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Un Peuple – Un But – Une Foi

INSTITUT D'ECONOMIE RURALE

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## PROJET MALI LIVESTOCK PASTORALIST INITIATIVE

### MLPI-2 /LCC CRSP

#### Compte rendu des ateliers de restitution des résultats et de planification des activités du projet LCC CRSP/MLPI-2

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#### Introduction

In an effort to improve the productivity of livestock raising and the revenue of the producers, IER, Texas A&M and Syracuse University, with financial support from USAID, have identified a research project aimed at reinforcing the capacity of the actors and their access to information, improved production technologies and livestock commercialization. The target zone for the project covers the regions of Mopti, Tombouctou and Gao. The communities implicated in the project are listed in the annex.

To reach these goals, surveys were conducted to identify and characterize the professional livestock organizations, the sources of and needs of information of the herders and the livestock markets. Research was also conducted on the feeding systems of the animals, land use, natural resource management as well as the impact of the types of management on the environment. In keeping with these activities, the OMA and DNPIA are working to develop an information system for the livestock markets in hopes of facilitating access to new technologies, information and communication for the agropastoralists.

After a year of research, the results of these different activities were the subject of two training and information workshops for the actors in the Mopti and Gao regions. The results of past research on sheep supplementation as well as the market information system developed in Mali by OMA and DNPIA were also presented during these workshops.

This document summarizes the work of these two workshops in three parts. The first relates to the opening ceremonies. The second is about the preliminary results of the research and the ensuing discussions. The third chapter is about planning future activities and the training needs of the livestock herders.

## **1. Opening Ceremonies**

### **1.1. Mopti**

The workshop in Mopti was held the 8-9 November 2010 in the PADER meeting room in Sevare. The opening ceremony was presided over by a representative of the Governor of Mopti, Mamadou Gaoussou TRAORE who was accompanied by the Deputy Prefect. Two people spoke: the Director of CRRRA Mopti P/I, Dr. Odiaba Samake and the representative of the Governor of the Region of Mopti. Dr. Odiaba Samake welcomed all the participants and briefly presented the project. After the director of CRRRA Mopti P/I spoke, the representative of the Governor officially opened the workshop. In his speech, he thanked those present for their participation, then explained the context of the workshop,

highlighting the importance of the project for the Mopti region and all the regions being studied.

The opening remarks were followed by a pause to allow the officials to leave.

The workshop was attended by more than 30 people, 10 of whom were from the following organizations:

- the livestock merchants association of Koro
- the Fatoma cooperative
- the herders cooperative of Madiama
- the herders cooperative of Sofara
- the cooperative of associations of livestock traders in Djenné

Also present were :

- the researchers from Koro and Madiama
- The representative of the Regional Assembly of Mopti
- the representatives of the government offices of the region (DRPIA, DRA, DRE, DRSV, DRPS, CRA)
- 8 representatives of CRRA of Mopti
- Two (2) representatives of the DNPIA
- A representative of OMA
- Two researchers from the Regional Office of IER
- A professor from IPR/IFRA of Katibougou
- A representative of the press

## **1.2. Gao**

The workshop in Gao was held the 11-12 November 2010 in the meeting room of the Diakossoye Center of Gao.

The opening ceremony was presided by the Advisor for Economic and Financial Affairs of the governor of the region. Before his speech, the Director of the CRRA of GAO spoke to welcome participants to the city of the Askias. Next, in his opening speech, the representative of the governor, after having talked about the importance of the project for the region, thanked USAID for financing the project and said he hoped for a successful two days of work. The opening speech was given by the regional CAEF, followed by a break of several minutes.

In addition to the CRRA Gao agents, the elected officials, the representatives of the government organizations (DRPIA, CRA, DRE, OMA), the project researchers, the regional commission of users and the press, over a dozen herders associations were present. They are:

- The Feeders Association MARYFF of Tonka.
- The herders association SIMATAWA of Tonka
- The herders association SOUTRA of Tonka
- The union of cooperatives and association of herders of Gossi (BOHANTA)
- The feeders association (BOUCTOU) of Gossi
- The association CIDAWT in Gossi
- The herders association of Gossi
- The association Gomni Koubeye of Bara
- The association Hadiya Nafa of Tabango (Bara)
- The Professional association of rural women (ASPROFER) of Ansongo
- The association Gakassineye of Ansongo
- The herders and livestock market operators cooperative of the city of Ansongo
- The butchers association of Ansongo
- The Association of Gomnika of Bangoundie (Gounzoureye)
- The association Adaba Faaba of Koïma, (Gounzoureye),
- The cooperative society of the rural commune of Soni Aliber
- The association of herders of Magnadoé (Soni Aliber)

The list of participants can be found in the annex.

## **2. Results and Discussion**

Before the opening ceremony, participants were asked to introduce themselves to allow everyone to get to know each other better. After going around the table, Dr. Lassine Diarra, Coordinator of the MLPI project, spoke to present the workshop agenda and explain the conditions of participation. The workshop continued and presidents and secretaries were chosen for the two days.

In Mopti, Dr Lassine Diarra called a moment of silence in memory of the late Salmana Cisse, former Director of the CRRA of Mopti and the mother of a fellow researcher who passed a few days before the workshop.

In Mopti, the first days work was presided by Mr. Mananssara Togo of the Regional Assembly of Mopti. Mr. Oumar Ibrahima Sow Regional Director of the bureau of Productions and Animal Industries presided over the second day. Mr Moussa Keita and Mme. Traore Fatoumata Ba, both researchers at CRRRA/Mopti were designated reporters.

In Gao, Mr. Mohamed Alassane of the Regional Chamber of Agriculture presided over both days of work. Sekou Sala Guindo, researcher at CRRRA in Gao and Youssouf Kanadjigui, an agent at DRPIA-Gao were the reporters.

Note : So that the agropastoralists could participate actively, a summary of questions and responses was translated into local languages (Peuhl, Bambara, Songrai, and Tamashek).

Five major themes were presented during each workshop:

### **2.1 Ovine feeding techniques : summary of results obtained at the station and in the field (Hamidou Nantoumé, person in charge)**

Note : in Mopti, the author of the project was absent, so the material was presented by Lassine Diarra.

The presentation had three parts:

- The development of economic feed rations for fattening sheep;
- The field test of food rations appropriate for sheep feeding;
- The development of woody feed sources for small ruminants.

To start, Dr Nantoumé discussed the importance of small ruminants as they relates to meeting the national meat and milk needs as well as their increasing importance especially during the weeks before religious holidays like tabaski. He provided information about the feed used for small ruminants, the animals themselves, the high costs of feeding and the lack of information about the technical aspects of feeding and the economic profitability. He then presented:

The research undertaken in the field to develop the economical feed sources for sheep feeding;

- The field tests of feed sources appropriate for sheep feeding
- The development of woody fodder for feeding small ruminants.

For each experiment, the objectives, research methods and results were presented. Twenty feed types were tested over five years, or four per year.

In conclusion:

- Eleven feed types were retained for feeding small ruminants.
- The average daily gains (GMQ) obtained during these studies (98 to 200g) are comparable to certain results in literature.
- the best GMQ obtained during this series of trials varied from 135 to 200g.
- The average carcass yield obtained during the last two years varied from 52 to 60.8%
- The fattening curves of the last three years show that the highest weight gains were during the first four periods.
- Feeding is a profitable activity. The economic analysis of the results shows that the feed sources tested are economically feasible. The net benefit from sheep feeding varied depending on the feed source between 1,345FCFA to 11,020FCFA per animal fattened. The net benefits of the best feed sources varied from 11,020FCFA to 4,220FCFA per animal fattened.
- In light of the results obtained during these trials, the length of the sheep fattening can be reduced to five periods of two weeks, or 75 days total;
- Among the four woody species tested (*Baissea multiflora*, *Ficus gnaphalocarpa*, *Pterocarpus lucens*, et *Pterocarpus erinaceus*), *Ficus gnaphalocarpa* is the best; it can be mixed into the pods of *Piliostigma reticulatum* to make a new feed variety.

He recommended the following :

- Theory and practical trainings on sheep feeding for women;
- A large broadcast of the feeding techniques in the real world
- A development of the results (bring the information sheets and publications from scientific journals up to date) via a better transmission to the users.
- Workshops on the installation and management techniques of fodder banks for *Ficus gnaphalocarpa* et *Piliostigma reticulatum* ;

## 2.2 Socio economic Characterization of the associations

This presentation was done by Alpha O Kergna. The main objective of the study was to improve the collective actions of production and the access to livestock markets (animal products) in the north of Mali (Mopti, Tombouctou and Gao regions). Specifically:

- Understand the types of organizations, the actors and their activities.

- Identify the current and future opportunities in terms of production and commercialization efficiency for the actors.
- Propose solutions for improvement for the actors.

Three hypotheses underpin the activities undertaken:

- Better organization will allow better access to inputs and products
- Better organization allows better identification of sales markets
- Better organization allows access to and more informed use of information.

After having presented the methodology used, he gave information about the organizations surveyed: the type of organization (gender), their level of representation (local, regional, national), the activities undertaken (herding, agriculture, fishing, forestry, etc.) their heritage (vaccination park, storage facilities, livestock markets), the suppliers of veterinary products, the food and care, the modes of implementation, the members and types of management structures, their level of functionality, the services provided, their source of information, their information needs, the partners and difficulties encountered, weaknesses and opportunities of the organizations.

235 activities were surveyed for the organizations, 89 concerned herding and amongst these, 66% are women's organizations.

The total number of members of the management groups of the organizations varied greatly (from 29 to 162); on the other hand, we observe stability of members at the administrative level (around 10) and the oversight committee.

Following his speech, he observed that almost all of the organizations present their schedule of activities at the beginning of the exercise and a summary at the end. Several weaknesses were noted at the organization level, especially:

- The source of the idea of the organization
- The choice of leaders
- A lack of financial resources to meet needs
- A low level of training of the members to be able to access new technologies or banking facilities
- A weak lobbying mechanism
- Weak horizontal and vertical organization.

- Weak autonomy of the actors.

### 2.3 Feeding practices in northern Mali

The presentation was given by Boubacar Dembele, Assistant Professor at the IPR/IFRA of Katibougou. After reviewing the objectives and methods of the study, he provided information about:

- The characteristics of the persons surveyed (gender and age, level of instruction, ethnic group)
- The food situation in the areas of study (length of feeding, food available and distributed, cost of feeding)
- Purchase and selling locations for the animals.
- Constraints for feeding.

In conclusion it was found that, in Mopti:

- The feeding techniques observed take into account the realities of the region and the feed available. For the time being, the low levels of feed stocked only allow one feeding cycle in Sofara, as opposed to 2 or 3 in Koro and Mopti.
- When buying, operators are very sensitive to the variations in price of the cattle on the local markets. The choice of animals by the farmers is based on their ability to get a low price for the animals.
- Responsibility for the operation is often poorly understood by the operators. Often costs or physical labor are not taken into consideration when calculating profitability or the efficiency of the feeding.

In Gao, Ansongo and Ménaka, feeding is of capital importance in the production systems and in animal productivity. However, this operation has certain limitations. Technical and financial support (training and information) is needed to improve the revenues of the meat producers. Also, an understanding of the needs of the animals and the nutritional value of the food. A formulation of economic feed sources becomes necessary.

### 2.4 Feeding systems

The time available did not allow for a detailed presentation of results obtained in different circles, only the investigations undertaken were presented. These focused on:

- The sources of feed for the livestock (rangeland, fields and fallows, water sources, crop residues, supplements)
- The production and conditioning of fodder (fodder species cultivated, reasons and techniques used, mowing and hay storage)
- The management of natural resources (rangeland, livestock, salt licks, etc...)
- Land use (planting zones, pastures, limits of the pasture zone, existence of conflict zones, reasons for the choice of pasture zones, etc...)

## **2.5 Development of a livestock market information system (LMIS) in Mali**

The livestock market information system was put in place by the DNPIA in collaboration with the the Observatory of the Agriculture Market (OMA) with technical and financial help from “Agri Life Research” of the University of Texas/TAMU and USAID-Mali.

The project led to an agreement between DNPIA, OMA, and USAID who declared as their objective, “the improvement of the productivity and revenue of the producers in the northern regions of Mali by facilitating their access to new technologies and by reinforcing the capacities of the actors”.

More specifically, it proposes to :

- Define and develop a larger information and skills network
- Improve the opportunities of and reduce the risks of commercialization;
- integrate the LMIS system with existing DNPIA livestock market information systems
- Take advantage of the NTIC (cellular phones and internet)
- Improve and increase the geographic and analytic pertinence of the data.

Three presentations were given by the representatives of the DNPIA and the OMA; they were about the methodology of data collection, the introduction of a code system and the conformation of the livestock.

The criteria for the confirmation of the livestock as well as the coding information system were presented by Dr. Faman Doumbia and Aly Diall o the DNPIA. The collection methodology and the global structure of LMIS were presented by Dr. Francis Kéita of OMA; Keita also explained

to participants the methods of requesting and sending data using a cell phone.

The collection and transfer methodology are based on:

- the use of cell phones to transmit collected market data in real-time
- the use of a central server to have access to data using text messages, the internet and other methods.

An information coding system allows information transfers in the LMIS. It also allows the collectors, the markets, the species, breed, age categories, sex and conformations to be distinguished from one another, with the help of the American university. These coding procedures were developed for bovines, sheep, goats, camels, donkeys and horses.

The criteria for the conformation of the livestock were developed. The need to know the different prices of animals depending on their conformation is necessary because:

- The animals with the best conformation have the highest prices.
- The price difference between a fat and skinny animal encourages professionals to engage in fattening.
- A communal methodology allows markets to be distinguished from one another on the basis of conformation.

## 2.6 Discussions

Each presentation was the subject of questions by the participants. The participants asked very few questions. They were about:

- Breed choices : why was the feed tested only on the maure and Dialonké breeds?
- The choice of feed : ad libitum, with or without millet in certain groups
- The effect of the feed on the quality of the products
- The use of locally available feed in the northern regions of Mali, especially the “bourgou” for preparing the feed.
- The availability of the documents presented;
- the woody species tested in the feed as well as the *Ficus gnaphalocarpa* ;
- The existence of plague in Mali

- The types of deficiencies that lead animals to eat bird droppings
- The number of associations in Ansongo
- The functioning of the associations
- The size of the study zone by the researcher
- The support for farmers
- The types of information the herders need for the livestock market.

After the questions, satisfactory responses were given by different facilitators. Dr. Hamidou Nantoumé emphasized the lack of nomenclature of our food for animals. He also confirmed that a plague of small ruminants still exists in the area and that the bovine plague has disappeared.

### **3. Planning for future activities and future training needs**

The second day's work centered mostly on planning for future activities for the MLPI GL CRSP project in villages. There are four main activities planned by the researchers of the project: reinforcing the capacities of the professional village organizations, the dynamics and structure of the herds, the use of natural resources and workshops that demonstrate the use of the technology. During the workshop, conversations centered around value chains, as well. The activities were presented in detail to get the reactions of participants. These focused mainly on the first activity. With the exception of one, the others were discarded by participants. The empirical study of historical data from NDVI in relation with risk management and livestock mortality from the "Dynamic and structure of the herd" module was retained. The following pages give the list of activities planned by the project and retained by the participants.

#### **3.1 Strengthening the capacity of the professional producers organizations**

The discussions revolved around two issues: the training needs and access to markets.

##### **3.1.1 Training needs**

The training needs expressed by the producers organizations (OP) center around five points:

- Negotiation techniques
- Management techniques, access to credit, the management of terms of reference, the operating accounts, development of a project, management of NTIC (literacy) funds, utilization of the LMIS system
- Roles and responsibilities of members (team management)

- Feed techniques for fattening
- Fodder production, conditioning and storage techniques

The trainings will occur until 2012. For management and negotiation techniques, a week-long training will be given to the leaders. All of the modules will be presented at these trainings.

### **3.1.2 Access to markets**

The activities planned by the researchers were approved by the participants; they are listed below:

- herder access to livestock markets and decision making for migrations
- market information system in relation to the feeding and watering systems
- livestock market chains
- Flow of livestock between the local and terminal markets
- choice of markets
- Route tracking from one market to another
- Principal lodges and loading places for the trucks
- Limitations linked to the route
- Participatory study of the transhumance corridors
- Decision making methods in the pasture (method and length)
- Terms of use of information
- Institutions that can influence decisions.

### **3.2 Herd dynamics and structure**

The activities selected by the workshop are below:

- Marketing and evolution of the herds by season during the last five years
- the nature of price risk in the markets

-the degree of integration of the market price in the market chain for livestock

### **3.3 Use of natural resources**

The activities planned by the researchers and selected by participants are as follows:

- Establishment of natural resource management at the village and community level
- Study of traditional practices of natural resource management in the local areas (villages, communes, circles and regions)
- The resource dynamic and the key constraints to their normal use
- Conflict management as related to the river resources of the Niger
- Analysis of conventional and new approaches to resource management;
- Formulation and test of a sustainable resource management strategy
- Test of improved methods of the fodder packaging;
- Test of the improved production techniques of storage of the bourgou;
- Test of food rations (Feeding and milk) from locally available resources
- Development and test of an information system for the sector;
- Development of evaluation standards for the effects of the project on the performance on the production system

After this presentation, Lassine Diarra noted that the first four points of this activity were taken into account during the first surveys at the beginning of the project. The current plan is to continue the surveys into 2010. The preliminary results obtained for different circles are included in the report on food systems. The 2011-2012 activities need to be planned.

### **3.4 Technology demonstration workshops**

This is essentially a training workshop for agropastoralists about the different innovations generated by the project (use of cell phones, food rationing, packaging and fodder conservation, etc). This activity is planned for 2012. However a first taste was given during this workshop about the return of the results and the activity planning.

### **3.5 Value chains**

In his speech, Mr, Alpha Kergna noted that certain aspects of value chains are taken into account in the first studies; the others are in process.

He also noted that a diagnostic study should be conducted to identify the diseases that influence commercialization and migration (foot and mouth, coals, pasteurelloses, the skin, CBPP).

### **Conclusion/Recommendations**

The participant's interests concerning livestock feeding became clear during the two workshops. This is why it is strongly recommended to:

- Take into account the training needs expressed by participants;
- Apply the food rations on cows and goats.

The cell phone demonstrations used to request and send information about livestock got participant's attention. A successful trial was attempted during the workshop.

The information provided about the professional organizations was confirmed by the participants who recommended renewing and following up on the executive boards of the professional organizations with the help of the Chamber of Agriculture.

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## ANNEX

### Acronyms and abbreviations

CAEF : Economic and Financial Affairs Advisor

CRA : Regional Chamber of Agriculture

CRRA : Regional Center of Agronomic Research

DRA : Regional Directorate of Agriculture

DRE : Regional Directorate of Livestock Raising

DNPIA : National Office of Production and Animal Industries

DRPIA : Regional Directorate of Production and Animal Industries

DRSV : Regional Directorate of Veterinary Services

GMQ : Average Daily Gain

IER : Institute of Rural Economy

IPR/IFRA : Rural Polytechnic Institute of Katibougou/Training Institute and Applied Research

LMIS : Livestock Monitoring and Information System

NDVI : Normalised Difference Vegetation Index

NTIC : New Information and Communication Technologies

OMA : Observatory of the Agriculture Market

OP : Farmers Organization

OPP : Professional Farmers Organisation

