease names needs to be addressed at some length because it is a source of confusion, and could lead to poor drug use practice.

4. Community Based Animal Health Worker refresher training

These are a continuation of the above, and the same comments apply. Refresher training should, of course, result from close follow up of CAHWs in the field, and discussion with the community about their strengths and weaknesses. The brief outline for these courses suggests that EVK is not yet a part of these courses. As the programme changes to include EVK, these courses will inevitably start to include it. One area that needs to be explored at refresher training is the evolving relationship between CAHWs and local specialists, and ways in which they can work together more effectively. Refresher trainings would be a suitable forum for CAHWs to learn skills from specialists.

5. Participative Training Techniques (PTT) training

PTT aim to encourage participants to learn by thinking, and one way to achieve this is by drawing on their own experience. Aspects of EVK should therefore naturally emerge during participative training courses. The PTT training courses should explicitly encourage this.

6. Animal Health Assistant (AHA) training

The four month AHA training course is the most ambitious course being run by the livestock programme, and deserves to be commended for tackling such a difficult, but much needed, task. It is by far the largest course being run by the programme, and the only one with a full working curriculum. The detail in the following criticism is a reflection of these factors.
As with the rest of the programme, EVK does not feature strongly in the AHA course curriculum. In line with the rest of the programme, this course should incorporate EVK as its foundation. The future AHAs could, and should, learn from local specialists, who should be brought in as resource people whenever possible.

The following comments refer to the curriculum for the first course, started in April 1996. We apologise if the points mentioned have already been addressed. The dates or blocks in brackets refer to the location of the session in the first course curriculum outline.

There is a good session (week 3, block 1) during which the different ethnic groups list their livestock related activities. This session will suggest points at which local knowledge can be discussed further during the rest of the course. There are many other places where EVK could also be brought into the curriculum. Any discussions of husbandry should be based on good local practice which is best learnt through discussion with good herders. This applies, for example, to the sessions on selection of animals for breeding (Wed 1 May), and on grass burning and range management (Thur 16 May).

There are a number of discussions on animal health practices which would benefit from local input. The session on the anatomy of bones should refer to bone setters, who provide the only realistic hope for animals with broken bones (Thur 16 May). (Perhaps one of two local bone setters can be brought in to demonstrate and teach the students about bone setting.) The physiology of the milk reflex could refer to local practices used to stimulate milk let down (Tue 14 May). The concept of quarantine is well known and widely practised (7 June). The diagnosis of swellings is well understood in both the Nuer areas as well as the Dinka, where there are specialists who cut the cutable, and have treatments for some others. These experts could be involved in the session on swellings (Monday 13 May). There are some useful local practices for mastitis (13 June), and a number of confidently used treatments for assisting in the management of retained placentas (14 June). Experts in the other areas such as those who deal with dystocia and do foetotomies as well as those who castrate should be asked to teach and demonstrate in the relevant sessions.

Care should be taken in selecting examples during the lectures. Some of those chosen for fluke and tick control (19 June and 10 June) are not appropriate to southern Sudan and could cause confusion to participants whose English is not very good. The programme would not want to appear to be advocating the widespread dissemination of toxic chemicals throughout the environment.

Care should also be taken to ensure that wording does not inadvertently undermine local culture and practices. One exercise (conducted on 17 June) looks at people’s perceptions of others, and divides people into two types; the qualities of the ‘traditional’ person are invariably bad, and it is not clear from the notes how this is dealt with in discussion. It may be better to use a different word than ‘traditional’ in future (e.g. conservative, or reactionary). In the guinea worm session (27 May), spear masters are referred to as using ‘witchcraft’, a word that has strongly negative connotations. In the same session, a number of traditional treatments for guinea worm are listed without any mention of whether they work or not.

The conclusions to a session on 7 May compares traditional ways of looking at disease with ‘scientific causes of disease’. The stated conclusions undermine local knowledge and are misleading. The recent elevation of science, from what was previously considered to be merely the use of rigorous critical thought in the study of the physical sphere, to a position of reverence, is now being challenged in a number of contexts. There is ‘science’, ie careful observation and critical assessment of tried and tested procedures, in the way traditional treatments have evolved. In many cases western medicine has advanced through purification of materia medica identified by ‘traditional’ cultures. Much of western disease investigation and drug development has resulted from advances in technology more than science, and the two should not be confused. Also, there is still a lot of mystery about disease processes in western medicine (see Kwacakworo 1994); and many western / modern medicines have not been proved efficacious by scientifically accepted clinical trials.

There is a session towards the end of the course which looks at the different roles of the ‘stakeholders’ in a Community Based Animal Health project; at least in the write up of the session, the community (of those who own the cattle and are expected to be the users of the program) is left out altogether.

These points together could suggest to students that their traditional knowledge was considered inferior in some way and best left behind. I am sure that is not the intention of the course planners who have
done a fine job in setting up the training centre. By addressing these points, the course can continue to develop in a way that builds positively on local knowledge.

**Developing the EVK content of the programme**

In order to realise the two benefits of incorporating EVK mentioned at the start of this report, ie the maintenance of a diverse range of treatments and the social benefits of building on traditional knowledge, it is recommended that the OLS livestock programme takes a more holistic view of animal health and uses local knowledge as the framework upon which to build its work.

Baseline surveys, community leaders workshops, 'community dialogues', and training courses could all be modified to make traditional animal health knowledge and practices more central to the programme.

In order to achieve this, the baseline work, and the relationship with the community that is built up from that starting point, should involve greater contact, including informal meetings to discuss animal health issues, with both ordinary people and specialists. Good relationships with specialists should eventually allow some assessment of the efficacy of local practices and treatments. All training should emphasise the overall animal health picture, of which modern drugs and vaccines are just one part. Once developed, the manuals of disease summaries will assist in drawing this picture, and in showing the range of conditions for which traditional treatments remain the treatment of choice.

The programme should actively point out the technical limitations of modern treatments. The remarkable success of the rinderpest vaccine has provided a valuable 'result' and therefore space to progress in an EVK-sensitive manner, yet could have given a false impression of the power of 'modern' medicines.

Local specialists should be included in the training courses as much as possible, and the programme should be seen to support their continuing role. It may be that they can pass their skills to CAHWs, or some may wish to learn, for example, the use of antibiotics as a supplement to their practical skills. The programme should not start training CAHWs in skills for which there are local specialists before it has consulted them and examined their role very carefully. It should be possible to hold specialists workshops to enable them to share their experience, develop their skills, and encourage good practice. CAHWs should be strongly encouraged to refer cases to the relevant specialists in their area.

It is not necessary that all CAHWs learn all traditional practice, or vice versa; merely that information continues to be considered common where there is interest in it, and that the role of CAHWs, although possibly remaining a separate, new speciality, is seen to be considered ‘within’ the existing system, with CAHWs complementary to other specialists.

These changes require commitment from the whole livestock programme, but should make the work more community based and more interesting to implement, as well as being beneficial to the local communities both socially and by developing a sustainable animal health service.
WHAT WOULD A LIVESTOCK PROGRAM LOOK LIKE IF IT MADE EVK CENTRAL?

This next section contains some thoughts and ideas that could be modified and changed but might be of assistance in thinking about the subject. These are not recommendations but are rather some ideas of what could be done. Please accept these as just some ideas that might foster other perhaps more useful ideas.

We suggest that the data base could be expanded.

We suggest the idea of a series of workshops with the various groups of local specialists, and then ongoing collaboration and cooperation. These are the experts in castration, reproduction, lumps and bumps cutters, bone setters, phytomedicine and diagnostics. The livestock programme will benefit from input and interaction with these animal health colleagues.

A workshop (or a series of these in all the various areas) could be held to bring together the castration specialists in the area. Let them know that the purpose is to learn from them and look at ways forward for mutual cooperation. Encourage them to discuss and demonstrate their methods practically to their fellow participants. Facilitate discussion on problems they have had, solutions they have found, and after care treatments they might have used. Encourage them to generate their own list of helpful hints for good technique and practice.

We suggest that the livestock programme refrain from lecturing or training unless specifically requested. Ask them how the livestock programme can help them. Perhaps the CAHWs can send referrals to them, or would they like to teach the CAHWs to castrate to reduce their work load? Do they want or need antibiotic assistance for the times when the wounds get infected? (The Dinka practitioners already have medicines for such cases). Generally explore what ways the livestock programme can help them.

Unlike some other East African pastoral groups, the Dinka and Nuer to whom we talked, seem to feel that there are very few problems with the castrations done by these knowledgeable people. Those whose work results in infections and or deaths do not get asked to do it anymore.

A second type of workshop in the series would be for the reproductive specialists, particularly the dystocia experts and the even more specialised foetotomists. Encourage them to describe what they do and discuss techniques among themselves. Discuss problems they have had and see if some of the more skilled can assist those less skilled, in solving these. Again the livestock programme will have a facilitatory role in these workshops and not a directive teaching one. Ask the reproductive people what can be done to work together more closely. Is there anything the programme can do to help them? Suggest referrals, bringing them in to teach in the AHA schools, CAHW training, refreshers etc. Perhaps they would like to be trained on antibiotics? Or perhaps some teaching on brucellosis would be helpful?

A third group of workshops would be for the cutters and treaters of lumps and bumps. A sub-speciality of these would be the people who do the hygromas. Ideally, a portion of the workshop would be discussions of the methods and then actual practical demonstration of the same. Again the same format as for the above could be followed. What can the livestock programme do to work with and assist them?

A fourth group of workshops would be for the bonesetters. The same format could be followed as discussed above.

A fifth group would be those who have a particular knowledge of phytomedicine. Among the Dinka these are often the cattle camp leaders, bany wuts, certain people who have just developed an interest and seem to have an aptitude for such things in the community, and the herbalists themselves, the ran wal. Again, after the first discussions among the group regarding diseases which have particularly efficacious treatments, several treatments for diseases or conditions could be selected for more thorough attention. Several days or more could very profitably be spent in mini demonstrations and trainings of collecting the proper plants, preparing them and treating affected animals with them. The same sort of format as for the above could be followed.

Another type of workshop would be many one day herder workshops which could be called "awareness raising workshops". In this case, it is suggested that awareness raising goes both ways. The livestock
programme might have it's "awareness raised" by learning more about how the activities of the programme, trainings and community dialogues, and any other kinds of information, are trickling down to the ordinary man or woman herder in the toic or cattle camp. It is suggested that these one day workshops include men and women together or separately, have from 20-40 participants and be very informal. In this case the livestock team will explain to the community that it is important that all cattle owners who use and pay for the service understand what it is they are paying for and what the responsibilities of the CAHWs are. To that end the participants will be asked what sort of interventions have come their way and what disease problems they solve. Participants should be encouraged to say what medicines and services they have used and what they understand about these interventions. A discussion and understanding of the differences between vaccination and treatment should be drawn out. This would be the part for livestock programme awareness raising. Then the livestock people will have brought to the workshop their coolboxes, vaccine samples, novidium tablets and oxytetracycline vials. These should be brought out, discussed, explained, and handled by the participants. Differences between vaccination and treatment can be discussed using locally appropriate example and illustrations. Uses of the cool boxes, and vials should be explained and all the participants should handle and examine the tools of the trade. In other words, it is suggested that there be a demystification of the various medicaments. This would be the second part of awareness raising.

Finally the programme can explain to the participants that they are becoming aware that there are many good plants for treatments for a number of conditions and that the program only has medicines for a few problems and is now wanting to learn about the local treatments that people consider effective and work at promoting those.

Based on the results of the above workshops a direction for the livestock program may come into focus which would might be more EVK centred.

One main issue in a reorientation of the programme to de-emphasise increased selling of modern drugs, is that of incentive for work and sustainability. To date, most community based animal health systems have used a percentage on the drug cost to keep the paravets or community animal health workers working and give them some reward for their labours. This allows a program to be sustainable with out pumping in money for salaries. The downside is that this can encourage more and more drugs sales at all costs.

Are the CAHWs who are chosen for this work by the chiefs and "communities" the sort of people who would be happy to treat an animal for a song? Would they be pleased in certain cases not to use any modern medicine but rather give advice on a plant treatment and by so doing gain the respect of the owner and find a place in the next song?

Perhaps the livestock program could consider itself a generator of just one more category of specialities, the modern medicine and vaccination people.

There are many other areas that could be explored and new and innovative ideas might be generated. Besides the atets and leerts there are individuals who are known to be good diagnosticians and treaters of all kinds of diseases including some of the more serious ones. It couldn't hurt to look at ways to dialogue with some of the knowledgeable individuals and affirm their knowledge by paying serious attention to it.

CONCLUSIONS

There exists a vast body of ethno veterinary knowledge resident in the pastoralists of southern Sudan. Specialists are more knowledgeable than ordinary people, whose knowledge, although they also have a lot of it, is unevenly distributed.

The veterinary treatments and procedures practised by specialists are quite sophisticated.

There are many traditional treatments many of which are considered effective.

The Dinka at least seem to use much the same terminology and descriptions of disease across the species including wild animals and humans.
ANNEX 1: ZANDE ETHNO-VETERINARY AND ETHNO-MEDICAL KNOWLEDGE

Interview with Moses Takpafe

The interview began with questions about animal diseases and treatments. He confessed that the Zande have very little experience in livestock management and know very few diseases. They do keep chickens, and have for a long time, but he did not know much about chicken diseases. However he did have a few things to say...

The *anongbo* root is used for epidemic diarrhoeal disease in chickens. Moses did not know the name of this disease but said that the chickens begin by just 'sitting around' (‘*na sunga a sunga*’) and then have diarrhoea. *Anongbo* root is collected, cut in pieces, and then pounded. After pounding to a fine powder, it is added to water and given to the chickens to drink ad lib. If too sick to drink on their own, they are drenched. This medicine is effective. ‘It saves them’. (‘*Si na batasa ra*’)

*Rindiseke* leaves are given to sick goats. (Again Moses did not known the name for diseases of goats but said that they are just not looking well, standing around and not eating). *Rindiseke* cures the sick ones but can also be used as a preventive measure.

*Pilipili* (little red peppers) is a very good general medicine for chickens. It is crushed and mixed with water and given in the mouth. It is a type of strengthener for them.

I asked him about whether the Dinka near Yambio use the Zande medicines for their cows. He said that while he could not see any reason why some of the human medicines wouldn't work for animal problems he did not know of any Zande who treated animals and had never heard that the Dinka come to the Zande for help with their cows. He was under the impression that the Dinka themselves have many of their own medicines which work quite well for their animals.

On the subject of human medicines Moses prefaced the subject by saying that while he knows about some of them there are many others who know more and many who have a high success in curing a number of difficult diseases.

He suggested that he just try and think about medicines for some common problems. He began with:

1. Malaria medicine....
   *kpazamangu*
   *rindiseke* root (*tara*)
   *ngbanvuru*
   *darra*
   *anyege* (honey)

2. Jaundice
   *ngboro*
   *bakaturo*

3. Headache (*salaři*)
   *agundu*
   *ngbunga*
   *furukpe*

4. Kind of headache that is blinding (*boro are ngere nga te*)
   *bambiri dungbutu*
   *dawa mbege*

5. Wounds (*oro*)
   *kubokubo*
   *nzike*
   *pirigibaso*
   *aranga oro*
   *anyege* (honey)
6. Worms (gbiro vuru boro yo)
gen
bagu
mgbiri mgbiri

7. Diarrhoea (vuru boro na ga aga)
baro (sap) ngiri
anyege (honey)

8. Constipation in small children
aranga paku

9. Snake bite
an emetic (aranga wo) plant is called zigawo
egg in mouth

10. Cough (kora)
ngba ho kao
ngba ho bagara
fajefaje tikpo
abanza
haraka (roast it and peel it)

11. Pneumonia (kaza ngazire)
Get a vine called nangana; make it into ropes flat and tie it around the persons ribs; smell will enter into
the persons chest directly and through inhaling, and make them better.

12. Endometritis (kaza diambara)
aranga kaza diambara ndubgi

13. Hernia (kaza akumba)
Put the leaf of gbururu in water drink it over a few days and it goes back inside;
bagbiri-aranga kaza akumba - roast with peanuts and hernia will go back in.

14. Eye problem
chronic problems - squeeze leaf of ngunj and let the juice drip into the eye
rimi rimi tara
ngbaho agbangbe (mouth of the sweet potato)
breast milk - 3 drops into eyes for eye infections

15. Ears (ayakanyari)
abagambu
nzeme age (oil of flying ants)

16. Back aches
amatindi (anthill) - lie on it
kurundu gbomu - the tree they build gbomu (grain store) with has an arange that can be drunk for
backaches

17. Broken bones
use mozungu - tie with something like a gbara

18. Burns
use honey (anyege) and with severe burns from a fire use the oil of gbara
ANNEX 2: BIBLIOGRAPHY

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Also many project reports from NGOs (particularly SCF) and UNICEF.

ANNEX 3: ABBREVIATIONS

ACROSS Association of Christian Resource Organisations Serving Sudan
ADRA Adventists Relief and Development Association
AHA Animal Health Assistant
CAHW Community Animal Health Worker
EVK Ethno-Veterinary Knowledge
HHFSP Household Food Security Programme
ITDG Intermediate Technology Development Group
NGO Non Governmental Organisation
OLS/SS Operation Lifeline Sudan / Southern Sector
PRA Participative Rural Appraisal
PTT Participative Training Techniques
RASS Relief Association of Southern Sudan
SCF-UK Save the Children Fund - UK
SIL Summer Institute of Linguistics
SRRA Sudan Relief and Rehabilitation Association
UNICEF United Nations Children’s Fund
VCM Veterinary Co-ordination Meeting
VSF-B Veterinaires sans Frontieres - Belgium
VSF-CH Veterinaires sans Frontieres - Switzerland

The following meanings are intended in the context of this report:

The livestock programme The livestock section of the HHFSP of UNICEF OLS/SS
The OLS livestock programme All the livestock work conducted under OLS/SS.
ANNEX 4: LOCAL KNOWLEDGE PROJECTS FOR SCHOOLS

The Idea

The OLS Livestock Programme has commissioned a study of ‘ethno-veterinary knowledge’ in the belief that the programme will be improved if it builds on the best of both local and western veterinary knowledge, and in order to record local veterinary knowledge and to affirm its value. Part of this study has been to collect information about diseases and treatments from ordinary people. The process has unearthed a rich vein of information.

From this process came the idea that it would be educationally, socially and culturally beneficial for school pupils to be given projects occasionally which involved going around the older members of their community (both women and men, their parents and grandparents, for example) with a structured list of questions on a particular subject, and collecting information and stories which would then be gathered together as a local resource book.

The Advantages

Some possible advantages of such projects are:

• that they would be cheap and easy, not requiring external resources other than exercise books and pens;

and that they would:

• start to record local knowledge on a wide range of subjects, to produce ‘local text books’, and to overcome, partly, the lack of culturally specific resource books;

• use the older members of the community as a resource, as ‘encyclopaedias’ of the local, orally transmitted cultures;

• reduce the loss of knowledge and respect between generations that results both from the introduction of formal education and from the war;

• take some of the teaching load off teachers by allowing pupils to acquire knowledge elsewhere;

• teach good science and philosophy to the pupils by making them think, explore and enquire.

Suitable Subjects

These projects could be useful in a number of projects, such as:

- biology zoology eg knowledge of domestic and wild animals (diseases etc)
- botany eg knowledge and use of local plants (medicinal, veterinary and food)
- agriculture
- ecology
- geography
- history
- arts and crafts
- languages

In addition, these projects would give pupils practice in writing and could also be used to provide interesting stories for translation into other languages.

How could these projects work in practice?

1. The projects could be built into the school curriculum in a number of places so giving teachers the authority and confidence to try them.
2. The teacher would give a list of about five questions to the pupils on the particular subject. These questions should be open and respectful to encourage the informants to give stories, anecdotes and as much useful information as possible.
3. With some subjects, such as arts and crafts, or botany, the projects could involve something more practical such as learning to make something, or learning to identify plants, or prepare traditional treatments.
4. When the project is finished, the pupils would write their answers into a single exercise book that could stay in the school, and be available for anyone to read, as a local resource.
5. If this idea were to be widely adopted, it may be possible at some stage to get funds to publish some of the information from these books in some form.
Teacher training

Teachers could be trained to run these projects (which are actually extremely easy) by making them do the exercise themselves during teacher training courses. For example, they could be sent out to ask members of the community questions along the lines of 'What do you think it is important that your children learn in school?'.

Some examples of questions

The idea of Local Knowledge Projects was introduced to Teacher Training Course facilitators at a workshop being run by MRDA in Lokichokio, and to a group of teachers being trained by PRDA in Nyal, both during November 1996.

Each group was asked to think of questions that they could give to pupils to ask their parents and grandparents on a particular subject. The MRDA questions are available from MRDA, and the PRDA questions, which were supposed to be for a local history project, are given below as examples. There are some very good questions in this list.

Where do the Nuer come from?
What happened in 1956?
Where we got the home and who tell us to building?
Why do we carry spear and kubab?
Why do we never see at night as the goats?
How did people study their cultures in the past?
Why didn’t the Sudanese get their liberations in the past?
Where were Sudanese natives from?
Why don’t all the nations share one language?
How did the Arabs become part of the Sudanese?
What happened when I was a little boy?
What is the kingdom of the Nubian deam?
When the Sudan got independence?
Why is the Nuer use a cow?
Where does the River Nile come from?
Why have we no school les time ago?
What happened in 1955 in Sudan?
Why Arabic deceived Southern Sudanese people?
What was said by British government to the southern parts of Sudan?
Where Nuer general settle long ago?
How Nuer behave in their life?
What was the attitudes of the Nuer in the past?
How they live?
Why they are calling Nuer?
What they belief for?
Which of the properties that they deal for?
Why we kept cow and some people are not kept cow?
Last time ago you eat what?
Why we plant maize?
What is used of goat and sheep?
Why do dog nit have hood?
Last time community were doing what in society?
What was the best way of earning the cattles in last or past?
What was the best way for pasturing the cattle?
Why is it important to continue with last or past culture?
Which human activities was done last time?
How can the people get most cattle last ago?
Last ago if the cattle are not getting good healthy what do you do about?
When there is no good harvest one year how can people get their food?
If you want to have most cattle what do you do to get more cattle?
What do people do if there is much rain or flood about cattle?
Why you don’t have school before?
How can our elders kepeed their animals?
Can they have any vaccination last time?
How can they feel now?
Some where were they grazed their cows?
How can they were believed their God?
How do people dance in our culture? and how do people settling their marriage? and why we are walking naked?
How do people protect themselves against diseases?
How do people rules each other? and what do they use when they are dancing? and what are their main transport in the past?
How long did Nuer begun? and where do they came from? and what are the use of cattles in Nuer community?
How do Nuer people earn their lives in the past?
When did Arab people came to these country?
Who is the first kingdom Nuer area?
Where do Nuer come from?
Why have youth used to walk with shield and spear?
How people lived long time ago?
From where do people get their food?
And how people cultivate their farms long time ago?
And from where they obtain water to use for food and use for drinking both animals and people?
What are those useful things that we use for transport long ago?
How can the people live in the past?
When did Arab people came from these countries?
Who born Nuer?
How can they keep their environment?
From where Nubia come from?
How the people are living in the past?
Where does people are going in order to cure their sick in the past?
Have you hospital in the past?
How did you marriage in the past?
Did you have clothes in the past?
My father did you know history event?
What thing did you use for?
Did you live in the good places or not?
Where did you get your food from?
Where did the Nuer come from?
Why we have no place clinic in long time ago?
Where we got food in past long time ago?
Which way we communication ourself in long past?
Why in long future our animals feel sickness and die?
Where we find our clothes?
What was happened during 1955 disturbances?
Why do northern Sudan cheat southern Sudan?
Where did Arabs come from?
Why do Unicef people give a help to the southern Sudan people?
Why education is very importance in southern Sudan?
Where did the Nuer come from?
What is the difference between Nuer and Dinka?
What is the difference between Islam and Christian?
Why do the people use the spear long time ago?
Why the Nuer people called Nath?
How do you chopping down the tree for making your luak?
Why you father, your lives existing on the cattle, and what was you benefited of cow since your grandfathers life?
What kind of thing did you cooked the food for its and where do you get the fire on?
How do you communicating yourself when anything happen to you and your wold community such as war?
My father during your generation can you tell me how do you do your farm before you cultivating seeds on it?
What did the ancient Nuer people did long ago?
How can they travel from place to place?
Where the Nuer come from?
What did they eat?
How can their culture?
How do people study their culture in the past?
Why do Sudanese did not got their independent?
Where were Sudanese native from?
Why were all there nation did not shared are language till now?
How did the Nubanins became a part of the Sudanese?
Where did our community began?
Why were we settle in this areas?
Why the cattle are useful to the Nuer?
How long we had been in these areas?
How do the dura is useful to us?
How do people earn their living times ago?
What do they do in order to get the food?
How did eldest person controlled his families?
What are their main properties which they used to put in their food?
How do they worship their Gods?
Who were the first in the Nuer land before?
Where did the person get mosquito net from?
How did you planted your crops?
Where do you got the maloda for cultivation?
Where did you store your crops?
Are your grandfather and mother a Dinka?
How can we know our livestock to be good?
Why we keep cattles for our life?
Why the people have different language?
Why the Dinka and Nuer have more cattle?
Who create the names of tribes?
Who know the God?
What is the project?
Where are the diseases of cow animals came from?
How you cure the diseases?
To where long time ago peoples they get clothes?
To where upon time grandfathers and our grandmothers get fire for cooking from?
Why the people long time ago was living in the caves?
What is the difference between English people and Nuer?
Why the Nuer people used to call themselves Nath?
Why God created the people in different colours?
What was happen during 1956?
Where are the people come from?
What is your food in the past?
Who created the people?
What is the use of the cows?
Who is the God?
How they use to kill cow to God?
Why Nuer and Dinka use cattle?
In which way do our forefathers get their food?
What does word Nuer mean? and great word Nuer?
When did Sudan get independ?
Which people live in northern Sudan?
Where is the source of the Nile?
How many years did Jesus spend on earth?
Why I didn’t see at night?
Where do we live before, father?
Father why do we have more cattle and goats what do you give them?
Grandfather how do you feed your family?
Grandmother or grandfather how do you planting your crops?
Father how do we build our home?
Where do the people got their food long ago?
Grandmother how did you feed your family?
Why did we use cattle?
Why the people were divide themselves into many different places?
Why now some people were still in bushes while the other were in good position?
What people come from?
Why the moonlight by night don’t light of the day?
Where world got medicine from?
What is sun go to sleep?
What is wind come from?
ANNEX 5: LETTER OF INTRODUCTION SENT TO NGOS WITHIN OLS/SS BY STUDY TEAM

To: All OLS S/S Livestock Programmes  
Date: Tuesday, October 23, 2001

From: Stephen Blakeway

Ref: UNICEF OLS S/S Ethnoveterinary Knowledge Study

I am writing this memorandum to introduce myself, BJ Linquist and David Adolph. Together we will be undertaking a study of the ethno-veterinary knowledge of the Dinka, Nuer, and Zande, between now and the start of December. I believe this study is known to all members of the OLS S/S Livestock Programme.

The objectives of the study are:

• To allow OLS livestock section to gain a greater understanding of: how people perceive livestock diseases; what are considered to be the most effective existing treatments and interventions to cure livestock disease, within the Nuer, Dinka and Zande tribes of southern Sudan.
• To apply the information gained by incorporating it into existing OLS training courses for community based animal health workers, vaccinators and animal health auxiliaries. To make the courses more pertinent to the trainees attending them. Dissemination of information on what are considered the best local treatments and interventions against diseases occurring in southern Sudan.
• To introduce information on exotic herbal treatments which might be appropriate to the Sudanese situation should the plants be present in Sudan and as yet unused.

We are aware that this study is part of a continuing process of investigating and using existing local animal health knowledge, and recognise that each organisation working in the OLS S/S Livestock Programme will already have some understanding and knowledge of the existing local knowledge in their areas of work. In order to maximise the benefits of this study in the short time we have available, we would like to build on what is already known. We also hope the study will be able to address any particular questions about evk that the individual organisations within the OLS S/S may have.

In order to do these things, we hope to be able to talk to representatives of each of the organisations within the OLS S/S Livestock Programme, to show you the terms of reference for the study, to hear of any other specific queries you may have that we could try to find answers for, and to learn from what you already know.

We are aware that during community leaders meetings, and at CAHW trainings, evk of various sorts is collected. This includes lists of local diseases, the meanings of the names, and some of the local methods used to control or treat these conditions. If your organisation has this information recorded in reports, we would be very grateful if you could lend us copies of the relevant reports. Also if you have any information about such things as seasonal movements and the reasons for them, divisions of labour within households, changes in evk over time, or any other relevant subject, we would also be grateful if you could let us know.

Any information given to us will be acknowledged. Our hope is that this study will be of general interest and use to all members of the Programme.

After Monday 21 October, one of us (most usually David Adolph) will be in Lokichokio throughout the period of the study. We will try to contact each organisation ourselves, but would appreciate it if you could let us know when you will be available to talk to us. We should be contactable through the veterinary office.

We look forward to meeting you all.

Yours Sincerely,

cc: ACROSS NPA SCF Vetaid
    ADRA Oxfam SRRA VSF-B
    GAA
ANNEX 6: TERMS OF REFERENCE.

Period of Service

This work should be carried out by SSA consultants working over a period of 4.8 months (25 days per month). The work is for the UNICEF HHFS program’s livestock section. This work is detailed in the 1996 plan of action and $32,000 have been put aside for this work. Because of the specialised nature and the complexity of this work, a team of consultants are to be contracted. The team will work out in advance their methodology, to ensure the work is consistent with the objectives stated and continuity is maintained throughout the 4.8 month period.

The duty post for these consultants position will be southern Sudan. The main work site for the consultants will be southern Sudan unless some force majeure prevents access.

Background

The disaster in southern Sudan has been caused by ongoing civil war and inter-factional fighting. This conflict has destroyed infrastructure and disrupted basic social services and commercial networks in rural areas. Education, artisan work, and professional activities have also been severely curtailed.

Large numbers of people have been displaced and made destitute, the estimated figure being 2.5 million from all provinces in southern Sudan (UNICEF 1993).

In these areas the pastoral populace has been faced with a lack of veterinary services from 1983 resulting in increased mortality and reduced livestock production. Severe flooding in 1988 killed thousands of cattle. There has been wide scale disruption of the cattle auctions and trade routes and large scale cattle raiding. Consequently, tens of thousands of pastoralists have completely lost their means of survival. These people now face starvation. Since livestock production is the basis for the area’s stable economy, food security depends upon steady livestock production. Livestock ownership for many pastoralists has been depleted to the point that there is neither access to land nor a viable core reproductive herd upon which to build for the future. In the worst affected areas the traditional social fabric of the pastoral society is either already damaged or threatened thus making recovery less likely and much more arduous.

The UNICEF - OLS livestock program has traditionally supported livestock production through rinderpest vaccination. 1.5 million cattle were vaccinated in 1993, 1.7 million in 1994 and 1 million in 1995. This has controlled rinderpest in certain areas. Many of the more remote areas have yet to be vaccinated. In line with the recommendations of a recent UNICEF study into restocking and the plan of action drawn up for 1994. The livestock program is increasing its depth and range of activity to improve the ability of the pastoral peoples and livestock farmers of southern Sudan to obtain secure food production and stable communities within the confines of the current conflict.

Assistance through relief organisations including UNICEF and it's livestock program in collaboration OXFAM - UK, SCF - UK, ACROSS, IARA, DOT, ADRA, VSF-Belgium, VSF- Switzerland, VetAid, CRRS and NPA, is beginning to have a beneficial effect on the food security situation. This effort is being continued and expanded to cover most of the traditional cattle raising areas of the southern sector for up to three years-depending upon the conflict.

UNICEF currently provides technical advice, co-ordination, monitoring, equipment and facilities (accommodation and flights) to all NGOs working within the livestock sector in southern Sudan. UNICEF currently implements one decentralised community based animal health project in Tonj district. UNICEF also implements both vaccination campaigns and the establishment of decentralised animal health services in other specific areas. UNICEF provides two technical advisors and co-ordinators for the NGO small livestock sector.

UNICEF specifically offers advice and co-ordination in the following areas:-
1. Training methodology (practical training, training illiterate people and training of trainers)
2. Training curricular (content and standardisation)
3. Facilitating the establishment of decentralised animal health services in specified areas. (Promoting community participation, community dialogue and action, onsite training, supply of equipment, vaccines and medicines, cost recovery mechanisms, use of cost recovery revenue, monitoring of the animal health service provided).
4. Evaluation of the impact of animal health services through PRA techniques and analysis of data collected via the NGOs.
5. Quarterly livestock co-ordination meetings and area based co-ordination meetings.
6. Liaison with pharmaceutical traders.
7. Bulk purchasing of veterinary medicines.

UNICEF implements rinderpest vaccination campaigns in many of the current working locations in southern Sudan. These vaccination activities are handed over to NGOs in areas where NGOs have livestock projects and are willing to take on the management of the projects. In those areas which have no NGO operating in the livestock sector UNICEF aims to both implement rinderpest vaccination and establish animal health services. The latter to be carried out as flights, staff time and funds allow.

Existing livestock staff positions

The Livestock Section Project officer (LPO) currently provides overall co-ordination of the sector to reflect strategy detailed in the plan of action, liaisons with NGOs, produces donor funding proposals and reports to donors, UNICEF and OLS, s/he facilitates supply of equipment and goods, controls the issue of supplies, establishes program facilities in Lokichokio, s/he advises NGOs working within the sector, implements both UNICEF animal health services and UNICEF vaccination campaigns through field visits as required.

The Veterinary Officer (training) (VOt) also advises NGOs working within the sector, implements both UNICEF animal health services and UNICEF vaccination campaigns through field visits as required but is specifically working with NGOs to establish recognised training methodology and curricular at the various different levels within the veterinary hierarchy currently being established.

The Livestock Officers (LO) also advise NGOs working within the sector, implement both UNICEF animal health services and UNICEF vaccination campaigns through field visits as required.

Objectives of this position.

To allow OLS livestock section to gain a greater understanding of: how people perceive livestock diseases; what are considered to be the most effective existing or ethnic treatments and interventions to cure livestock disease, within the Nuer and Dinka tribes of southern Sudan.

To apply the information gained by incorporating it into existing OLS training courses for community based animal health workers, vaccinators and animal health auxiliaries. To make the courses more pertinent to the trainees attending them. Dissemination of information on what are considered the best local treatments and interventions against diseases occurring in southern Sudan.

To introduce information on exotic herbal treatments which might be appropriate to the Sudanese situation should the plants be present in Sudan and as yet unused.

Tasks

They will specifically be required to:-
- Work as a team to ensure division of tasks in such a way that after a period of 4.8 months the final reports are delivered as required.
- Provide, before signing of contracts, a detailed methodology and a proposed schedule of activities.
- Spend at least 60% of work time in southern Sudan identifying and meeting with key informants, liaison with partner NGO staff and local authorities.
- Carry out a literature search for information related to existed livestock knowledge in southern Sudan.
- Gain a good understanding of how livestock owners perceive livestock disease, that is, where it comes from, why it comes and how it causes disease. How this understanding relates to people’s everyday existence and activities.
- Gain a good understanding of how perceptions of disease relate to the local treatments and interventions to cure those diseases.
- Target the problem diseases of southern Sudan.
- Rank existing treatments and interventions in terms of efficacy.
• Record the information gathered for each tribe and clan in the form of resource manuals and database for OLS use. Record information for specified clans of the Dinka, the Nuer and the Zande tribes.
• To work closely with the VOT, VSF-B training co-ordinator and any OLS livestock sector NGO staff who specialise in training work to improve the OLS livestock sector training courses.
• Become familiar with the OLS livestock sector training objectives, programs and training courses.
• Be aware of any differences in tribal perceptions and knowledge when recommending changes to generic OLS livestock sector training course curricula.
• Incorporate the information gathered on the perceptions of disease into the OLS livestock sector training courses.
• Incorporate the information gathered on the treatments and interventions to cure specific diseases into the training course curricula.
• Incorporate information on any exotic but appropriate herbal treatments into training course curricula.
• Field test those changes to OLS training course curricula which relate to existing livestock knowledge and local perceptions of disease.
• Prepare written reports detailing findings in the form of resource manuals, changes made to training curricular and recommendations for future action.
• Make oral presentations to interested parties identified by the program staff, as necessary.

Deliverables

• Prepare final report detailing findings, changes made to training curricular and recommendations for future action; make oral presentations to program staff and interested professionals from NGOs and other organisations operating in the region, as requested by the LPO, the HHFS Project officer, the OLS Program Co-ordinator.
• Rewrite OLS livestock sector training course curricula with information on perceptions of disease and specific local treatments and interventions incorporated into them, with a note of approval from the LPO.
• Concise action-oriented memoranda summarising field activities and constraints should be directed to and discussed with the LPO and the HHFS PO as necessary.
• Monthly time sheets showing locations visited.

Reporting Relationships

The consultants shall work closely with the UNICEF Livestock Section Project Officer (LPO) and the Household Food Security Project Officer. They are expected to work in close collaboration with all relevant personnel including those from co-operating NGOs and Sudanese local authorities.

Qualifications

A degree in veterinary medicine or a livestock orientated agricultural degree. Experience with pastoral programs, training of pastoralists and the collection of existing livestock knowledge is a requirement. Long term experience among pastoralists and experience in southern Sudan is preferred. Experience in designing successful field-oriented programs which are based on a thorough understanding of traditional systems and community based herder participation is highly desirable.

Salary

The salary level will be in line with OLS consultancy rates and dependant upon the individual’s qualifications and experience.

Work conditions.

Duty station will be southern Sudan. Payment will be made as two lump sums. 50% payment will occur once 50% of the contract has been completed. 50% payment will occur once the final report has been handed in and approved by the LPO, HHFS PO and the program co-ordinator.
### ANNEX 7: ITINERARIES

<table>
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<tr>
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<th>S Blakeway</th>
<th>BJ Linquist</th>
<th>D Adolph</th>
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<tr>
<td><strong>Oct</strong></td>
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