Dear Mr. Symoens,

here the full copy of the article at AITVM meeting from 25.-29 Sept-95 in Berlin

Greetings,

G. Rahmann

You will find the sources of the citations in the attached literature.

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ACCEPTANCE OF VACCINATION CAMPAIGNS IN NOMADIC SOCIETIES - THE CASE OF NOMADS IN THE BUTANA/EASTERN SUDAN

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INTRODUCTION

Animal health is an important aspect of animal keeping in arid and semi-arid climates. Particularly in mobile husbandry systems like nomadism or transhumance the sheep, goats, cattle and camels are heavily affected by epidemic and enzootic diseases, e.g. Rinderpest, CBPP, CCPP, PPR, Anthrax. Vaccinations are an appropriate way to protect the animals with immunisation. In Sudan the vaccination is organised and carried out by governmental organisations or by international vaccination campaigns (Pan African Rinderpest Campaign PARC) (Weiser, 1994). This way of vaccination is confronted by many problems, one of them is the acceptance and co-operation by the nomadic animal keepers. The reasons could be evaluated by two different groups of animal keepers in the Butana, Eastern Sudan. This case shows the constraints and the potential of vaccination campaigns in nomadic societies.

ENDEMIC ANIMAL DISEASES AND TREATMENTS

Diseases are one of the most significant limiting factors for animal husbandry in the Sahel (Idris, 1992). Due to the traditional mobile method of keeping of animals, which today is still very present (nomadic, semi-nomadic, transhumance), the spreading of disease and contamination of animals with diseases is permanently acute. Statistics and data showing diseases occurrence are insufficient. The following diseases are rated by livestock keepers and veterinarians as significant (Table 1).

Due to general agreement on the estimation of disease, these diseases are significant for livestock keepers. Foot and mouth disease, rabies, photosensibility and three-day-illness with cattle are only seldom and cause little loss (Weiser, 1994). Diseases show variability in their spreading and ways of contamination. Diseases caused by spores, Anthrax and BQ, Rinderpest, CBPP, CCPP, HS, PPR and vector diseases, trypanosoma and heartwater (veld sickness) are significant. Zoonoses (infectious disease transmissible between vertebrates and humans) with

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a low mortality rate are to be combatted (e.g. brucellosis, Q-fever, cattle pox, foot and mouth disease (FMD)). Water holes are one of the most contagious places for animals because of the high concentration of animals.

Table 1: The main animal diseases mentioned by livestock keepers and veterinarians

Species	Disease	
	livestock keeper (n = 69)	veterinarian (n = 14)
Cattle	Rinderpest, CBPP*	Rinderpest
	Anthrax	CBPP
	Trypanosomiasis	HS*, Anthrax
	Helminthiases	BQ*
Camels	Trypanosomiasis	Trypanosomiasis
	Mange	Mange
	Helminthiases	Helminthiases
	Dermatophytosis	
Sheep	Heartwater	Heartwater
	Anthrax	Anthrax
	Helminthiases	Helminthiases
	PPR*	PPR*
Goats	CCPP*	CCPP*
	Heartwater	Heartwater
	Anthrax	Helminthiases
	Helminthiases	Anthrax

CBPP = Contagious Bovine Pleuropneumonia
HS = Haemorrhagic Septicaemia
BQ = Blackquater
PPR = Pest of Petits Ruminants / PSR = Pest of Small Ruminants
CCPP = Contagious Caprine Pleuropneumonia
Source: Weiser, 1994

Next to the traditional methods (Schutzbar, 1992) the state run disease preventive methods are the basis for combatting disease. These are based on the Disease and Animals Act of 1901, the Disease Free Zone Act 1973 and the Livestock Route and Veterinary Control Stations Act of 1974 (Abu Elazaiem, 1982). Due to control, infrastructure, many measures are not possible. Vaccination campaigns are the main methods. These are organised by the regional veterinary offices of Khartoum, Kassala, Gedaref and New Halfa for the dry season. Vaccination against Rinderpest (currently in the framework of PARC), HS, CBPP and splenic fever and BQ is being carried out. These are often thwarted or not carried out at all due to poor infrastructure and deficiency in sera. In Um Sarha which was under survey, vaccinations were only carried out in 1984, 1988 and 1990 and in Shawat there have been no vaccination campaigns at all over the last few decades (Rahmann, 1995). Data showed that only a small percentage of livestock keepers took part although vaccination was accepted as useful by the same (Weiser, 1994).

MATERIALS AND METHODS

One part of the research project „Animal Production in the Sahel - Recent Developments in the Republic Sudan" (Mensching and Seifert, 1994) was to evaluate the behaviour of animal keepers in the case of crisis (droughts) (Rahmann, 1995). The field research was done between August 1991 and April 1992 in different groups of nomadic animal keepers. One group (Um Sarha, 212 members) belongs to the tribe of the Shukriya, the major tribe of the area. This tribe conquered the grassland hundreds of centuries ago and were well adopted to the conditions of the region. The group suffered greatly by the droughts of 1984/85 and 1990/91. In 1991, the majority of their animals were already sold or had died from hunger or diseases. Despite animal keeping being the major activity, they did not force/support vaccinations of their animals, even if it was free of charge. The other group, members of the tribe of the Rashaidas, settled in Shawat (208 members). This tribe moved 150 years ago from Saudi-Arabia to the Butana and they are still regarded as „foreigners". From an economic point of view they did not suffer as much as the Shukriya by droughts. They were very willing to treat and vaccinate their animals despite the fact that they didn't get support by official institutions. They bought medicine and vaccine on the black market for very high prices. Concerning acceptance of vaccination there were great differences between these two nomadic groups of animal keepers: in one group there was a low, in the other a great acceptance. The comparison of both groups makes the analysis of reasons possible.

RESULTS

The reasons of acceptance and attending of vaccination campaigns is multi-factorial. It goes from individual principle refusal to logistic and financial reasons.

KNOW-HOW

Although the passive and active traditional medicine plays an important part in disease prophylaxis, 'modern' vaccinations are regarded by livestock keepers as 'better'. The use of traditional methods is usually because of a deficiency in alternatives and knowledge. When 'modern' drugs are available, they are often applied incorrectly. When there is little success, especially in therapy, it is put down to the drug itself. The same applies to combatting disease and sickness in animals. A positive therapy for acute sickness/disease is expected from 'modern' medicine. There is little knowledge on the problematics of diseases which leads to unjustified and incorrect expectations. Vaccination is only seen as necessary when disease has started, and depending on the disease, successful combatting of the disease is then low. It is indispensable to improve know-how in 'modern' disease prophylaxis for active co-operation and a bigger acceptance of preventive methods.

DROUGHTS

Due to greater nomadic movement and increased animal concentration at the few water holes in unforeseeable droughts (e.g. 1984/85 and 1990/91) the disease risk for the animals increases. It is often then too late for prophylaxis and the livestock keepers are too busy with the supply of foodstuff for their animals to worry about disease prophylaxis. There is little interest during these times for vaccination campaigns because other problems (of survival) are more important. Logistically, vaccination campaigns should be carried out at these times because due to the shortage of water holes during these seasons, it is easier to find the animals. Vaccination teams are in the position to reach a large number of animals and vaccinate. As the animals' constitution does not necessarily allow an easy vaccination (too weak), vaccination is often only very inadequate. Vaccination during times when food supply is better, however without willingness to participate on the part of the livestock keepers, it is difficult to carry vaccination out. It is difficult to find where the animals are and their numbers. During the rainy season, it is difficult and often impossible to get to the grazing areas in a motorised way. Livestock keepers are in a position to integrate into their nomadic movements defined areas (seasonal as well) in the grazing areas/water holes by acceptance of vaccination campaigns. Special stations set up for vaccinations in rural areas are at the present time not being exploited and are only being used through high expense.

LITTLE FAITH IN THE VACCINATION CAMPAIGNS

Although many livestock keepers advocate vaccination for their animals in principle, the vaccination campaigns do not represent a solution for them. They find fault with unreliability, irregularity, non-flexibility and inadequate equipment of the vaccinating team. An agreement between livestock keepers and veterinarians does not usually take place, queries to vaccinations are ignored or take place too late which results in disregarding vaccination campaigns which have been carried out. The praise of the British vaccination campaigns in colonial times shows that is due to the incompetence of the state authorities and not the situation in the Butana. Where there is no faith, participation decreases.

CENTRALITY

Building up trust to persons who are carrying out the vaccination is only possible by a relative independence of the vaccination teams, especially from the state authorities. Many animal keepers reason that their low active participation is because by the vaccination the number of animals are documented and the animal keepers are then to pay higher taxes to the Zakat tax system. Since Independence in 1956 the traditional legislatives and executives (rights of the tribes) have been stopped and central rules and regulations have been put in their place and therefore there is no faith in the new system (no proper constitution). The ways

and laws of the nomads are based mainly on tribal rights and their legislative and executive institutions. By keeping this up, it was possible for the colonialists to gain a certain influence and trust with the livestock keepers and to carry out their political policy (also known as 'British behaviour as colonial power'). Traditional tribal chiefs are still very respected persons, however without authority. A synergetic co-operation between 'modern' institutions requires the implementation of technical improvements, e.g. vaccination campaigns. This is the only way livestock keepers feel they are being taken seriously and can so be motivated to an active participation to change.

CONSTITUTIONAL STATE

The lack of a constitutional state is a main reason for the low willingness to participate. The Rashaida reported this especially. They have not been taken into consideration in the vaccination campaigns and can only supply their animals with drugs from the black market. The state does not honour the acceptance of disease prevention. This was the case in the Land Administration Act of 1971 which prohibited the traditional land use systems. The livestock keepers are not having their interests fully represented and therefore are only prepared to co-operate up to a certain point. The Shukriya from Um Sarha were of the opinion that because of the neglect in animal husbandry and the one-sided support for farming, they were forced into a fight for survival for animal husbandry. They still are livestock keepers, their children however have fled to the towns and do not want to continue in the traditional lifestyle. Active participation in improvements for animal husbandry, e.g. in disease prophylaxis, are hindered by this.

DISCUSSION

Disease prophylaxis by vaccination campaigns are accepted by the nomadic livestock keepers, but an active participation is low. This is mainly because of distrust of centralised state planning, unreliable vaccination campaigns and inadequate knowledge in the problems of disease. There is fear of misuse of data, as e.g. taxes are based on the number of animals. The campaigns have not been based on the needs and possibilities of the livestock keepers. Vaccination campaigns can only be successful and accepted if the livestock keepers are fully aware of the possibilities and limits of disease control. Persons of trust who know the tribal customs and traditions are the only persons who can give advice. Training of members of the nomadic tribes is a possibility here. An active integration of these persons in campaign planning shows more promise than the present planning and execution.

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