

CILSS

COMITE PERMANENT INTER-ETATS DE LUTTE
CONTRE LA SECHERESSE DANS LE SAHEL



PERMANENT INTERSTATE COMMITTEE FOR
DROUGHT CONTROL IN THE SAHEL

SECRETARIAT EXECUTIF



Burkina Faso



Cap-Vert



Gambie



Guinée Bissau



Mali



Mauritanie



Niger



Sénégal



Tchad

PROJET DIAGNOSTIC PERMANENT **PERMANENT DIAGNOSIS PROJECT**

L I V E S T O C K

LIVESTOCK PHASE III PROGRAMME
FOLLOW-UP AND EVALUATION

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INTRODUCTION

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- INTRODUCTION

This document is an attempt to review the livestock programme that was initiated within the framework of the third phase of the Permanent Diagnostic Project. The programme comprises the following parts:

- Monitoring of cattle markets in Mali, Niger, Mauritania, Sénégal, Tchad;
- Pastoral monitoring test in Mali;
- Evaluation of the livestock population in the Gambia and in Cape Verde;
- Training seminar for livestock officers in Burkina.

The different actions shall be undertaken by the national structures on the basis of a methodology which shall be agreed on with ECA. The project shall, in that case, assure the additional funding for purchasing Equipments and the inherent operational costs. The proposed budgets should enable the carrying-out of actions for the period June 86 to February 87.

It is only at the end of this period that the present document shall attempt to assess the level of execution of each action and to perceive what the prospects are for the fourth phase.

I - Monitoring of Cattle markets

1 - 1 Context of the Study

The livestock sector is no doubt one of the areas in which data collection is least satisfactory in the CILSS countries. The inventories which have been made within the framework of the Permanent Diagnostic Project show much irregularity and less viability in the existing data. The reasons are especially to be found in the inability to be able to formulate up to now acceptable statistical methodologies, because of the nature of the exploitation systems.

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Thus in all the CILSS countries, people are very little informed about the structure of herds; the nature of exploitation systems in particular in the Sahelian zones makes it difficult enough to establish a statistical methodology for the structural evaluation of livestock.

Added to this, the States do not have sufficient means to carryout regular surveys. Thus, in spite of the deficiencies of the method the Livestock Departments continues to evaluate their herds on the basis of the populations vaccinated. Nevertheless, the deep mutations that livestock has been through in recent years owing to the consequences of drought, call for a surveillance - albeit minimal - of the structure of herds and more so the reproductive means. There will be need to see in what way reproduction is assured by exploitation.

Another example, which is not least important is that of the price which still is less know than the structure of herds. Here also, the nature of the production systems based on the extensive use of water points and natural pastures makes it that it has not yet been possible to find an approach method for evaluating production costs. Apart from such a possibility, the price of cattle obtained from the monitoring of cattle markets constitutes an essential reference in the process of valorizing national livestock populations.

This price plays an important role in determining the incomes of cattle owners and the exchange rate between animal husbandry products and agricultural products.

This is therefore enough useful information not only for development planning but also for the adoption of conjunctural policies which shall be gathered within the framework of the monitoring of cattle markets the objectives and methodology of which are hereunder indicated.

1-2 Objectives

The objectives of this component which constitutes the substance of the livestock sector programme had been identified in the document entitled "Livestock 3rd phase programme" presented at the 3rd Regional Consultation meeting of the project. Briefly, it was a question of carrying out surveys of cattle markets with a view to determining:

- The volume of transactions on the basis of the number of heads presented and sold
- The structure of the animals sold
- The origins and destinations of the animals sold
- The prices and weights of the animals sold.

1-3 Methodology

1-1 Original conception

Initially the survey should have been carried on two market samples prior to whose selection there was to have been drawn a list of all the cattle markets categorized on the basis a typology which reflects their functional characteristics. Thus, three types of markets needed to be distinguished: collection markets, regrouping markets and terminal markets. The two samples were to be selected in such a way as to be representative enough of this typology.

The first sample, which is more restricted, should be the object of regular monitoring and the second a more spaced-out monitoring.

Regarding the choice of secondary units which comprises the number of heads for all the parameters excepting the cost and weight, the idea was to carry out as exhaustive a survey as possible.

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The price and weight were to be determined on the basis of the method of sample units that correspond to the different categories of cattle. For bovines, distinction is made principally between the following: bullock, bulls, cows, heifers, bull calves, young bullock. For sheep and goats, they are: male adults, female adults, young males, and young females.

The surveyor should take note of minimum observations on prices and weight for each category of cattle. The scale of the samples shall depend on the numbers sold. The methods for taking-down data would depend on the degree of training of surveyors and the equipment available on the market.

Data collection should be done on the basis of basic fact sheets prepared by ECA and harmonized through the length and breadth of those countries executing this component. Based on this data collected, a monthly report should be prepared at each market controlled and it should form the basis for the monthly synthesis report of all the markets controlled and which should be sent to ECA to be processed at regional level.

1-3-2 Application of the methodology

1-3-2-1 Problems encountered

Applying such a methodology against a number of difficulties. In the first place there was the absence of sufficient basis for determining this. The majority of countries do not have a complete list of their cattle markets. Added to that the existing lists were often outdated and do not reflect present reality given especially the long experience of drought that the states have known. All the States were asked to update their respective lists. This job has not been completed.

It was also difficult to retain a market typology of cattle markets as initially defined. The limits of collection and gathering markets were often difficult to determine.

Lastly the insufficiency of the human and material means available did not enable the monitoring of the two samples. The monitoring of the second sample in particular which should have been selected in an aleatory manner should bring about major movements as well as increase considerably the survey charges.

1-3-2-2 Methodology retained

For all the reasons cited above and because of the fact that the method of this project is to proceed is to proceed by repetition, it was decided in the first place to follow a single market sample selected in a reasonable manner and which shall be controlled regularly. This sample is representative of a market typology which differentiates on the one hand the production markets and on the other the consumption markets. The consumption markets are those in which the supply to slaughter and exploitation centers constitute a major feature. On the other hand the role of production markets would be to supply markets for re-raising or to other interior markets. The production markets are, in any case, more visited by herdowners than consumption markets

The results shall be analysed on the basis of the these two types of markets for the purpose of determining whether there is a significant difference.

This method has enabled the retention of the following samples for each country:

	Production	Consumption	TOTAL	
	Markets	Markets		
Mali	8	9	17	
Mauritanie	-	-	-	
Niger	-	-	20	
Sénégal	10	10	20	
Tchad	10	10	20	

.../...

This list of sample markets is annexed. As could be seen these samples are not identical for all the countries. Their sizes are especially determined by the human means available.

In Senegal and in Tchad surveys have a national scope. In Mali, only the Mopti region monitored by the ODEM project is not covered. In Niger, the project covers two Divisions. In Mauritania, the sample has not yet been determined.

1-4 Execution of Surveys

1-4-1 Commencement of surveys

Surveys started late and the causes and importance of this lateness vary from one country to the other. It is in Tchad that they started first at the beginning of August following an in-service course for surveyors during the second half of July. In Mali and in Senegal they started in September. The training of surveyors was done in Mali at the end of August. In Senegal where there was no budget provided for to this effect training was done on the spot by the different inspectors. In Niger, surveys only started in November following training of surveyors done at the end of October for the Niamey area and mid-November for the Dosso area. In Mauritania surveys have not yet begun.

The causes of delays are often blamed on the lateness in providing funds but also to the availability of those responsible for the surveys as is the case in Niger where the principal Officer responsible was out of the the country for two months.

1-4-2 Collection problems

Some difficulties arose while collecting data in the field. The first of these difficulties is the workload. The human and financial means available only allowed for the sole monitoring of one market per surveyor. In some cases, surveyors had on their shoulders two markets to survey. The importance of some terminal markets brings along a charge which is borne with

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difficulty by an only surveyor and in particular where it is a question of counting. It is for this reason that during one of the ECA missions, it was suggested to the surveyors to count one species only alternatively on sale days. This would give more viable results.

The second difficulty stemmed from the taking the two parameters that are cost price and weight. Concerning the price, there were, in the first place, difficulties in obtaining it from the first fact sheets which were aimed at obtaining it on the basis of several characteristics: sex, weight, profession of the seller, age. Following this the category and weight were intended. Another difficulty in taking down the prices arose from the refusal of businessmen. This requires a certain tactfulness on the part of the surveyor.

Regarding the weight of the animals, the visual estimation of live animals or carcasses method was retained owing to shortage of equipment on the markets.

The majority of countries have a limited number of surveyors trained to this effect. Training sessions will therefore be organized in order to surmount this difficulty. In Tchad where this method has not yet been initiated prices shall be expressed only on the basis of the category.

The third difficulty in data collection is the upward movement of information. This is particularly acute in Tchad and in Mali owing to communication problems. The least tiresome means is that of the Posts and Telecommunications service but this means is not operational. Channelling information by road is quite expensive. This situation is a serious handicap to the drafting of synthesis reports.

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1-4-3. State of surveys

1-4-3-1 Level of execution

The level of execution of inquiries materialized by the preparation of monthly reports by the controllers and of synthesis reports in each country is annexed.

In Mali all the controllers submitted their reports as early as September. By October only two reports had not arrived. It was in November that the greatest irregularity was observed. This was due to the laying-off of some controllers who were found to be quite in order vis-a-vis the Civil Service. When the ECA mission came by at the end of December the synthesis reports for September and October were ready.

In Niger the mission arrived at the end of November while surveys had started early November; consequently no report was available yet. The first synthesis report is expected during the month of January.

In Senegal, surveyors with the consumption markets are more regular. All submitted their reports from September to November. In September five surveyors of production markets did not prepare reports. In October and November they numbered three. Presently only the synthesis report for the consumption markets is available.

In Chad, owing to inundation-related problems during the rainy season not all the controllers of markets in the East were able to communicate their report. There were only five in September and two in October failed to send their report. At the time of the ECA mission from 17 to 25 November the synthesis report has been received by ECA.

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1-4-3-2 Observation on the reports

It may be early to pass judgement on the results of this survey. The synthesis reports received as at date are quite limited. Nevertheless, except for slight differences, all contain the same elements. Mali's report does not indicate the origins and the destinations of the animals. This observation was made during the last mission by ECA. In future this parameter will be used. This observation was made during ECA's last mission.

In Senegal calculation errors in the report were observed, however the latter was not discussed. In addition as the "cost price sheets" were not to be processed initially by the controllers but sent directly to Management, the Majority of controllers kept them to themselves.

In the final analysis the synthesis report of Senegal for the month of September does not touch on this area. Measures have been taken to fill this gap at the ECA mission.

In Chad also information on prices structure for the month of August is incomplete.

1-5 Perspectives

By end of February 87 the markets monitoring system would have lasted seven months. However the majority of parameters concerned experienced major seasonal fluctuations owing to exploitation systems based on seasonal transhumance. It will not therefore be possible to gauge the entire reality of these parameters on the basis of punctual surveys. This is why it is necessary to have the monitoring done for a year at least in order to appreciate the nature of these variations. This is a condition required if the evaluation of the collection method used is to be done properly and also in order to allow for the interpretation of the results obtained.

II Pastoral Monitoring

2-1 Objectives

This part consists in realizing a test on the pastoral monitoring methodes in Mali, based on two cases: general monitoring and local monitoring. General monitoring shall be based on the use of national agrometeorological data with the aim of setting-up a warning apparatus. Local monitoring on the other hand shall be done on from agrostological data with a view to making an evaluation of pastures.

2-2 Monitoring methods

2-2-1 General Monitoring

The general monitoring method which covers the entire country consists in utilizing rainfall data in order to gauge herbacious production. Indeed, studies have been made which would enable to relate rainfall and productivity to surveillance spots.

Rainfall data shall be gathered from the AGRHYMET Centre covering 41 localities. This network is insufficient and needs to be completed with raingauges of Development Operations. The norm to be observed should be one raingauges for an area of 30km.

Near raingauges should be installed a number of surveillance spots selected on the basis of an appropriate Statistical method. The final objective is to be able to compare yields of herbaceous production calculated on the basis of the relations between rainfall and herbaceous production and the yields observed on the surveillance spots. If the results are satisfactory they should be able to specify the zones based on yields and should enable the alarm to be sounded as regard the exploitation of pastures.

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2-2-2 Local Monitoring

This test has been done in three regions which are characteristic of the three pastoral units of the country: Sahelian pastures (GAO), innundated pastures (Mopti) Sudanese pastures (Sikasso). The monitoring calls for different methods depending on the region: agrostological data, remote sensing, cartographic data. The final objective is to ensure the evaluation of the situation of pastures with a view on the one hand to defining a strategy in the short term and on the other to appreciating their interannual evolution by laying the foundations of a strategy in the long term. The detail of the method appears in a document of the National Livestock Management "Methods of Continious Surveillance of the Pastoral Ecosystems of Mali".

2-3 Realisations

2-3-1 General Monitoring

This action only took effect begining September. This delay compromised the results immensely because the rainy season had already finished at end of September.

The execution report was prepared in November it shows a relatively fair appreciation of the method in the collection and processing of rainfall data; even though the rainfall network utilized was inadequate. Indeed as at 10 November 29 estimation points of biomass on the basis of rainfull figures gave results which provided for a convincing photograph of the rainfall situation. The biomass calculated and expressed in dry susbtance kg/hectare varies from 0 to 3455kg/ha depending on the soils productivity and daily rainfall.

On the other hand results were not satisfactory concerning the data observed on biomass and the floristic composition. The problems reside mainly in a deficiency in training and monitoring of surveyors. This resulted in a poor sampling of spots and to a poor observations. Noting.

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Instead of being selected at random, the spots were located where there is a lot of grass. They cannot therefore be representative of the actual situation of pastures.

The results show very high yields observed. The differences as compared to the yields calculated vary from 1.3% to 90%.

2-3-2 Local Monitoring

This report is being prepared and the results are therefore not available.

2-4 Perspectives

The results obtained within the framework of the general monitoring do not allow for the drawing of conclusions in the direction of an alarm. One may therefore conclude that this component's objective has not been attained. In reality however the objective is especially meant to try the method, and the results obtained do not allow for the questioning of this method in that its minimal application conditions were not all available for the reasons given earlier. In this regard it would be interesting to use this experience once more as desired by the National Livestock Management and which made the following recommendations:

- Start the campaign in July-August
- To make preparatory and supervision missions at the opportune moment
- To train field workers especially in agroecology
- Increase the density of the rainfall network
- Accelerate the transmission of data

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III - EVALUATION OF LIVESTOCK IN GAMBIA AND CAPE VERDE

Here, it is a question of carrying out surveys in order to establish the structural composition of the animal population in these countries. These were carried out within the framework of annual agricultural surveys whose methodologies shall be discussed in another ECA document relative to the surveys carried out within the framework of the programme of the agricultural sector. They shall therefore not be examined here.

IV - Training seminar on livestock statistics in Burkina

This seminar falls within the framework of the process of creating by the Ministry of Agriculture and Livestock permanent data collection structures. It took place from 17 to 26 June 1986 with the joint support of the Project, CEBV and FAO.

The seminar brought together representatives of livestock structures of 28 provinces, officers of the Ouagadougou and Bobo Dioulasso abattoirs, of ONERA and of the Central services of the Livestock Department, that is a total of 42 participants.

The training programme was centred on the actions carried out in the area of animal production statistics, general notions on statistics, and the survey methods by counting. Participants also benefitted from a practical session on the field and work sessions on statistical calculation.

All the documents of the seminar are contained in a final report which was addressed to ECA.

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At the end of the seminar the National component expressed the desire to realize an inquiry to survey the national livestock population on the basis of a methodology already tested in three provinces and discussed during the seminar. The total cost of the enquiry estimated at 50 million F CFA seems difficult to be borne by the Project during its 4th phase.

V CONCLUSION

Even though there were delays in starting, the livestock programme as a whole saw some degree of execution, for the moment satisfactory excepting the part on the monitoring of markets in Mauritania and to a lesser degree in Niger.

Concerning the appréciation of methodologies for the cattle markets, it must be said that the lack of counting basis has for the moment prevented all use of random sampling. Therefore some empirical methods of sampling were tried which in our view if well applied should give viable results. For now it is difficult to make an opinion on either the good use of the methods or on the viability of the results obtained. Other difficulties of start in training and lack of means are added to the methodology problem as such and make it difficult to appreciate individually. This appreciation therefore must necessarily pass through the clearing away of these hurdles which will be done after a certain practice resulting from a process of repetition. It is therefore in this regard and also because of the fact that the majority of data collected undergoes major changes during the year that one should envisage prolonging the surveys for a relatively longer time. These surveys should therefore continue into the 4th phase of the project and shall be extended if need be to other countries like Burkina.

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Concerning pastoral monitoring methods we can at this stage only talk of general monitoring. In this area we saw that the methodology desired was not observed but that the interest shown by the authorities and the importance of the subject bring us to envisage redoing this study within the framework of the next season by taking all the necessary measures on time.

Seminars of the type that was held in Burkina should be envisaged elsewhere depending on the means available for they are of considerable utility in training assistants.

Likewise in the area of cattle markets surveying a meeting of heads should be possible during the 4th phase with a view to enabling them to discuss the problems they experienced and thereafter harmonize collection methods.

Some methodology areas still remain at a general level and could give rise to diverse interpretations. An example is the different categories of cattle. Should the categories be specified on the basis of the ages of the animals (1-2 years etc...) or on the basis of the types (bull, cow etc...) as is the case in the present survey? There is also the method of guessing weights. Should one guess the weight of the live animal or of the carcass? Also there is the size of samples on the prices and weights of animals which should be specified more. Finally there are all the practical problems of data collection in the field as appearing in this report.

The meeting could also discuss and take up definitively the essential information that survey should portray at both national and regional levels.

The concrete actions to be taken and their required funding shall be the object of bilateral discussions between ECA and the national components.

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LIST OF NIGER'S SAMPLE MARKETS

NIAMEY AREA

Balayara

Filingué

Téra

Gothèye

Mangaizé

Torodi

Mankalondi

Boki

Boubon

Kollo

Ayorou

Tillabéry

Niamey

DOSSO AREA

Guiladjé

Yéda

Mokko

Karguibangou

Baga

Fadama

Malgourou

N.B. Survey Started in November, reports not yet obtained.

SITUATION OF CHAD'S REPORTS

+ Arrived

- Not arrived

	August	September	October	
I CONTROLLERS REPORTS				
N'DJAMENA	+	+	+	
Mandalia	+	+	+	
Massuguet	+	+	+	
Dourbali	+	+	+	
Massakory	+	+	+	
Bol	+	+	+	
Bassola	+	+	+	
Ati	+	-	+	
Koundjourou	+	-	+	
Mungo	+	+	+	
Bitkine	+	+	+	
Bongor	+	+	+	
Palo	+	+	-	
Dum Hadjer	+	+	+	
Sarh	-	-	+	
Abéché	-	-	+	
Am Dam	-	-	+	
Biltine	-	+	+	
Dressia	-	-	-	
II SYNTHESIS REPORTS	+	+	-	

SITUATION OF SENEGALS REPORTS

+ Arrived

- Not arrived

	September	October	November
I CONTROLLERS REPORTS			
Production markets			
Niassante	+	+	-
Sagata	-	+	+
Dahra	-	-	+
Toubatoul	+	+	+
M'Bake	-	+	+
N'Diedel	+	+	-
Birkilan	-	-	+
N'Diote Ceane	-	+	-
Sare Yoba	-	+	+
Bindiona	+	-	+
Consumption			
Saint Louis	+	+	-
Lougo	+	+	+
Thiès	+	+	+
Dakar	+	+	+
Djourbel	+	+	+
Kaolack	+	+	+
Tamba	+	+	+
Kolda	+	+	+
Ziguinchor	+	+	+
Fatick	+	+	+
II Synthesis reports	+	-	-

SITUATION OF REPORTS IN MALI

+ Arrived

- Not arrived

	September	October	November
I CONTROLLERS REPORTS			
Production markets			
Ansongo	+	+	-
Bilali Kayra	+	+	-
Boussin	+	+	+
Gossi	+	+	+
Nara	+	+	+
Nioro	+	+	+
Tonka	+	+	-
Yolo	+	+	+
Consumption markets			
Bamako Abattoir	+	+	+
Faladié	+	+	+
Bougouni	+	+	+
Gao	+	+	-
Kati	+	+	+
Kayes	+	+	+
Nioro	+	+	-
Ségou	+	+	+
Sikasso	+	+	+
II Synthesis reports	+	+	-