



ORGANIZATION OF
AFRICAN UNITY

Secretariat
P. O. Box 3243

COUNCIL OF MINISTERS

Nineteenth ordinary session Addis Ababa

Nairobi, June 1971

منظمة الوحدة الافريقية

السكرتاريه

ص. ب. ٣٢٤٣

ORGANISATION DE L'UNITE
AFRICAIN

Secretariat
B. P. 3243

OM/471

PROPOSED JOINT PROJECT (J.P. 28)

AGAINST CONTAGIOUS BOVINE ILIAC-EPIDEMIC (CBEP)

IN THE COUNTRIES OF THE GREAT RIFT BASIN COMMISSION



TABLE OF CONTENTS

	<u>PAGE</u>
- INTRODUCTION	1 - 4
- FEDERAL REPUBLIC OF CAMEROON	5 - 10
- REPUBLIC OF CHAD	11 - 16
- REPUBLIC OF NIGER	17 - 22
- FEDERAL REPUBLIC OF NIGERIA	23 - 28
- TABLE OF DETAILS OF EXTERNAL AID SOUGHT: Over a 3 Years Period of Operation:	
(a) Capital Expenditure -- --	29
(b) Recurrent Expenditure -- --	30
- TABLE OF DETAILS OF LOCAL CONTRIBUTION TO JP.28 AS PROPOSED BY THE COUNTRIES OF THE LAKE CHAD BASIN COMMISSION OVER A THREE YEARS PERIOD :	
(a) Capital Expenditure -- --	31
(b) Recurrent Expenditure -- --	32
- MAP OF AFRICA SHOWING :	
(a) Area Covered by this Report (Fig. A)	33
(b) Cattle Movement (Fig. 1)	34
(c) C.B.P.P. Infection (Fig. 2)	35
- MEETING OF THE SUB-COMMITTEE OF THE FAO/OIE/OAU EXPERT PANEL ON CBPP - Lagos	
- Introduction	36
- Aspects of Vaccination	36
- Outline proposals for Control Scheme	38
- Recommendation regarding Trade Cattle Movements	43

PROPOSED JOINT PROJECT (JP.28) AGAINST CONTAGIOUS
BOVINE FLEURO-PNEUMONIA (CBPP) IN THE COUNTRIES
OF THE LAKE CHAD BASIN COMMISSION.

INTRODUCTION

Following the first Regional Technical Co-operation Committee Meeting of the OAU and all the Sub-Regional groupings in West and Central Africa, which was held in Lagos in July, 1970, I was instructed by the Executive Secretary OAU/STRC to visit the four countries of the Lake Chad Basin Commission (Cameroon, Chad, Niger and Nigeria) to prepare the following report on a proposed joint project against CBPP now called JP.28 which I now wish to present to this 13th Meeting of the Commission.

All the four countries were visited and talks held with the highest authorities concerned with livestock and Veterinary activities of each country. Generally speaking, all the four countries expressed great anxiety to fight CBPP and get it under control just as was done in the case of JP.15 Rinderpest Control.

The official political boundary of the Lake Chad Basin Commission does not cover the entire countries concerned. For the purpose of the control of CBPP or any other disease for that matter it is essential that when talking about the Lake Chad Basin Commission we mean the entire geographical boundaries of Cameroon, Chad, Niger and Nigeria. Disease respects no boundaries and shall not stop spreading beyond the official Lake Chad Basin Commission Boundary.

The present CBPP situation in the countries of the Lake Chad Basin Commission is quite serious. The disease is enzootic in most of Chad, in the North-Eastern and North-Western parts of Nigeria and in the South-Western and South-Eastern parts of Niger. The situation in Cameroon however is not very serious, since North Cameroon has been classified as an exposed area (see Fig. 2).

The role cattle movement plays in the spread and persistence of CBPP in West and Central Africa is very important. As can be seen on the Map in Figure 1, these movements are very vast and it has been

most difficult for some veterinary authorities to control them. CBPP has quite often been spread by these movements. When a mass vaccination programme starts CBPP shall be more effectively controlled within a shorter period if this cattle movement is also put under effective control. It is therefore wise to consider CBPP control together with other aspects of Livestock improvement which also includes improvement of trade cattle routes.

As already stated, for the execution of JP.28 CBPP control, the four countries of the Lake Chad Basin Commission shall work as a unit. The operations shall be controlled by a Deputy International Co-ordinator who shall be appointed by this Commission. It is recommended that he shall be from Nigeria. Since he shall be working directly for the Commission, it is expected that the Commission shall meet all his financial requirements - salary, allowances etc..

It is hoped that the campaign shall start latter this year in Nigeria and as soon as possible in the other three countries. There shall be an intensive yearly vaccination of cattle for three years in these countries. At the end of this period the CBPP situation shall be reviewed and other necessary actions taken.

For the success of this operation it is essential that the vaccination units are given absolute freedom of movement between frontiers. This was done during the JP.15 Rinderpest Campaign. The Deputy International Coordinator should also be assisted by the Lake Chad Basin Commission to enable him enter and leave freely, any of the four countries concerned. This could be done by issuing him with an approved "Laissez Passer".

The question of financing JP.28 has been a problem. Unlike JP.15 Rinderpest Control there is presently no funds what-so-ever to run it. It will be recalled that during the Lagos Meeting of July, 1970 this question was fully discussed, and it was agreed that every individual country should make definite efforts to start this Joint Project and finance it from its own local resources. If an individual country cannot provide enough funds for the project, it may apply to the sub-Regional Group or Groups to which it belongs, for assistance. If for one reason or the other the Sub-Regional Group or Groups cannot help any particular country or countries from which

financial application has been received, this sub-Regional Group or Groups may in turn apply to the OAU/STRC Secretariat for financial assistance. With such applications the OAU/STRC Secretariat can put up a comprehensive case for the OAU Council of Ministers to vote some money for this project.

For an additional source of finance for this Project, the OAU/STRC Secretariat is working on an application to Donor Agencies for funds to control CBPP as a part of the National Livestock Development Programme of the OAU Member States concerned.

While on the question of finance for JP.28 I would like to congratulate Nigeria for having offered to start this project within this present year, and fully finance it as much as possible from its National budget. This only goes to show how seriously we in Africa regard the harm CBPP does to our present and future livestock development projects. As long as CBPP is with us, it will remain a constant threat. I am convinced that other African countries would act like Nigeria if they had adequate means.

The estimated total cattle population to be vaccinated shall be about 19,000,000 of which Nigeria has the largest number of 9,000,000. The estimated cost of the project shall be 3,258,725,240 CFA or 11,764,351 US dollars of which 1,021,683,000 CFA or 3,688,387 US Dollars shall be from External sources and 2,237,042,240 CFA or 8,075,964 US dollars shall be the local contribution.

In going through the estimates for JP.28 it will be noticed that no estimates have been included for "Propaganda" etc. This is because the propaganda Machinery created during the JP.15 period is still effective and the cattle owners have already learnt to accept mass vaccination of cattle as an effective means of Disease Control.

The training of the staff to be involved in this Campaign is very important. Action is presently going on between the FAO and the OAU to obtain some external assistance for this training. It is hoped that the training course shall be held either in Farcha Laboratory, Fort-Lamy or the Vom Laboratory in Nigeria. This shall begin as soon as things have been finalised.

When CBPP shall have been put under control in the Lake Chad Basin Commission countries the only area of infection around them shall be the BOUAR Region of Central African Republic. Action is going on to control the disease here too.

It may be worth mentioning here that there are several differences between the JP.15 Rinderpest Control and this proposed JP.15 CBPP Control. For example, as has been mentioned, before JP.15 started External Aid had already been obtained. JP.28 is starting without any External assistance and it is hoped that while the campaign is going on aid shall be obtained to complete it.

The execution of JP.28 shall go on simultaneously throughout the whole of West and Central Africa. There shall not be any phasing of this project in the same sense as was done in the Rinderpest JP.15

Some Laboratories have developed combined CBPP and Rinderpest vaccines such as "Bisec" and "Aviper". During the course of vaccination in JP.28 such combined vaccines shall be used as much as possible to control CBPP and to prevent the return of Rinderpest in that area. In this way two major African Livestock diseases shall be fought in one campaign.

This concludes the introduction to this report the details of which follows. I do hope it will be found useful and that the Lake Chad Basin Commission shall use it to start a successful Joint Campaign against CBPP as soon as possible.

THE FEDERAL REPUBLIC OF CAMEROON

The Federal Republic of Cameroon is made up of two states - East Cameroon and West Cameroon. These two states have completely independent Veterinary and Livestock services with each state responsible for its own budget. There is no service at the Federal level that coordinates the activities of the two states. So I had to visit each of the states.

WEST CAMEROON

Ministry of Rural Development,
Veterinary Department,
BUEA.

In West Cameroon discussions were held with :-

- The Secretary General of the Ministry
- The Director of Veterinary Services
- The Veterinary Officer in-charge of Bamenda
- The Veterinary Officer in-charge of Victoria.

The Cattle population of West Cameroon is about 250,000. These are found principally in the Northern part of the State, in the Bamenda area.

The Veterinary authorities have never reported any confirmed outbreak of CBPP. In 1969, there was a suspected outbreak which was later proved to be some other disease and not CBPP.

So, for the purposes of the proposed CBPP Joint Campaign, the State of West Cameroon shall not be involved.

EAST CAMEROON

Secretariat d'Etat à l'Elevage,
Direction de l'Elevage et des Industries Animales,
B.P. 1050,
YAOUNDE

In Yaounde, J.P. 28 CBPP control was discussed in the Ministry of Stock farming, with the following officials :-

- The Secretary General, and
- The Director of Stock Farming.

First of all it was announced that the National Organiser for this project in Cameroon shall be Dr. Felix Nzie, the Director of Livestock farming. However, the Field activities shall be performed by Dr. Alain Garrouste, who is stationed in the North of Cameroon which is the region where outbreaks of CBPP occur.

The total cattle population of East Cameroon is 2,100,000. This is distributed principally in the Adamawa, Benoue and the Northern Provinces of Diamare, Margui - Wadela, Mayo Danai - Logone and Chari.

The majority of CBPP outbreaks in East Cameroon occur in the Northern Provinces. The disease is usually introduced by trade and migratory cattle originating from the Chad or Central African Republic.

TABLE I(a) OUTBREAK FOCI OF CBPP, 1960 - 1970

SOUS-SECTEURS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Diamare Mwandala	40	19	31	21	20	23	37	40	15	5	20
Benoue	14	3	2	1	29	6	23	1	3	1	-
Logone et Chari	4	3	2	2	-	-	-	-	5	3	-
Mayo-Danai	28	7	12	18	5	21	5	2	3	3	17

TABLE I(b) VACCINATIONS AGAINST CBPP

SOUS-SECTEURS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Diamare Mwandala	15723	9692	4330	16959	16542	3476	8274	16022	6057	1610	4,385
Benoue	1999	1061	208	365	1963	1628	2997	1673	6984	5158	-
Mayo-Danai	4100	1309	1904	20047	14986	14487	36057	19672	11502	741	4.229
Logone et Chari	878	1224	307	1895	-	-	-	-	13017	15657	-

This constant cattle movement in this area is shown in Fig. 1. Cattle of Bororo breeds enter Cameroon for trade purposes through Garoua and Boulay, while Godali Heifers travel out of Cameroon to

.../..

Central African Republic also through the town of Garoua. A majority of the cattle from Central African Republic come from the known CBPP infected area of Bouar.

Strictly speaking therefore the Northern part of Cameroon can be regarded as a CBPP Exposed Area : This covers the area North of 6°N to the Lake Tchad See Fig.2. The total number of cattle involved here is about 850,000. The number of CBPP outbreaks in the past ten years is given in Table I(a).

At the moment the control policy of CBPP calls for regular vaccinations. Under certain circumstances the policy of slaughter with compensation is practiced. Aviper which is T₂ broth culture lyophilised vaccine is used during active outbreaks of CBPP. This is injected into the muzzle of the animal. In some parts of Cameroon KH₃J vaccine is also being used. The vaccination figure during the past ten years is given in Table I(b).

During the proposed Joint Campaign, it is estimated that about 850,000 cattle shall be vaccinated. The strategy shall be to vaccinate all infected herds with Aviper while the rest of the animals in the CBPP area shall be vaccinated with the T₁ broth culture vaccine. Yearly vaccinations shall be done over a period of three years. All the vaccine for the campaign shall be supplied by the Farcha Laboratory, Fort-Lamy, Chad.

The Cameroon annual budget for Livestock work is very satisfactory as compared with those of other African countries. Since Independence this budget has been increasing yearly. This is not the case in some other countries.

There are enough staff - Professional, Technical and Junior - that can satisfactorily execute this Joint Campaign in Cameroon. During peak period of the operation, there shall be staff mobilisation from the South to the more active parts of the North.

The Campaign is expected to start in Cameroon as soon as funds are made available.

FINANCIAL SUMMARY FOR CAMEROON

IN CFA FRANCS

I T E M	LOCAL CONTRIBUTION	EXTERNAL AID SOUGHT
A. CAPITAL EXPENDITURE		
(a) Transport	Nil	18,400.000
(b) Refrigeration Equipment	5,350.000	8,280.000
(c) Vaccination Equipment	1,000.000	Nil
Total : -	<u>6,350.000</u>	<u>26,880.000</u>
B. RECURRENT EXPENDITURE		
<u>Salaries and Allowances</u>		
(a) Professional Staff	23,400.000	Nil
(b) Technical Staff	142,125.000	Nil
(c) Other Staff	45,450.000	Nil
Total	<u>210,975.000</u>	<u>Nil</u>
2. OTHER CHARGES		
(a) Transport	Nil	9,000.000
(b) Refrigeration	Nil	9,000.000
(c) Cost of Vaccines	Nil	30,000.000
(d) Sundry Minor Equipment	Nil	12,000.000
Total	<u>Nil</u>	<u>60,000.000</u>
GRAND TOTAL	<u>217,325.00</u>	<u>86,880.000</u>
	CFA 304,205.000	
	or US. \$ 1,098,213	

N.B/ Calculations cover a 3 years period.

EXPLANATORY NOTES

A. CAPITAL EXPENDITURE

(a) Transport: There is no local contribution. External Aid is sought for -

- 10 Renaults 4 x 4 at 1,500,000 each,
- 3 Land-rovers at 1,200,000 each

(b) Refrigeration Equipment:

Local Contribution here is the supply of -
3 old ice making machine, and
4 old deep freezers.

It is anticipated that External Aid shall supply -

1 Electric generator, costing 1,000 for running the ice making machines; refrigerators etc..

- 3 ice making machines at 2,000 each,
- 25 containers type CRT at 17,500 each,
- 3 Westinghouse Machines of 750 litres at 250,000 each; and
- 40 deep freezers of type "Somaplex" at 4,500 each.

(c) Vaccination Equipment:

This shall be supplied purely by local contribution. Equipments such as syringes, needles, camping equipments etc.. are estimated to cost 1,000,000.

B. RECURRENT EXPENDITURE

1. Salaries & Allowances:

The whole of this shall be paid for from local contribution. It is estimated that the following staff shall be placed at the disposal of this project -

- (a) Professional Staff - 2 Docteurs Veterinaires
- 2 Veterinaires Camerounaises.
- (b) Technical Staff - 5 Assistants Veterinaires
- 60 Infirmiers Veterinaires.
- (c) Other Staff - 35 Agents Veterinaires Journaliers
- 10 Drivers
- 1 Mechanic
- Laboratory staff shall be supplied by Farcha Laboratory. The cost cannot be estimated.

2. Other Charges: There is no local contribution here.
External Aid is demanded for the cost
of -

- (a) Running the vehicles- petrol, tyres, oil, etc.
- (b) Running the refrigerators, deep freezers etc.,
- (c) Vaccines
- (d) Sundry minor equipment - flasks, water,
containers, etc.

THE REPUBLIC OF CHAD

Ministère de l'agriculture et de la production animale,
Direction de l'Elevage,
Fort-Lamy
Chad..

In Fort-Lamy a Meeting was held with :-

(a) The Minister of Agriculture

(b) Dr. A. Provost,
Director of Farcha Laboratory

He has been working in Central Africa for many years on different disease problems including CBPP. Recently under the instructions of the OCAM Secretariat Dr. Provost undertook a CBPP survey of Central Africa.

(c) Dr. Nicolas,
Director of Veterinary & Livestock Services.

(d) Dr. Bertucat,
Chief of Veterinary Services,
Department of Livestock Services.

He is also the newly appointed National Organiser for Chad.

(e) Dr. Albert Mamadou,
Deputy Director of Veterinary Services.

(f) Mr. M. Carpenter,
Executive Secretary,
Chad Basin Commission.

(g) Dr. Pierre Renard,
Expert on Livestock Production and
Veterinary specialist on Range Management, Lake
Chad Basin Commission.

(h) Dr. Toupon Mfouapon,
Veterinary Expert "Elevage",
Lake Chad Basin Commission.

Veterinary staff are few and are posted far from each other. Chad is particularly short of Senior Officers mainly of the rank of Veterinary Officers.

The annual budget for Limestone activities is rather low regarding the size of the country and the cattle population of 4,500,000 it carries. The cattle are fairly evenly distributed throughout the country.

CBPP can be found all over the whole of Chad. The incidence is particularly high in the North with a Sudanian Zone type of climate and where some modern agriculture is practiced. Here also the animals are semi-sedentary. Outbreaks are also often found in migratory animals (see fig.1). Roughly speaking, the whole of this country can be regarded as an Enzootic zone for CBPP. The disease is enzootic in about 4,000,000 cattle (See fig.2).

Table II(a) show the number of outbreaks between 1960 and 1971 while Table II(b) gives the number of sick and dead animals within the same period.

Cattle migration in the Chad is shown in Fig.1. This movement is for both trade and transhumance. With this vast movement of stock all over the country the spread of disease such as CBPP within the country and to the neighbouring countries

There is a disease reporting system in this country, and quite often IBAR receives reports from the Director of Veterinary Services.

TABLE III FIGURES FOR NUMBER OF OUTBREAK FOCI,
NUMBERS OF SICKS, DEAD AND VACCINATED
ANIMALS

YEAR	FOCI	SICK	DEAD	VACCINATION
1966	87	3,705	584	643,419
1967	28	1,221	164	2,269,624
1968	25	304	98	1,176,693
1969	27	168	45	860,649
1970	12	456	73	848,936

Attempts have been made as far back as in 1911, to control CBPP in Chad by vaccination. Intensive vaccination campaigns were carried out from 1965. From table II it can be seen that the CBPP foci, and the numbers of sick and dead animals had dropped considerably after 1965. This only goes to prove that with vaccination alone, one can control CBPP particularly if there is a high enough vaccination cover. Table III also shows the vaccination figures between 1966 and 1970. 'Bises' vaccine from Farcha Laboratory has always been used.

For JP.28 CBPP Joint Campaign the country shall be divided into six main areas of operations:-

(i)	North East	with 12 Veterinary Posts
(ii)	West Central	" 10 " "
(iii)	Central	" 12 " "
(iv)	East	" 12 " "
(v)	South Western	" 36 " "
(vi)	South Eastern	" 13 " "

It is anticipated that all the 4,500,000 cattle shall be vaccinated. For general cover vaccination the 'Bisec' vaccine shall be used while in outbreaks "Aviper" (T₂ broth culture, lyophilised vaccine) shall be used. This is usually injected into the muzzle. The strategy during the JP.28 CBPP control shall therefore be mass annual vaccination using 'Bisec'. Exposed cattle shall be re-vaccinated using 'Aviper'.

The Farcha Laboratory shall continue to supply all the vaccines for this campaign. The assurance has been given that this laboratory is presently well staffed and equipped to cope with even future higher demands for vaccine.

All vaccinated animals shall be marked with the same marking as for the Rinderpest campaign. This is because it is hoped that vaccination shall be carried out against CBPP and Rinderpest simultaneously.

The Chad Government is all set to put in a big fight to get rid of CBPP ones and for all. The Government has already given its administrative support. Propaganda and education of the masses shall be in the same form as for JP.15. The one for JP.28 shall be a lot simpler since they are now used to the idea of mass control of diseases.

FINANCIAL SUMMARY FOR CHAD

IN CFA FRANCS

I T E M	LOCAL CONTRIBUTION	EXTERNAL AID SOUGHT
<u>A. CAPITAL EXPENDITURE</u>		
(a) Transport	47,000.000	93,820.000
(b) Refrigeration Equipment	8,000.000	21,800.000
(c) Vaccination & Camping Equipments	-	8,200.000
Total	55,000.000	123,020.000
<u>B. RECURRENT EXPENDITURE</u>		
<u>1. Salaries and Allowances</u>		
(a) Professional Staff	}	3,500.000
(b) Technical Staff		135,000.000
(c) Other Staff		56,400.000
Total	135,000.000	60,000.000
<u>2. OTHER CHARGES</u>		
(a) Transportation Running Cost	13,800.000	54,690.000
(b) Refrigeration	see (d) below	2,832.000
(c) Cost of vaccines	-	128,100.000
(d) Sundry Minor Equipment	32,400.000	-
Total	46,200.000	185,622.000
GRAND TOTAL	236,200.000	368,642.000

CFA.604,842.000

OR US.\$ 2,183,545

N.B./ Calculations cover a period of 3 years.

EXPLANATORY NOTES

CAPITAL EXPENDITURE

- (a) Transport: The local contribution here is to supply -
- 7 land-rovers estimated to cost 1,900.000 each;
 - 11 lorries estimated to cost 3,320.000 each,
- External Aid sought is for -
- 9 Land-rovers at 1,900.000 each,
 - 6 Peugeot's stations wagon at 1,120.000 each,
 - 5 Lorries (Berliet) at 3,320.000 each.

(b) Refrigeration Equipment:

- (a) The Chad Government shall supply -
- 44 Kerosene deep freezers and
 - 12 gas deep freezers both estimated to cost about 8,000.000
- (b) It is requested that External sources shall supply -
- 80 Kerosene freezers costing 200.000 each, and
 - 12 gas freezers costing 25,000 each,
 - 6 portable deep freezers estimated to cost 50,000 each.

These shall be used for vaccine transportation over short distances.

(c) Vaccination & Camping Equipment:

There is no local contribution here. Aid is sought for -

- 34 Boxes of veterinary equipment (each box contains needles, syringes, etc.); estimated to cost 100.000 each.

Camping equipments consisting of -

- 23 tables costing 7.000 each,
- 23 chairs costing 2.300 each, and
- 50 beds and mosquito-nets at 11.000 each.

B. RECURRENT EXPENDITURE

1. Salaries and Allowances

The local contribution shall be in the form of the services of some professional Officers and supporting junior staff such as Veterinary Officers, vaccinators, Drivers, etc. It is estimated that Government shall spend about 45, 000.000 on this.

Aid is sought to pay for the more senior staff and some additional staff that shall be required for this project. This sum shall provide for -

- National organiser at 720.000 per year,
- deputy National organiser at 480.000 per year
- 24 Drivers each receiving 180.000 per year,

- One Secretary at 960,000 per year,
- 68 vaccinators each at a salary of 168.00 per year
- Other Junior staff.

OTHER CHARGES

(a) Transportation running cost:

It is hoped that the Chad Government shall contribute to this item yearly.

However, aid is required to supply the sum of 18,230,000.

About 3,810,000 shall be spent on spare-parts for the vehicles while the rest shall be for the purchase of petrol and oil.

This is based on the calculation that each vehicle is expected to cover 20,000 kilometres per year.

(b) There is a certain amount of local contribution here but this has been difficult to access (also see (d) below).

This sum is for the purchase of gas cylinders at a cost of 4,800 francs a cylinder, and kerosene at 40 francs per litre. These shall be used for running the deep freezers.

(c) Cost of Vaccines

Based on an estimate of 8 francs per dose of "Bisec" vaccine from Fort-Lamy. It is hoped that there shall be two vaccinations a year. This should double the cost for the first year only.

(d) It is hoped that the Chad Government shall place at the disposal of the campaign some 10,800,000 per year. This is for the running cost of the operation and shall pay for items such as gas, kerosene, replacement of syringes, needles, etc..

THE REPUBLIC OF NIGER

Ministry of Rural Economy,
Department of Stock Breeding & Animal Industries,
Niamey.

While in Niamey, talks were held with Dr. Hassane Baza the Director of the Stock Breeding Department. I met, very briefly, the Minister of the Stock Breeding Services, Dr. Bembelo who was previously the Director of the Service.

Niger has a total cattle population of 4,500,000. These are concentrated more in the South Eastern, South Western and Southern parts of the Country. There are few or practically no cattle in the North of the Country. Niger also has about Seven Ranches and Research stations for Pastures, placed in strategic places.

The Stock Breeding Department has a staff of

- 8 Veterinary Doctors (3 Africans and 5 Europeans).

There are also:-

- 7 Engineers Veterinaires,
- 30 Assistants Veterinaires,
- 170 Infirmiers Veterinaires,
- 104 Hides and Skins Assistants who also deal with cattle markets and other duties.

The Junior Veterinary staff are trained for 3 years in the Livestock Technical training School at Maradi. This School also trains the Hides and Skins Assistants. Very shortly the section of the School training Veterinary Assistants shall move over to Niamey.

The total annual budget for Livestock activities in Niger amounts to about 326.195.000 Fcs. CFA. This figure was lower than this just after the country had its independence. It is therefore good news to hear that the budget had since been on the increase.

It is very difficult to say exactly how many vehicles are used in the services of the Department, but it is estimated that there are about 73 all together.

CBPP has existed in Niger for some time. The Veterinary Section of the Ministry of Rural Economy has for a long time been active in the fight against this disease in trying to limit its spread throughout the country.

Table IV shows the disease situation between 1964 and 1968. It will be seen from this table that there was no CBPP outbreaks in 1966.

TABLE IV

	1964	1965	1966	1967	1968	
Outbreaks	12	6	-	5	33	
Sick	74	28	-	696	681	
Dead	38	18	-	696	699	

But due to cattle movements, disease was re-introduced in 1967 and control was by vaccination and slaughter. The figures indicating number of dead animals in 1967 and 1968 are for both slaughtered animals and for those that died a natural death.

CBPP outbreaks are more frequent during very long dry seasons and they are concentrated along the Niger river where the majority of the animals concentrate for grazing and watering. Such concentrations of animals are most ideal for the rapid spread of CBPP. From this river bank, the disease spreads to the South by means of cattle movement. The present disease situation is as indicated on the Map in Fig. 2. The disease is enzootic along the Niger river valley, at the extreme East of the country between 12°E and 14°E and the extreme West of the Niger between 0° and 6°E. CBPP has not yet been diagnosed between 7°E and 11°E. This area is regarded as a free zone. There are two narrow belts of CBPP exposed areas. These are between 6°E and 7°E and between 11°E and 12°E (see Fig.2).

For the control of CBPP, the T₁ lyophilised vaccine and "Pervia" are used. For the first outbreaks however, vaccinations were done with the Bennett Vaccine. In 1969, 744.397 vaccinations were done while in 1970, 252.987 were also done. Niger gets its vaccine from the IEMVT Laboratory in Niamey.

When J.P.28 begins it is hoped that a total of about 4,000,000 cattle shall be vaccinated yearly. This figure is not the final one because an expert from F&D, possibly Dr. Provost, the Director of Farcha Laboratories shall visit Niger shortly and advise the Government on the number of cattle to be involved in the J.P.28. Niamey Laboratory shall again supply the vaccine and the T₁ lyophilised vaccine shall still be used.

Niger's system for organising vaccinations against CBPP is to establish some fixed vaccinations post along cattle routes. From these fixed posts mobile ones operate. Each post is under the control of an Animal Health Assistant (Infirmier Veterinaire) with one or two assistants who count and mark the animals after vaccination.

Apart from vaccinating the animals, the Animal Health Assistant also tries to convince the cattle owners to give up their sick and contaminated animals for slaughter in order to control the disease.

Most of the cattle vaccinations are done between the months of November to the end of March. Only a single vaccination shall be done yearly.

The Government of Niger, regards the problem of CBPP as a serious one and gives J.P.28 its full backing and it is hoped that the Veterinary Services shall have enough equipment, particularly vehicles to help them fight the disease.

9
FINANCIAL SUMMARY FOR NIGER
IN CFA FRANCS

I T E M	LOCAL CONTRIBUTION	EXTERNAL AID SOUGHT
A. <u>CAPITAL EXPENDITURE</u>		
(a) Transport	Nil	101,800.000
(b) Refrigeration Equipment	Nil	28,960.000
(c) Vaccination and Camping Equipment	9,672.000	13,751.000
Total	9,672.000	144,511.000
B. <u>RECURRENT EXPENDITURE</u>		
1. <u>Salaries and Allowances</u>		
(a) Professional Staff	12,600.000	18,750.000
(b) Technical Staff	106,056.000	Nil
(c) Other Staff	29,520.000	231,750.000
Total	148,176.000	231,750.000
2. <u>OTHER CHARGES</u>		
(a) Transport	19,200.000	117,600.000
(b) Refrigeration	2,400.000	3,400.000
(c) Cost of vaccines	1,500.000	48,500.000
(d) Sundry Minor Expenditure	2,400.000	20,400.000
Total	25,500.000	189,900.000
GRAND TOTAL : -	183,348.000	566,161.000
	CFA, 749,509.000	
	cr	
	US. \$2,705,809	

NB: Estimate covers a 3 years' Period.

EXPLANATORY NOTES

A. CAPITAL EXPENDITURE

- (a) Transport: There is no local contribution. Aid is sought for -
25 vehicles for liaison work at a cost of 1,500,000
per vehicle, and
25 semi-heavy lorries at 2,500,000 each.
It is also hoped to have -
3 boats (pinasses) costing 350,000 each,
3 motors for the boats costing 250,000 each.
- (b) Refrigeration Equipment: The following items shall be obtained from aid -
50 ice machines at 450,000 each;
44 electric plants at 500,000 each,
300 containers at 35,000 each,
200 thermos flasks at 5,000 each,
16 freezers at 80,000 each,
8 deep freezers at 80,000 each.
All these are essential for the storage of vaccine..
- (c) Vaccination Equipment: This covers the cost of syringes,
needles, camping equipments such as tents,
mosquitoes nets etc. There is a substantive
local contribution here.

B. RECURRENT EXPENDITURE

1. Salaries and Allowances

- (a) Professional Staff: Estimate is to pay for eleven Veterinary
Officers, four of which shall be on technical assistance
from France. The estimate does not include the Veterinary
Officers on technical assistance. Their salaries and allowances
are unknown.
- (b) Technical Staff: The existing Departmental staff shall be used.
Details are -
17 Veterinary Assistant at 38,000 per month for 1 year.
100 Infirmiers vet. at 25,000 per month for 1 year

(c) Other Staff: This works out at -

200 vaccinators at 10,000 per month for 1 year,
95 drivers at 15,000 per month for 1 year,
235 other odd workers whose salaries range from
6.000 - 7.000 per month.

2. Other Changes

(a) Transport running Costs

Cost based on approximately 65 francs per kilometre, with each vehicle covering an average of 16.000 kilometres a year.

(b) Refrigeration Running Costs

This covers cost of kerosene, electricity and oil for the running of the equipment.

(c) Cost of Vaccines

5,000.000 doses estimated to cost 10 francs per dose.

(d) Sundry minor Equipment:

Cost of distilled water, postage, etc..

FEDERAL REPUBLIC OF NIGERIA

Ministry of Agriculture & Natural Resources,
Federal Livestock Department,
Kaduna,
Nigeria.

In a meeting held in Kaduna, J.P.28 CBPP control was discussed with:

Dr. D. Walker,
Federal Director of Veterinary and Livestock Services
Kaduna.

Dr. Inua Mohammed,
Chief Livestock Planning Officer
Kaduna, and

Dr. M. Goni,
Director of Veterinary Research,
Vom.

The Federal Republic of Nigeria is made up of 12 States. Each State has its own Veterinary and Livestock Services, completely independent, of the services of each other. The Veterinary Services are headed by Chief Veterinary Officers.

For the CBPP Campaign only the 6th Northern States shall be involved. These are Kano State, North Western State, North Central State, North Eastern State, Kwara State and Benue Plateau State.

The cattle population of Nigeria is about 10,000,000; 95% of these are in the six Northern States.

The Veterinary and Livestock Services of Nigeria are probably the most developed of the four countries of the Lake Chad Basin Commission. It has adequate staff to run the services satisfactorily.

It was agreed in the First Regional Technical Cooperation Committee meeting of the CAU and all the Sub-Regional Groupings in West and Central Africa that Nigeria shall appoint a Deputy International Coordinator to look after J.P.28 in the countries of the Chad Basin Commission. Nigeria has still to appoint him. This Officer shall be paid by the Chad Basin Commission.

If he is based in Fort-Lamy, as he may likely be, his direct and frequent contact with all the six states of Nigeria shall be a bit limited. Because of this, it was agreed by Nigeria that an Officer should be appointed who would look after the work in all the six states of Nigeria and report to the Deputy International Coordinator. This Officer shall be called the National Organiser. Such an Officer shall be paid by the Nigerian Government and he shall be based in Kaduna. He shall soon be appointed.

Each of the Six States involved shall appointed a State Organiser to look after their respective states. Those already appointed are:-

Kwara State	-	Dr. Owoyele
North East State	-	Dr. Khan
Benue Plateau State	-	Chief Veterinary Officer or Provincial Veterinary Officer (to be appointed)
Kano State	-	Senior Veterinary Officer (to be appointed)
North Western State	-	Dr. Eid
North Central State	-	Dr. Nyam Sani.

The total cattle population in the six States is 9,000,000. CBPP is enzootic mainly in the North Western State and North Eastern State. The rest of the Northern States are regarded as Exposed area. The six States in Southern Nigeria have no CBPP and this area can be regarded as a Free area. see Fig 2.

In the period April 1968 to March, 1970 there were 107 yearly outbreaks of CBPP in Nigeria. The yearly mortality rate is about 7.5% while the morbidity rate is unknown.

Action is already going on in the control of CBPP in Nigeria. KH₃J vaccine is used and a total of 1,219,716 cattle were vaccinated between 1968 to 1970. The Federal Veterinary Research Laboratory Vom supplies all the vaccines and no post vaccinal reactions have been noticed.

When J.P.28 starts it is anticipated that all the 9,000,000 cattle in the enzootic and exposed areas shall be vaccinated yearly. Mass vaccinations shall not be carried out in the CBPP Free areas.

The T₁ wet vaccine shall be used. Trials that have been performed all over Nigeria show that the T₁ vaccine is the vaccine of choice and can be used even among the highly susceptible cattle of Kwara State.

The Vom Laboratory shall provide all the required vaccine for this project and it is expected that about 10 - 15 million doses shall be produced yearly. This Laboratory shall therefore be able to cope with the demands of other West African countries such as Gambia, Ghana etc. who presently get some of their vaccine from there.

In addition to the general training of all the staff to be involved in J.P.28, the Nigeria Government is asking for an FAO Expert to further train their staff on Huddart's test.

During the operations of the J.P.28, only annual vaccinations shall be done. Vaccinations shall be carried out throughout the year, but the activities shall intensify during the months of October to May. The Nigerian authorities have not yet made up their minds on if and how vaccinated animals shall be marked.

The Government of Nigeria is very keen on attacking this disease and getting rid of it ones and for all. It is hoped that its neighbours shall do the same during the same period, so that the whole of the Lake Chad Basin area shall be cleared at the same time.

FINANCIAL SUMMARY FOR NIGERIA

IN NƐ

ITEM	LOCAL CONTRIBUTION	EXTERNAL AID SOUGHT
A. <u>CAPITAL EXPENDITURE</u>		
(a) Transport	80.800	Nil
(b) Refrigeration Equipment	16.910	Nil
(c) Vaccination Equipment	224.695	Nil
TOTAL	322.405 =====	Nil =====
B. <u>RECURRENT EXPENDITURE</u>		
1. <u>Salaries and Allowances</u>		
(a) Professional staff	135.000	Nil
(b) Technical staff	360.000	Nil
(c) Other staff	840.000	Nil
TOTAL	1,335.000 =====	Nil =====
2. <u>Other charges</u>		
(a) Transport	52.800	Nil
(b) Refrigeration	12.720	Nil
(c) Cost of Vaccine	187.500	Nil
(d) Sundry Minor Equipment	7.950	Nil
TOTAL	260.970 =====	Nil =====
GRAND TOTAL	1,918.375 =====	Nil =====

CFA 1,500,169.250

OR US.Ɔ 5,415,773

EXPLANATORY NOTES

Each of the Six Northern States of Nigeria shall make a substantial contribution to the cost of this project. This shall include the running cost and staff. The Federal Government of Nigeria will contribute mostly towards the cost of vehicles, and refrigeration equipment. Vaccine supply is also expected to be given free to the states by the Federal Government.

There is a financial provision in the Federal Government Budget for Inter-State Disease control. This shall be used principally for JP.28. Unfortunately, this mutual allocation may not meet the requirements for the first year of the operation. It may therefore be necessary for Nigeria to ask for some sort of External aid for this period. After the first year it is hoped that Nigeria will be able to foot its own bills for this campaign.

CAPITAL EXPENDITURE

(a) Transport: The Nigerian Government now has for the campaign:

- 18 Land-Rovers and
- 16 Lorries.

It shall need the following additional vehicles -

- 28 Land-Rovers costing £1,600 each, and
- 16 Lorries cost £2,250 each.

(b) Refrigeration Equipment: Existing inventory shows that there are -

- 12 Deep freezers,
- 132 Fridges,
- 107 Thermos flasks.

In addition to these, the following articles are required -

- 19 Deep freezers costing £200 each;
- 108 Fridges costing £100 "
- 170 Thermosflasks costing £5.-.- "
- 60 Fridges costing £20.-.- "
- 2 Airconditioners costing £130 "

(c) Vaccination Equipment: A total of £224,695 shall be spent to purchase -

- 900 Syringes,
- 1,800 spare barrels, and
- 9,500 needles.

B. RECURRENT EXPENDITURE

1. Salaries and Allowances:

30 Professional Veterinary Officers;
149 Middle grade Officers, and
808 Junior Staff shall be employed on this Campaign.

A total of £445,000 per year shall pay for their salaries and allowances, following the rates in Nigeria Civil Service Regulations.

2. Other Changes

- (a) Transport: Based on an average of about £110 per vehicle per year.
- (b) Refrigeration: This will cover the cost of kerosene, gas and electricity.
- (c) Cost of vaccine: It is estimated that about 10 million doses of vaccine shall be produced per year costing $1\frac{1}{2}$ per dose.
- (d) Sundry Minor Equipment: To cover cost of water, replacement of broken needles, flasks etc..

TABLE V

DETAILS OF EXTERNAL AID SOUGHT OVER A
3 YEARS PERIOD OF OPERATION

C A P I T A L		E X P E N D I T U R E		
		C O S T O F B U Y I N G : -		
Country	Transport	Refrigeration Equipment	Vaccination & Camping Equipment	TOTAL
CAMEROON (CFA)	18,600.000	8,280.000	NIL	26,880.000
TCHAD (CFA)	93,820.000	21,000.000	8,200.000	123,020.000
NIGER (CFA)	101,800.000	28,960.000	13,751.000	144,511.000
NIGERIA (£)	NIL	NIL	NIL	NIL

GRAND TOTAL CFA294,411.000
OR
US \$1,062,856

TABLE OF DETAILS OF EXTERNAL AID SOUGHT OVER A PERIOD OF THREE YEARS

TABLE VI

R E C U R R E N T E X P E N D I T U R E							
	S A L A R I E S A N D A L L O W A N C E S			O T H E R C H A R G E S			
Country	Professional Staff	Other Staff	Transport Cost	Refrigeration Costs	Cost of Vaccines	Sundry Minor Equipment	TOTAL
CAMEROON (CFA	NIL	NIL	9,000.000	9,000.000	30,000.000	12,000.000	60,000.000
TCHAD (CFA)	3,600.000	56,400.000	54,690.000	2,832.000	128,400.000	NIL	245,622.000
NIGER (CFA)	18,750.000	213,000.000	117,600.000	3,400.000	48,500.000	20,400.000	421.650.000
NIGERIA (£)	NIL	NIL	NIL	NIL	NIL	NIL	NIL

CFA727,272.000

GRAND TOTAL

OR

US \$2,625.531

TABLE VII

DETAILS OF LOCAL CONTRIBUTION TO J.P.28 AS PROPOSED BY
THE COUNTRIES OF THE LAKE TCHAD BASIN COMMISSION OVER
A THREE YEARS PERIOD

C A P I T A L		E X P E N D I T U R E		
C O S T		O F B U Y I N G		
Country	Transport	Refrigeration Equipment	Vaccination & Camping Equipment	TOTAL
CAMEROON (CFA)	NIL	5,350.000	1,000.000	6,350.000
TCHAD (CFA)	47,000.000	8,000.000	NIL	55,000.000
NIGER (CFA)	NIL	NIL	9,672.000	9,672.000
NIGERIA (£)	80,000	16.210	224.695	(£)322.405 OR CFA 252,120.700

GRAND TOTAL CFA323,142.700
 OR
 US \$1,166,580



TABLE VIII

DETAILS OF LOCAL CONTRIBUTION TO J.P.28 AS
PROPOSED BY THE COUNTRIES OF THE LAKE CHAD
BASIN COMMISSION OVER 3 YEARS PERIOD

R E C U R R E N T E X P E N D I T U R E							
	Salaries and Allowance			Other Charges			
COUNTRY	PROFESSIONAL STAFF	OTHER STAFF	TRANSPORT COSTS	REFRIGERATION COSTS	COST OF VACCINES	SUNDRY MINOR EQUIPMENT	TOTAL
CAMEROON (CFA)	23,400.000	187,575.000	NIL	NIL	NIL	NIL	210,975.000
TCHAD (CFA)	135,000.000		13,800.000	(See Sundry and Minor Equipment)	NIL	32,400.000	181,200.000
NIGER (CFA)	12,600.000	135,576.000	19,200.000	2,400.000	1,500.000	2,400.000	173,676.000
NIGERIA (£)	135,000.000	1,200.000	52,800	12.720	187.500	7.950	N£1,595.970 OR CFA1,248,048.540

GRAND TOTAL

CFA1,813.899.540
OR
US \$6,548,374

MONTANT DES CONTRIBUTIONS PROPOSEES DANS LE CADRE
DU PC.28 PAR LES ETATS DE LA COMMISSION DU LAC TCHAD
POUR UNE PERIODE DE TROIS ANS.

DEPENSES INITIALES				
PRIX D'ACHAT				
Pays	Transport	Matériel de Réfrigération	Matériel de Vaccination & Camping	TOTAL
CAMEROUN (CFA)	-	5,350.000	1,000.000	6,350.000
TCHAD (CFA)	47,000.000	8,000.000	-	55,000.000
NIGER (CFA)	-	-	9,672.000	9,672.000
NIGERIA (£)	80.000	16.910	224.695	322.405 Livre soit 252.120.700 -CFA

TOTAL GLOBAL

323,142,700 CFA

SOIT

1,166.580 dollars US.

MONTANT DES CONTRIBUTIONS PROPOSEES DANS LE CADRE DU PC.28
PAR LES ETATS DE LA COMMISSION DU LAC TCHAD POUR UNE PERIODE
DE TROIS ANS

- 34 -

TABLEAU VIII

PAYS	DEPENSES PERIODIQUES		Frais divers				TOTAL
	Salaires et allocations		FRAIS DE TRANSPORT	FRAIS DE REFRIGERATION	COUT DES VACCINS	MATERIEL DIVERS	
	PERSONNEL	PERSONNEL DIVERS					
CAMEROUN (CFA)	23.400.000	187.575.000	-	-	-	-	210.975.000
TCHAD (CFA)	135.000.000		13.800.000	(Voir materiel divers)	-	32.400.000	181.200.000
NIGER (CFA)	12.600.000	135.576.000	19.200.000	2.400.000	1.500.000	2.400.000	173.676.000
c NIGERIA (£)	135.000.000	1.200.000	52.800	12.720	187.500	7.950	1,595.970 livres soit 1,248,048.540 CFA

TOTAL GLOBAL 1,813.899.540 CFA
 soit 6,548,374 dollars US.

=====

PROPOSED JOINT CAMPAIGN (JP.28) AGAINST
CONTAGIOUS BOVINE PLEUROPNEUMONIA (CBPP)
IN THE COUNTRIES OF THE LAKE CHAD BASIN

COMMISSION

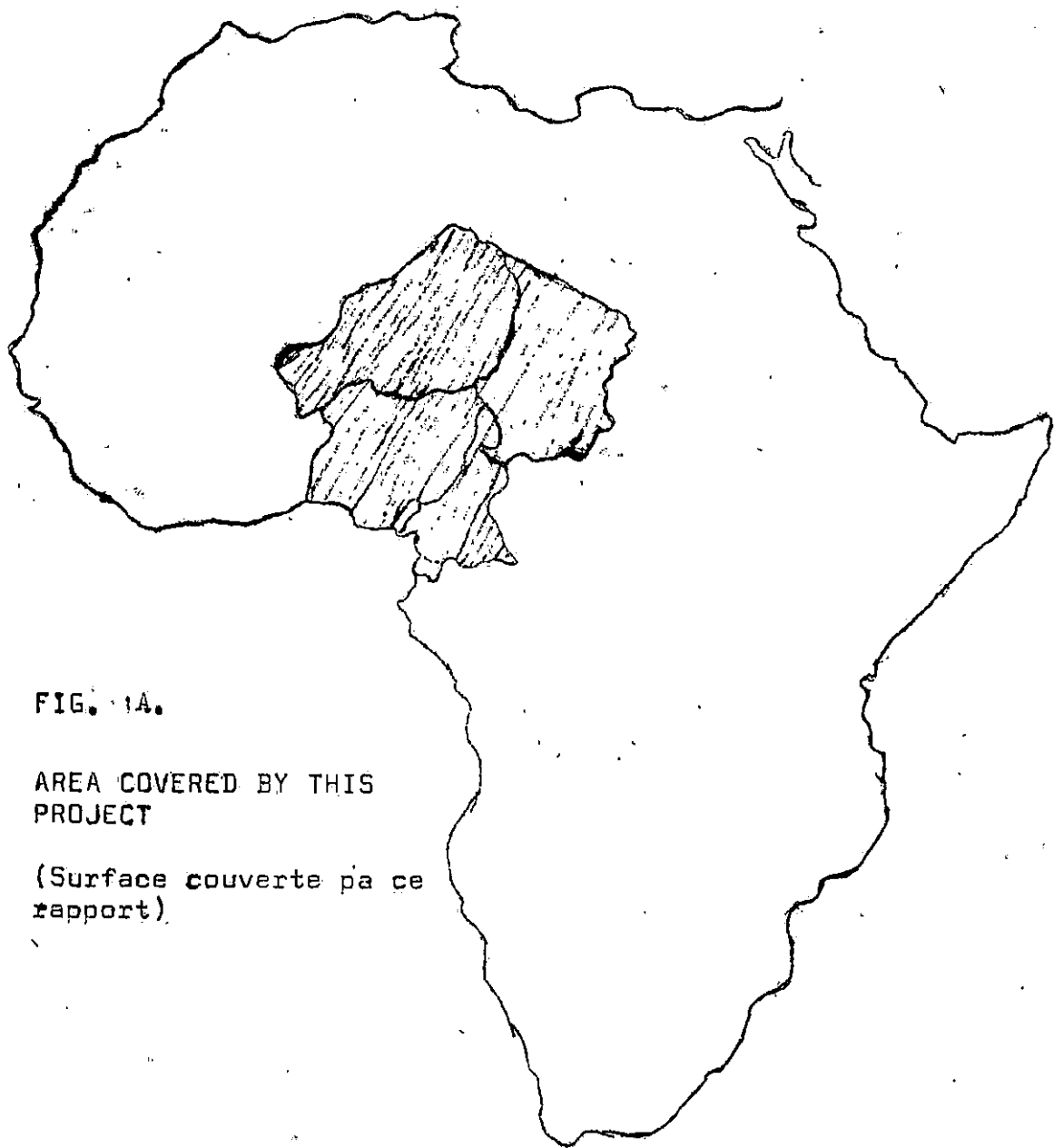


FIG. 1A.

AREA COVERED BY THIS
PROJECT

(Surface couverte par ce
rapport).

PROPOSED JOINT CAMPAIGN (JP.28) AGAINST
CONTAGIOUS BOVINE PLEUROPNEUMONIA (CBPP)
IN THE COUNTRIES OF THE LAKE CHAD BASIN
COMMISSION

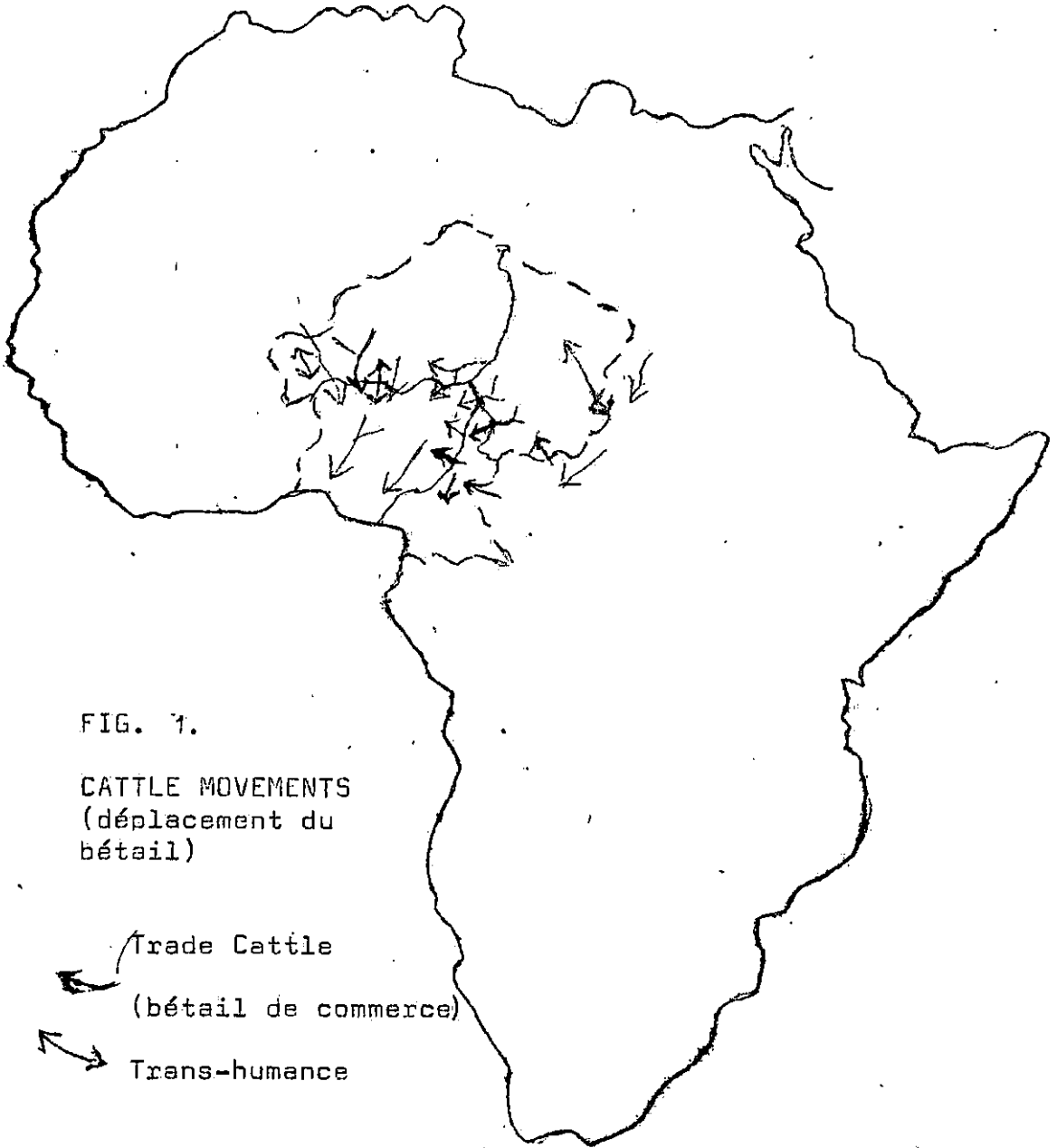


FIG. 7.

CATTLE MOVEMENTS
(déplacement du
bétail)

Trade Cattle
(bétail de commerce)

Trans-humance

PROPOSED JOINT CAMPAIGN (JP.28) AGAINST
CONTAGIOUS BOVINE PLEUROPNEUMONIA (CBPP)
IN THE COUNTRIES OF THE LAKE CHAD BASIN
COMMISSION

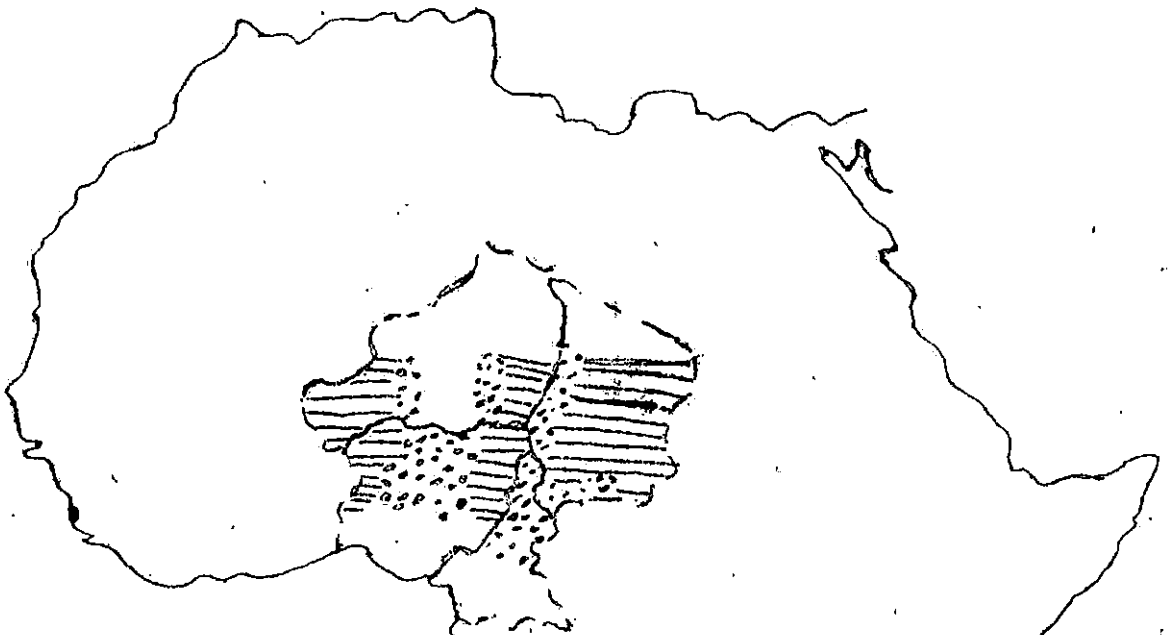


FIG. 2

CBPP INFECTION



Enzootic Zone



Exposed Zone

Free Zone
(zone indemne)

Boundary of Countries of
Lake Chad Bason Commission

(Frontière des pays de la
Commission du Lac Tchad)

MEETING OF THE SUB-COMMITTEE OF THE
FAO/OIE/OAU EXPERT PANEL ON C.B.P.P

LAGOS, 17 - 20 JULY, 1970

Following a recommendation of the 2nd African FAO Conference on Animal Production and Health held at Kinshasa, 28th November to 6th December, 1969, a meeting of a sub-Committee of the FAO/OIE/OAU expert panel on CBPP was held at Lagos, Nigeria from 17th to 20th July, 1970 to draft proposals to be submitted to OAU for the organization of a joint regional campaign of control against CBPP in Central and West Africa.

The sub-Committee was composed of:-

- Dr. P. G. Atang Director, IBAR/STRC/OAU
- Dr. M. Sall Deputy Director, IBAR/STRC/OAU
- Dr. J. E. Huddart FAO Expert
- Dr. E. P. Lindley FAO Expert
- Dr. A. Provost FAO Consultant/OIE Representative
- Dr. M. Lobry Secretary of the Panel

INTRODUCTION

These proposals for the control of CBPP are intended to amplify the recommendations made by the FAO/OIE/OAU Expert Panel on CBPP in 1967.

The adoption of a uniform approach is recommended, although it is accepted that local modifications to methods might have to be accepted. The adoption of regional schemes is recommended. National control program already in operation should be continued.

1. ASPECTS OF VACCINATION

1.1 Choice of vaccine

1.1.1 Of the live vaccine available those made from the strains T₁ and KH₃J are recommended. Safety trials of T₁ vaccine should always be carried out before widespread use in a population of unknown susceptibility. (See Paragraph 2.17). Vaccine made from strain KH₃J may have to be used until such time as it has been confirmed that vaccines made from T₁ strain can be used without undue complications.

- 1.1.2 Simultaneous vaccinations with any other compatible vaccine, such as Rinderpest vaccine, is strongly recommended. Advice as to compatibility is obtainable from the laboratories concerned.
- 1.1.3 It is strongly recommended that lyophilised vaccines should be used in any mass vaccination campaign. Advantages include more satisfactory standardisation and much greater convenience in use.
- 1.1.4 Bearing in mind the dangers associated with avianised vaccines, the use of this type of vaccine should be discouraged.

1.2 PRODUCTION OF VACCINES - LABORATORIES

- 1.2.1 Vaccine supplies - CBPP vaccines are at present available from the following laboratories: Dakar, Farcha, Bamako, Vom. In view of requirements of staff and equipment, and the exacting standard of production required, it is desirable that production should be centralised as far as possible.
 - 1.2.2 Methods of vaccine production are described in the literature, Special attention should be given to the standardisation of all vaccines for use in large scale campaigns.
- 1.3 It is important that all rules for transport, storage, and handling of vaccines should be faithfully observed according to the instructions issued by the producing laboratories.
- 1.4 Use of Vaccines:
- 1.4.1 Route - subcutaneously.
 - 1.4.2 Sites of vaccination - 3 main sites
 - 1.4.2.1 TAIL as used in East Africa and there considered to be the safest site.
 - 1.4.2.2 OVER THE NASAL BONE (Chanfrein) restraint is difficult and serious lesions are more likely to cause death. The use of this site is to be discouraged.

- 1.4.2.3 NECK OR FLANK:- the more conventional sites but may result in larger lesions with reaction producing vaccines.
- 1.4.3 In the case of T₁ vaccine choice of site must depend on local experience KH₃J can safely be given at conventional sites.
- 1.4.4 Post vaccinal reactions - the ill effects of vaccination consists of local swelling at the site of inoculation in a small proportion of animals. This swelling is usually apparent by about 2 weeks after vaccination and reaches its peak at 3 to 4 weeks.
- 1.4.5 Chemotherapy to control local post vaccinal reactions is not objectionable.
- 1.4.6 Safety trials for T₁ vaccine should be set up immediately in as many countries as possible (See paragraph 2.17).

1.5 COVERAGE

- 1.5.1 High vaccination cover is essential in mass vaccination campaigns. Inadequate vaccination coverage is dangerous in that it tends to perpetuate the disease.
- 1.5.2 Vaccine should be used every six months in high incidence areas.

- 1.6 MARKING - all vaccinated animals should be marked distinctively.

2.0 OUTLINE PROPOSALS FOR CONTROL SCHEME

The proposed control scheme is based upon repeated mass vaccination campaigns in the enzootic areas. Ancillary measures such as testing and slaughter are recommended also but only after the incidence of disease has become greatly reduced through vaccination.

- 2.1 The detailed planning of control programmes depends on the availability of precise information on the distribution of the disease in each country or region. It is essential to

define enzootic, free and exposed areas, and for this purpose, epizootiological surveys may be necessary.

Enzootic area - an area within which there has been infection within the last two years. It is essential to select readily definable boundaries based on physical features or tribal boundaries or other features likely to present an effective obstacle to cattle movement. Occasionally such an area may have to include some non infected populations.

Free area - an area within which there has been no infection during the past two years and in which there is little risk of future introduction of disease.

Exposed area - an area in which disease is normally absent but in which sporadic outbreaks are liable to occur due to introduction of infection by migratory or trade cattle.

Areas of which the status is unknown must be regarded as suspect (enzootic) areas until proved otherwise. Epizootiological areas may overlap national boundaries and call for co-operation between neighbouring states.

2.2 Mass vaccination programmes should be started in enzootic areas offering the most favourable prospects for high cover rate. More exact estimates of time scales can be given when epizootiological findings are known and the availability of resources can be assessed.

2.3 Programme for an enzootic area:-

2.3.1 Preliminary safety trials on an adequate scale (including calves) (Also see paragraph 2.17).

2.3.2 Preliminary educational propaganda and enlistment of support from local administration, police, army and judiciary etc. Everything should be done to ensure cattle owner co-operation and good vaccine cover.

2.3.3 Vaccination of all cattle including calves:
in the case of T_1 according to the plan.
(T_1) - 6 months - (T_1) - 12 months - (T_1) -
12 months - (T_1) (a total of 4 times in $2\frac{1}{2}$ years);
in the case of KH_3J vaccination should be carried
out every 6 months.

Either scheme results in an effective immunity
level for approximately $3\frac{1}{2}$ years. Note that this
first phase must last for at least $2\frac{1}{2}$ years from
the beginning of vaccination.

2.3.4 Special attention is to be paid to herds identi-
fied as infected on clinical grounds. The
intervention consists of vaccination with T_1
vaccine repeated after two months. It is not
essential to slaughter clinical cases at this stage.

2.4 Each country will require at least one diagnostic
unit (testing). This should be established if
not already available within 1 to 2 years.

2.5 The policy of slaughter would not be used as an
instrument of control in a vaccinated enzootic
area until it could be supported by CF testing.
This would normally take place at a late stage
after the incidence had been substantially reduced
by vaccination and the area is approaching free
area status. The basic object of testing and
slaughter is the early removal of carriers.

2.6 When compulsory slaughter is carried out, adequate
compensation should be paid as soon as possible and
every effort made to salvage the carcass.

2.7 When the incidence is lowered and testing becomes
available, outbreaks should be dealt with by the
most suitable of the following techniques. Note
that these are applicable whenever active disease
is discovered. These represent 3 methods of
eradicating infection from infected herds.

2.7.1 Testing with herd slaughter. This is always
particularly applicable in sedentary areas and in
areas approaching final eradication.

2.7.2 Eradication within a quarantine. This involves the provision of suitable quarantine areas in suitable localities or alternatively involves ability to maintain an infected herd in isolation in situ. An infected herds is treated as follows:-

- (i) Clinical cases are slaughtered
- (ii) The herd is tested and reactors slaughtered
- (iii) The remainder of the herds is vaccinated with T_1 vaccine
- (iv) Clinical cases are removed during the next 2/3 months while CF testing cannot be used.
- (v) The herd is tested at 2/3 months after vaccination and reactors slaughtered.
- (vi) The test is repeated a month later and if clean the herd is re-vaccinated and released from quarantine.

2.7.3 A useful and economical modification of the method described in 2.7.2 is to vaccinate an infected herd after slaughtering clinical cases, then hold in quarantine, slaughtering new clinical cases as they can be identified during the next 2/3 months, then test to remove chronic disease and complete the eradication process as in 2.7.2.

2.7.4 The methods of 2.7.2 and 2.7.3 have the great advantage of attracting cooperation of cattle owners. Note that this is the only proposed use of testing in the originally defined enzootic area - to hasten the process of eradication by removing carriers or potential carriers as soon as they can be identified; thus avoiding persistence for perhaps several years under a regime of vaccination alone. But note also that vaccination (without testing or slaughter) can achieve eradication in time.

2.8 Testing can also be used in the later stages in the original enzootic areas to demonstrate freedom from disease, but this can hardly be regarded as a practical necessity of general application as eradication will become evident through the lapse of time without such effort.

- 2.9 Basic programme for free areas - Here the policy should be the maintenance of freedom from infection by routine sanitary measures of CBPP control. These primarily relate to movement control but also include such services as patrolling, reporting, and diagnosis. In case of outbreaks testing and slaughter of entire herds should be applied; vaccination should not be used.
- 2.10 Exposed Areas - Each such area must be considered strictly on its merits. If the risk is particularly high or sanitary measures difficult to apply, then these are both indications for the use of protective vaccination. If the risk is not particularly high and sanitary measures are adequate, vaccination is to be avoided. It is believed that in many of the high risk areas vaccination is likely to be the preferred policy, especially in the early stages. Note however that whatever immediate decision is made the time will arrive when these areas will approach the status of free areas and control must then be based on test and slaughter.
- Special mention is necessary of high risk countries in which mass vaccination is deemed necessary for the time being, and in which outbreaks might occur sporadically until effective cover is achieved. In such cases repeated vaccination in the herd and surrounding herds offers an effective approach to control. Rigorous slaughter of clinical cases assists in early achievement of control, as also does testing applied at an appropriate stage.
- 2.11 Note that test and slaughter of individual animals with the object of eradicating disease from a herd HAS NO PLACE IN THIS SCHEME.
- 2.12 Testing Units - It is immaterial whether these are mobile or static in a laboratory. Each unit needs 8 middle grade staff plus 2 professional officers to supervise testing and to interpret and apply the results of testing. Basic facilities required include a supply of sheep. Capital

cost say 20,000 dollars U.S. with a recurrent cost of 10,000 dollars per annum excluding salaries. Each unit can test up to 1,000 cattle per day - the limiting factor probably being the rate of collection of blood samples. The unit could probably be sited so as to test in support of disease control in trade cattle.

2.13 RECOMMENDATIONS REGARDING TRADE CATTLE MOVEMENTS

2.13.1 It is recognised that the existing system is based on movement permits and vaccination. It is desirable to include the certification of vaccination in the movement permit with details of the vaccine used. It is desirable to use distinctive marking. It is to be observed that export taxes levied by exporting countries introduce an element of tax evasion which is reflected in evasion of sanitary control.

2.13.2 Branding - "S" on the head for slaughter cattle is strongly recommended.

2.13.3 For imported slaughter cattle close supervision up to the time of slaughter is essential together with effective precautions against contact with local cattle. Such imported slaughter cattle should be slaughtered as soon as possible.

2.13.4 For imported breeding cattle the use of the CF test is recommended - two CF tests with a minimum period of isolation of at least one month between tests. All such cattle should be derived from disease free areas and contact with imported slaughter stock should be avoided.

2.13.5 Every effort should be made to move slaughter stock by mechanical transport from their place of origin to the abattoir.

2.14 PHASING

Phase I - Vaccination in enzootic areas

Set up diagnostic facilities in laboratory and field, staff training.

Cattle Trade - improve movement control

Improve sanitary services generally.

Phase 1 comes to an end at about the end of three years, when a review of progress is held and zones are re-defined. In some areas the disease should be ready for eradication, with less progress in others. In the latter vaccination is continued into Phase 2.

Phase 2 - Vaccination continuing in many areas.

In the more advanced areas testing can be introduced to speed up eradication.

Re-definition of zones to continue.

At this stage complete reassessment of the problem is necessary. Good progress should have been made in reducing incidence but the additional effort required for complete eradication cannot be estimated at this time. It is emphasised that any abrupt termination of these operations would be most undesirable. All countries concerned must be prepared to take over and continue control measures as necessary.

2.15 There is a real need for standardisation of methods and techniques throughout the region. The FAO/OIE/DAU expert Panel on CBPP is able to provide the necessary technical information.

2.16 A CBPP technical officer is recommended for each country, to be responsible for all aspects of control in that country. He must be competent in both field and laboratory techniques. He should have an understudy and both should be basically field rather than laboratory officers. Both should be professional officers with established seniority. They need technical training at a high level and should be able to train their own subordinate staff in both laboratory and field when their own training is complete. Technical training for this purpose might well be sponsored by an international organization. These two officers are the two professional officers mentioned in paragraph 2.12.

2.17 Safety trials are urgently recommended now in every country concerned. These should take the form of T_1 inoculation first in 10 then 100, then in 1000 cattle representative of the population of the area concerned. Lyophilised vaccine should be used and trials are necessary only for T_1 strain. A standard recording method for the results is suggested as follows:-

Neck or Flank site - measure diameter of swelling at 1,2,3, and 4 weeks after inoculation.
Record presence of ulceration, any slough of necrotic tissue, and any systemic disturbance (note might lead to death in extreme case)

Tail site - measure length of swelling along tail (note inoculation site is 5 cms above the brush) at 1,2,3, and 4 weeks after inoculation. Record also ulceration, slough, spread to the perineal region, loss of tail or death.

A study of the results should indicate the suitability of the vaccine, and these results should be made available throughout the region.

1971-06

Proposed Joint Project (JP.28) Against Contagious Bovine Pleuro-Pneumonia (CBPP) in the countries of the Lake Chad Basin Commission.

Organization of African Unity

<https://archives.au.int/handle/123456789/7740>

Downloaded from African Union Common Repository