

Improvement of the Beef Cattle Marketing System in Oriental Mindoro, Philippines

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In Partial Fulfillment of the Requirements for
the Degree of Master in Agricultural Production Chain Management,
specialization Livestock Production Chain

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ACRONYMS

BAS – Bureau of Agricultural Statistics

DOST – PCARRD – Department of Science and Technology – Philippine Council for Agriculture and Resources Research and Development

MIMAROPA – Oriental Mindoro, Occidental Mindoro, Marinduque, Romblon and Palawan

CALABARZON – Cavite, Laguna, Batangas, Rizal and Quezon

LAM – Livestock Auction Market

DA – RFU – Department of Agriculture-Regional Field Unit

BAI – Bureau of Animal Industry

OPV – Office of the Provincial Veterinarian

LGU – Local Government Unit

ABSTRACT

Poor livestock marketing system in the Philippines is considered as one of the weaknesses in the livestock industry. To determine if this problem holds true in the island province of Oriental Mindoro, a survey on forty one (41) smallholder cattle farmers and 3 case studies were done. The objective of this study is to assess the beef cattle marketing system in the province and find out if a livestock formal market is needed to improve the marketing system.

Results showed that livestock farmers are raising 3 – 5 animals in 1 – 3 years with an income per head of P7000 – 10000.

Although the cattle marketing system is characterized by the traditional system wherein traders buy the animals at the farmers' place through some barrio agents who bring the animals in one common place in the municipality, it was concluded that the marketing system is not that inefficient, considering the low input production practiced by the farmers, the continuous supply or offtake of live animals and the income the farmers are getting per head of cattle.

Farmers have recognized the importance of middlemen as helping them to save costs in terms of time and money. Trust has been established and farmers believe that middlemen are not earning much from them. Middlemen play a major role. Transaction cost per head of animal ranges from P1350 – P1950, which an ordinary farmer raising 3 – 5 head could not easily afford if he will do the marketing to the mainland himself.

The beef cattle supply chain is fragmented in that each actor functions separately, although linkage between farmers and middlemen have been established. Strengthening the chain is necessary to help revitalize the cattle industry.

The need for formal market is evident in both farmers, middlemen and the local government unit. And to realize such need, there shall be a strong cooperation between the local government unit, the farmers and all the other stakeholders. In line with this, revitalization of 2 livestock auction markets is being recommended.

CHAPTER 1. INTRODUCTION

1.1 Background

In the Philippines, the livestock industry is firmly integrated into the structure of the farm and village life. Raising of farm animals, particularly, cattle and carabao, is still predominantly a backyard enterprise. The Bureau of Agricultural Statistics (BAS) reported that of the total cattle stocks from 2003 – 2007, 94% comes from the backyard farms (Appendix A). Backyard enterprise in the country is characterized by farmers breeding or fattening one or a few head cattle or carabao which are stall-fed or tethered along roadsides and backyards.

Commercial ranches engaged in cattle raising are decreasing due to a combination of factors like, poor peace and order situation in production areas, implementation of the comprehensive agrarian reform law, land use conversion, lack of domestic source of quality stocks, changing policies on pasture lease, increasing input costs and poor herd and pasture management (DOST-PCARRD, 2001), lack of farm-to-market-roads and inadequate market information system (Castillo, 2000).

According to the Cattle Industry Performance Report of 2006 (BAS, 2007), the livestock sector was posted to increase by 2.38%, which contributed to 12.96% of the total agricultural production. However, this increase was accounted to the increase in production of the dairy, poultry and hog sectors. From 2003 – 2006, cattle production has been decreasing, from 258.45 thousand metric tons to 238.27 thousand metric tons (Appendix II). But with the increasing human population and change in the eating habits of Filipinos, the beef sector is believed to have a bigger room for growth. Per capita consumption of beef is 4.4 kg in 2006 as compared to 4.1 kg in 2003 (www.fas.usda.gov/dlp/circular/2006/06-03LP/bpppcc.pdf).

1.1.1 Research Problem

Oriental Mindoro is one of the island provinces of the MIMAROPA (Oriental Mindoro, Occidental Mindoro, Marinduque, Romblon and Palawan) Region in the Philippines. With regards to beef cattle production of the province, about 97% is being produced at the backyard level (BAS,2007). Problems on production are being well-addressed by different government organizations through research and development. Marketing of beef cattle, however, is given the least concern. Beef cattle are marketed by farmers informally, i.e., they just have to wait for traders or middlemen to come and command prices for their animals. Most of the time, liveweights are determined through eye estimates. Being in the island province, transportation and handling costs limit these farmers to sell their animals themselves.

Further, farmers have little information on market prices. Information flows play an important role in bringing about efficiency in marketing. Middlemen and traders may be able to exploit this information failure to the disbenefit of small farmers (Riethmuller and Smith, 1994).

In a survey conducted by FAO regarding the livestock industries in the Asia-Pacific Region in 2001, poor livestock marketing system was one of the weaknesses identified in the Philippine livestock sector.

1.1.2 Significance of the Study

Looking into the present beef cattle marketing system and finding options to improve the existing system may be a way to encourage the farmers to increase beef cattle production in the province. Farmers have been doing the traditional way of selling live animals to slaughterhouses and feedlot operators through the help of middlemen.

Improving the marketing system through the establishment of a formal market may be one of the strategies to help farmers gain more access to market information. ENTREPinoy's Atbp (2008) cited that the degree of competition among buyers of live animals is high and price is more advantageous to producers if they are sold in auction or livestock markets.

One of the major projects of the Department of Agriculture through the Ginintuang Makamasa sa Agrikultura (GMA)- Livestock under the Post-Harvest Development Services is the establishment of Livestock Auction Markets (LAM). These are markets where farmers bring their livestock for sale under more systematic procedures. A weighing scale is provided and prevailing prices per kilogram live weight are posted. Results of this research may give some information necessary for consideration of the GMA-Livestock Program of revitalizing a formal market in Oriental Mindoro.

1.1.3 Objective of the Study

To assess the beef cattle marketing system in Oriental Mindoro and find out if a livestock formal market is needed to improve the marketing system.

1.1.4 Research Questions

1.1.3.1 How does the beef production chain influence cattle marketing system in the province?

1. Who are the stakeholders of the chain?
2. What are the problems in the chain?

1.1.3.2 How efficient is the beef cattle marketing system in the province?

1. How are beef cattle marketed?
2. What are the marketing facilities or structures available?
3. What are costs incurred in marketing of beef cattle?
4. How do farmers get information on market price?
5. What are the contributions and role of middlemen and/or traders?
6. What is the government doing to improve beef cattle marketing?

1.1.3.3 Is there a need for a formal market?

1. What are the benefits of having a livestock formal market?
2. What are the problems incurred?
3. What are the necessary requirements for establishment of a formal market?
4. What are the opportunities in the province that could contribute to the improvement of the marketing system?

1.1.5 Methodology

A desk study prior to the conduct of the field research was done to gain more knowledge on the beef cattle marketing chain in the Philippines and the marketing practices being done in different developing countries. Field research composed of a survey on marketing system employed by farmers in Oriental Mindoro and 3 case studies on a successful livestock auction market in the adjacent region, on role of middlemen and the local government unit were done to gather information that would answer the research questions.

The study was conducted in the province of Oriental Mindoro, covering its 2 Districts for the period July – August , 2008.

A more detailed methodology is described in the Research Framework in Chapter 3.

CHAPTER 2. DESK STUDY

2.1 The Organization

To have a better understanding of why this research was undertaken, a brief description of the organization was reviewed.

The Department of Agriculture (DA) is the principal agency of the Philippine government responsible for the promotion of agricultural development. In pursuit of this, it provides the policy framework, helps direct possible investments, and in partnership with the local government units, provides support necessary to make agriculture and agri-based enterprises profitable and helps spread benefits of development to the poor farmers, particularly, those in the rural areas.

2.1.1 Mission

The mission of the DA is to boost farmers' income and reduce poverty incidence in the rural sector through the Medium Term Philippine Development Program. Its vision is "having prosperous and rural communities, built on profitable farms that provide surplus for agro-industry and food security".

2.1.2 Vision

Its vision is "having prosperous and rural communities, built on profitable farms that provide surplus for agro-industry and food security".

2.1.3 Goals

With emphasis on agribusiness, the twin goals of DA under the present administration are a) to develop at least two million hectares of new land for agribusiness in order to contribute to 2 million jobs targeted in 2010 and b) to reduce cost of wage goods through productivity enhancement, more efficient logistics and improved retailing linkages.

2.2 Beef Cattle Marketing in the Philippines

Cattle and carabao marketing in the Philippines, according to EntrePinoy Atbp (2008), are characterized by the existence of many middlemen in the distribution network which is to the disadvantage of producers who received relatively low price for their animals and consumers who pay high price for meat products. Studies have shown that the gross margin derived in selling a head of cattle or carabao is 60-88%.

In the province of Isabela, the second biggest province in the Philippines in terms of land area, middlemen or livestock traders buy live cattle from the farmers and sell them either to auction markets, to butcher-retailers or to feedlot operators. They usually have bigger margins because cattle are bought from the farmers at a much lower price. These middlemen have good market information (Rodrigo,2007).

2.3 Beef Cattle Marketing in Other Developing Countries

In Vietnam most of the farmers do not have access to organized markets and auctioning systems so that information about markets, prices and other issues are limited. The lack of organized system of live animal markets has resulted in the majority of marketing and distribution of live animals being undertaken through a network of marketers operating in informal groupings and often, exchanges take place on a face to face basis. Beef cattle marketing is composed of 4 middlemen: trader, wholesaler, slaughterer and retailer (Lapar, et.al, 2003).

According to Knips (2004) local trade of cattle, pigs and chicken between the villages in Cambodia often takes place for payments in kind rather than in cash. Town traders, such as slaughterhouse operators or market sellers come to the villages to purchase the animals. Less frequently, villagers bring their animals to town to sell them directly to consumers.

In Thailand, there is no standard price for beef cattle and markets are not well-developed (FAO RAP, 2002a).

The marketing system for cattle and buffalo in Lao is characterized by small traders bringing the animals to nearest truck loading points. Traders based in major towns organize collection by trucks and supply the urban market. Transaction costs are generally high but they are not likely to have a major effect on livestock prices since the value of animals per kilogram is high. However, access to market information is limited which put farmers into a disadvantage when negotiating sale prices for their livestock (Stur, et.al, 2002).

Marketing was one of the weaknesses identified in the livestock sector of the Asia-Pacific regions, as reported by FAO in February 2001. Concerns were expressed about the marketing activities of middlemen, who are apparently much better at gauging weight and yield of animals. In Bangladesh, it was cited that farmers get low profits due to payments of high commission to middlemen. Recommendation for a village-based livestock market and provision of weighing scales for livestock were made.

In Sri-lanka, the marketing system has evolved through active participation of private butchers and agents. A village has such an agent who identifies the animals for sale and collects a number of animals sufficient for a wagon load and brings them to a central holding location from where the agent arranges the transport to the slaughterhouses. It was reported that the farmer gets less than 40% of the retail price of meat and the rest of the profit goes to the middlemen (Abeyrante, 2007).

A report from KIT and IIRR (2008) disclosed that before 2006, the farmers in Mbire District, Zimbabwe sold cattle directly to the traders with distrust and a few guided rules for interacting. In 2006, farmers tried to bypass the traders by selling directly to the abattoirs. After experiencing problems, they reverted to using traders, but with more transparency and a greater sense of partnership within the chain.

Results of a survey on smallholder farmers in Cambodia conducted by Neou (2007) showed that 82.5% of the respondents preferred selling their cattle to local middlemen since they get more profit while 27.5% sell to the local butcher.

2.4 Benefits of Livestock Formal Markets

A study conducted by Musemwa, et. al (2007) in Kamastone Village, Eastern Cape Province on marketing channels for smallholder farmers concluded that development of an efficient and sustainable livestock marketing system for the small-scale farmers was one of the main strategies that would improve small scale farmers' access to formal markets. An improved livestock marketing system is likely to increase participation of small scale farmers in commercial agriculture that would mean higher income for them.

Marketing efficiency can be improved by reducing the number of stages in the marketing channels by encouraging direct selling from producers to butcher-retailers or processors. Sometimes, this is not possible due to the location of producers relative to markets and the prevalence of small-sized farms, resulting to small volume of sales. Establishing livestock markets near production areas, to increase degree of competition could be feasible (PCARRD, 1995).

According to the Department of Agriculture-Bureau of Animal Industry (DA-BAI) a livestock auction market system promotes fair trading between farmers and buyers, creates awareness on the animal health condition before selling them through issuing of veterinary certificates and augments revenue collection of the local government units through fees being charged from facilities and services they deliver to farmers and buyers. It provides facilities and services, like weighing scale, grading chart and marketing information on prevailing prices of livestock. (<http://www.bai.ph/faq.html#market>).

In the province of Negros Oriental, Central Visayas Region Philippines, (Appendix C) there are 16 livestock auction markets (LAM) that are operating successfully. According to the Provincial Veterinarian, Dr. Antonio Mutia, “ one way of helping livestock farmers is the establishment of LAMs where their animals are graded and assessed at market value. In this way, farmers will know the true value of their produce, which they can leverage against unscrupulous traders” (Abao, 2005).

One of the most successful LAMs in the country is in Urdaneta City, Pangasinan in the Ilocos Region (Appendix C) which caters to 1,140 livestock each week, of which 550 – 600 are cattle. It does not only generate monthly revenues for the city government but it also serves as a catalyst for further agro-industrial growth of the province (Abao, 2007).

2.5 Transparency in the Beef Cattle Chain

Castano (2001) pointed out that information helps farmers, traders and consumers to balance supply and demand at markets and thus, avoid gluts and surpluses. The knowledge that a farmer can compare one price offered by a trader with another price also influences buyers in offering fair prices. Access to better information enables wholesalers to reduce their business risks and to operate profitably on lower margins. Consumers could in turn be influenced by market news, such as, they can be encouraged to buy products that are plentiful and leave products that are in short supply.

Kularatne, et.al (1999) stated that in order to develop a strong linkage throughout the chain, vertical coordination from the producers through the consumers is

necessary. This statement was shown in his study in Saskatchewan, Canada wherein a large majority of respondents agreed on the need for increased cooperation between sectors.

2.6 The Beef Cattle Sector in Oriental Mindoro

Just like in most provinces in the Philippines, cattle raising in Oriental Mindoro is recognized as a key element which contributes to rural income and to the efficient use of available resources in the rural sector. It is an activity intimately tied to the farmers' way of life and serves as a source of cash in time of need. Further, cattle offers a means whereby crop products, farm residues and native vegetation in uncultivated areas are converted into meat, milk, hides and other by-products.

Beef cattle population in the province is 29,847 head, of which 28,047 head are raised by smallholder farmers and only 1,800 head by commercial raisers (BAS,2007). Table 1 shows the total population per municipality.

Table 1. Beef Cattle Population in Oriental Mindoro

Municipality	Backyard Farms (No. of Head)	Commercial Farms (No. of Head)	Total No. of Head
Puerto Galera	265	-	265
San Teodoro	220	50	270
Baco	981	-	981
Calapan City	1,868	100	1,968
Naujan	4,250	329	4,579
Victoria	472	-	472
Socorro	733	-	733
Pola	767	-	767
Pinamalayan	1,386	-	1,386
Gloria	3,230	-	3,230
Bansud	1,934	140	2,074
Bongabong	6,513	186	6,699
Roxas	1,313	147	1,460
Mansalay	2,408	147	2,555
Bulalacao	1,707	198	1,905
TOTAL	28,047	1,800	29,847

Source: Bureau of Agricultural Statistics (2007)

Data derived from the DA-Animal Quarantine report for January – December 2007 and January – June, 2008 show that an average of 359 head cattle are shipped to other regions by traders monthly, as shown in the Table 2.

Table 2. Number of Cattle Shipped in Oriental Mindoro (2007 – 2008)

Month/Year	No. of cattle shipped
January 2007	350
February	482
March	352
April	352
May	364
June	441
July	529
August	482
September	387
October	238
November	306
December	353
Total	4636
January 2008	259
February	137
March	297
April	221
May	390
June	515
Total	1819
Grand Total	6455
Average/month	359

Source: DA-Animal Quarantine Office (2008)

The total number of cattle slaughtered from January – December 2007 is 8,844 head, giving 2,254 metric tons. Liveweight of the animals is 255 on the average (PASO, 2008).

Offtake is a production parameter which determines population dynamics and productivity. Total offtake in 2007 is 13,480 head (slaughtered and shipped-out), which is 45% as compared to the total number of population (Table 1). This is considerably high as compared to cattle offtake rates in the traditional systems in Sub-Saharan Africa which ranges from 1.2 – 20% (Otte, et. al, 2002).

2.7 Beef Supply Chain

A desk study on the beef cattle supply chain was conducted prior to the conduct of the field research to have a general picture of the production part of the chain and how it influences the marketing system. As a result, the beef cattle supply chain in Oriental Mindoro was established, as shown in Figure 1.

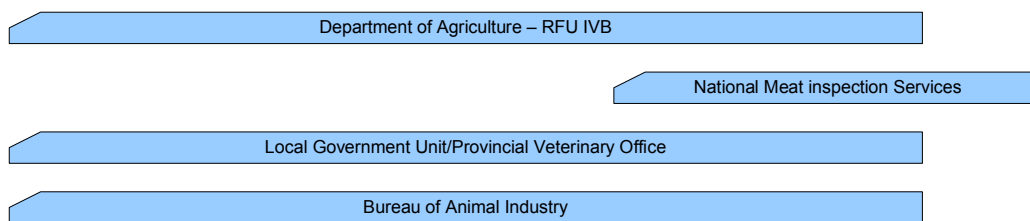
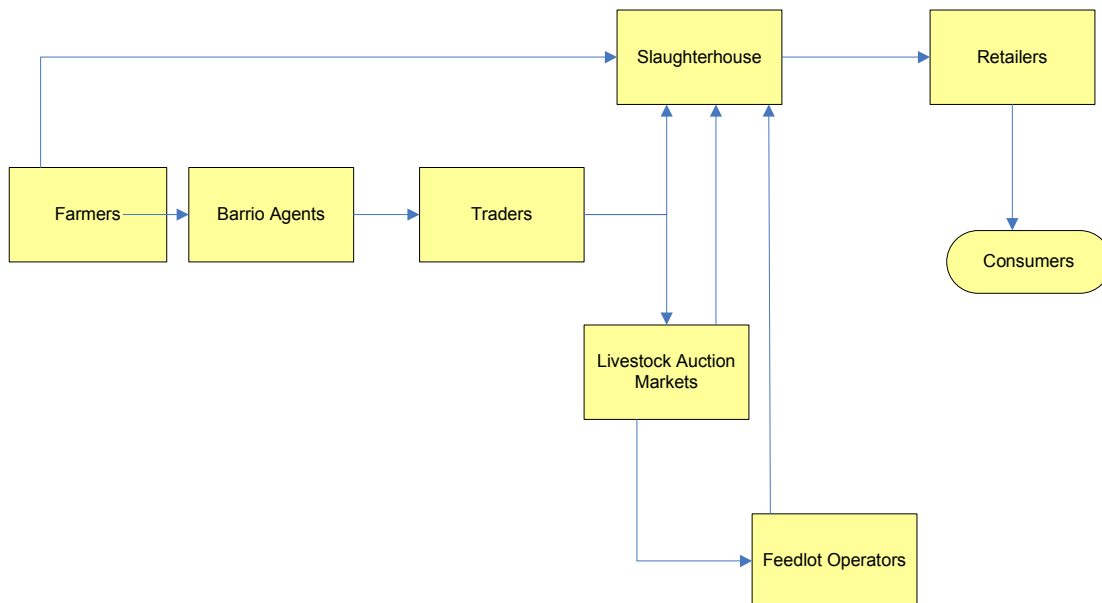


Figure 1. The beef cattle supply chain in Oriental Mindoro

2.7.1 Farmers/producers

The beef cattle supply chain in the province of Mindoro is characterized by being dominated by backyard farmers, like most of the other livestock production system in the whole country.

Farmers usually raise 3 -5 head cattle under coconut or rice-farming systems. With the introduction of improved forages, farmers are utilizing a part of their farm for pasture establishment which they find important especially during the summer months. Cattle are raised for 1-3 years but sometimes disposed earlier when farmer needs cash for his personal needs.

The “paiwi” system is widely practiced. Under this scheme, a livestock owner provides cattle to a caretaker which the latter raise for a certain period of time. Income from sale of the animal is divided equally between the owner and the caretaker after deducting the cost of the animal at purchase plus other costs incurred like concentrates and drugs.

Being a rice-based area, rice straw is the principal feed source after rice harvest. Other sources of roughage are napier grass, ipil-ipil (*Leucaena leucocephala*) and weeds available in the farmers' field. Concentrate feeding is minimal.

2.7.2 Barrio Agents/Traders

Marketing of live animals is done through middlemen. There is no functional auction market in any of the municipalities so that farmers depend on middlemen for selling their animals. Barrio agents buy and gather the animals in a certain area and wait for the traders who have their own trucks to haul the animals. About 34% of the cattle are shipped to the mainland through the Calapan port.

2.7.3 Auction Market

From Oriental Mindoro, the live animals are either exported to Region IVA and the National Capital Region for slaughter or to the Padre Garcia LAM (Section 4.4.1) to be sold to feedlot operators, if animals weigh less than 200 kg.

2.7.4 Slaughterhouse

Slaughterhouses in the province are classified as A which means that meat is only for local trade. There are no cold storage so that animals are slaughtered early in the morning and sold as fresh meat in the wet market. Sixty six (66) percent of fattened animals in the province are slaughtered locally.

2.7.5 Feedlot Operators

Live animals are also sold to feedlot operators in other regions who fatten them for a certain period of time before selling to meat processors or retailers. Due to limited time, no data was obtained to quantify this.

2.7.6 Retailers

A big portion of beef is sold in wet markets and supermarkets. Only a small portion is processed.

2.7.7 Consumers

At present, consumer preference on quality of beef is not much a question. Per capita consumption of beef in the province is only 1.56 kg in 2000, as per personal communication with the Provincial Agricultural Statistics Officer of Oriental Mindoro. This is the latest data available, but it could have increased with the changing lifestyle of people.

2.7.6 Stakeholders

The DA is the primary stakeholder of the beef cattle chain. With its mission to increase income and decrease poverty incidence in the rural areas, the Department through its different agencies greatly influence the beef cattle chain.

Through the Regional Field Unit (RFU) -4B, it provides artificial insemination and dispersal programs and forage seeds distribution for pasture establishment, in coordination with the Bureau of Animal Industry (BAI). Disease control is being taken cared of by the Regional Animal Diagnostic Laboratory (RADDL).

Research on production, mainly focused on nutrition and crop-livestock integration is being carried out by the Research Division, in coordination with the Bureau of Agricultural Research.

Trainings on new technologies are provided by the Agricultural Training Institute (ATI).

The DA through the Agriculture and Fisheries Modernization Act of 1997 has created the Bureau of Agriculture and Fisheries Food Products Standards (BAFFPS) to centralize monitoring of food products to meet food safety standards. Furthermore, safety of meat products is being monitored by the National Meat Inspection Services (NMIS).

Since Oriental Mindoro is an island province, entry and exit of live animals are being strictly monitored by the Livestock Quarantine Office. Foot baths and other quarantine measures are strictly implemented.

The Office of the Provincial Veterinarian (OPV), which is under the Local Government Unit (LGU) of Oriental Mindoro, is in-charge of promoting livestock industry in the province, particularly, through research and extension.

2.8 The PEST Environment

2.8.1 Political

Oriental Mindoro is part of Region 4B, also known as MIMAROPA region. MIMAROPA was created on May 17, 2002 under Executive Order 103. The region was formerly a part of Region 4 or the Southern Tagalog Region, which was the largest and considered the prime region of the country due to its size and population. The separation of the two regions (MIMAROPA and CALABARZON) was done to accelerate the social and economic development of the provinces and cities comprising the region and to improve delivery of services. MIMAROPA is composed of 5 island provinces, 2 cities and 71 municipalities (DA-RFU IVB Regional Profile, 2003).

The Local Government Unit, as the main governing body of the province, has the power to implement laws. As far as the livestock sector is concerned, strong support is given to the Office of the Provincial Veterinarian, in terms of logistics and financial support.

2.8.2 Economic

The province is primarily an agricultural area. It is known as the rice granary of the Southern Tagalog region. Other chief farm products include coconut, corn, citrus and banana. Livestock raising is also a main agricultural industry.

With regards to infrastructure, national highways are upgraded and major roads that link rural barangays have been constructed to facilitate delivery of goods and services. Calapan port is the main gateway to Oriental Mindoro, facilitating the transport of passengers and agricultural products to CALABARZON and Metro Manila. Calapan Airport accommodate light planes, like SEAIR for air transportation.

In May 2003, the Strong Republic Nautical highway was made available for transport of goods to the Visayas and Mindanao provinces. With this giant step of transporting goods, including live cattle, progress and development is not far behind for Oriental Mindoro.

2.8.3 Socio-cultural

An ethnic group, called Mangyans, are still found living in the hilly areas of the province and their main occupation is agriculture. Generally, people of Oriental Mindoro have simple lifestyle but are hard-working.

2.8.4 Technical

Oriental Mindoro is being considered as the seat of DA-RFU 4B, among the other provinces of the Region due to its proximity to Metro Manila. It has its satellite office in Calapan which makes it easier to deliver agricultural services to farmers, both in research and extension. It is also the seat of the Agricultural Training Institute (ATI) which is responsible for training farmers, technicians and researchers on new technologies

The Mindoro State College of Agriculture and Technology (MinSCAT) has been playing a major role in educating young people geared towards improvement of agriculture and technology.

CHAPTER 3. RESEARCH FRAMEWORK OF FIELD STUDY

3.1 Study Area

Oriental Mindoro is one of the island provinces of the MIMAROPA Region. It is 140 kilometers south of Manila and could be reached by ferry boats from the international port of Batangas. It is divided into 2 congressional districts, District I with 8 municipalities and District II with 7 municipalities. Total population as of August 1, 2007 is 735,769 (NSO, 2007). The province is primarily an agricultural area. Livestock raising is considered as one of the major sources of livelihood for rural households.

Based on the recommendation of the Office of the Provincial Veterinarian (OPV), the study was done in the two congressional districts, considering two top beef cattle producing municipalities per district (Table 3 and Appendix D).

Table 3. Study Areas

District	Municipality	Distance to Calapan City (km)	Distance to Manila (km)
I	Calapan City		150
	Naujan	32	182
II	Bansud	90	240
	Bongabong	101	261

3.2 Method of Data Gathering

The research was done by means of desk study, a survey to assess the beef cattle marketing system in the province and 3 case studies.

A courtesy call to the Local Government Unit, through the Office of the Provincial Veterinarian (OPV) and the office of the Provincial Agriculturist (OPA) was done to inform the Offices about the conduct of the research. Coordination with the City Veterinarian of Calapan and the Municipal Agricultural Officers (MAO) of the respective municipalities was done through phone calls.

A total of forty-one beef cattle raisers were randomly selected and interviewed, at 10 farmers per municipality of Naujan, Bansud and Bongabong, and 11 farmers from Calapan City.

Three case studies were also done. A case study on the successful marketing system of Padre Garcia, Batangas was facilitated by interviewing the MAO and the Planning Officer together with five staff to obtain insights of how livestock formal market has to do to the success of a beef cattle industry. A Marketing Specialist from the Bureau of Animal Industry was, likewise, interviewed as a key informant.

Batangas is a province of the CALABARZON Region, which is the mainland part of the Southern Tagalog Region (Appendix C). MIMAROPA is the island part (Section 5.4.4.1)

In another case study, at least 3 middlemen from Oriental Mindoro and 1 middleman from Padre Garcia were interviewed to determine their participation in the chain.

The third case study was done on the local government unit, as represented by the Provincial Veterinary Office to determine plans and priorities in relation to beef cattle marketing and the constraints and opportunities of establishing a livestock formal market.

3.3 Data Analysis

Data were clustered according to the two congressional districts of the province. Descriptive statistics of the SPSS program was used. To compare relationship of the clusters against different variables as level of satisfaction on pricing, choice of marketing channel, source of market information, perception on importance of middlemen and need for formal market, chi-square test was used. Independent t-test was used to compare number of years of experience, number of animal raised and income.

Qualitative analysis was done for results of desk study and interviews.

CHAPTER 4. RESULTS OF FIELD STUDY

4.1 Demographic Data

Data on the number of years the farmers have been involved in cattle fattening, the number of cattle raised and income per head of animal were derived from the survey to compare with the results of the desk study.

Table 4. Distribution Table for No. of Years in Cattle Fattening

No. of Years	Frequency	Percentage	Cumulative Percentage
<3	10	24.4	24.4
3 – 5	16	39.0	63.4
6 – 10	15	36.6	100.0
Total	41	100.0	100.0

Table 4. shows that 39% of the respondents have been into cattle fattening for 3 – 5 years while 36.6% have been engaged in the business for 6 – 10 years and 24.4% have just started for less than three years. Comparing the 2 Districts, results are not significant (Appendix F).

Table 5. Distribution Table for No. of Cattle Raised

No. of Cattle Raised	Frequency	Percentage	Cumulative Percentage
1 – 2 head	10	24.4	24.4
3 – 5 head	21	51.2	75.6
6 – 10 head	5	12.2	87.8
>10	5	12.2	100.0
Total	41	100.0	

Results show that 51.2% of the respondents raise 3 -5 head cattle, 24.4% have only 1 – 2 head, 12.2% raise 6 – 10 head and also 12.2% raise more than 10 head, respectively (Table 5) and which is not significantly different between the Districts (Appendix F).

Table 6. Distribution Table for Income per Head of Cattle

Income per Head	Frequency	Percentage	Cumulative Percentage
P1000 – P3000	6	14.6	14.6
P3001 – P5000	7	17.1	31.7
P5001 – P7000	8	19.5	51.2
P7001 – P10000	15	36.6	87.8
>10000	5	12.2	100.0
Total	41	100.0	

Table 6 shows that 36.6% of the respondents claim that income per head of cattle ranges from P7001 – P10000 while 19.5% earns P5001 – P7000. The rest have incomes ranging from P1000 – P3000 (14.6%), P3001 – P5000 (17.1%) and 12.2% only earns an income of more than P10000.

4.2 Problems in the Beef Supply Chain

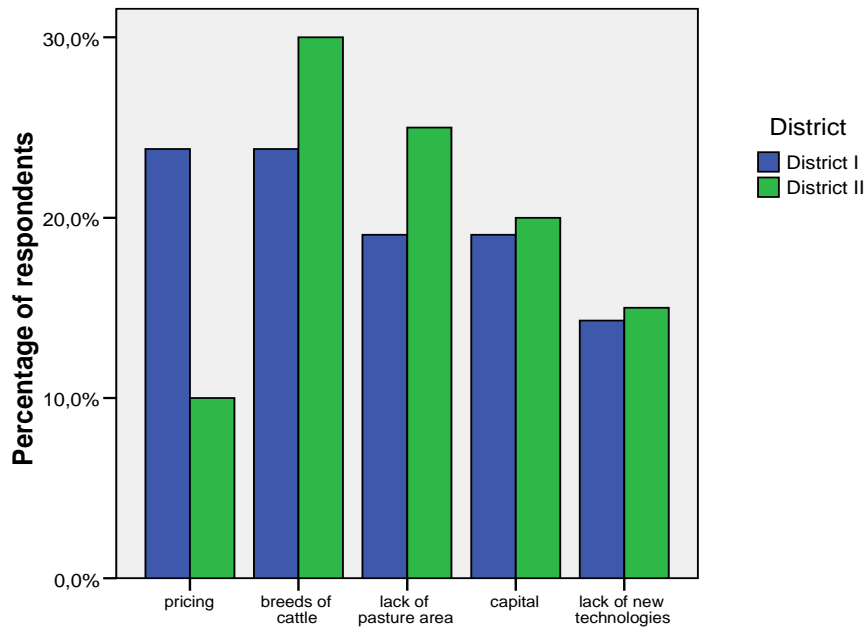


Figure 2. Problems incurred by farmers

Results (Figure 2 and Appendix G) show that the most common problems identified by farmers in District I are pricing of animals (24%), breeds of cattle (24%), lack of pasture areas (19%), capital (19%) and lack of new technologies (14%). On the other hand, 10%, 30%, 25%, 20% and 15% of the respondents in District II identified the same problems, respectively.

From the case studies done, problems identified are decreasing cattle population and peace and order situation in some areas.

4.3 The Beef Cattle Marketing System in Oriental Mindoro

4.3.1 Marketing of Beef Cattle

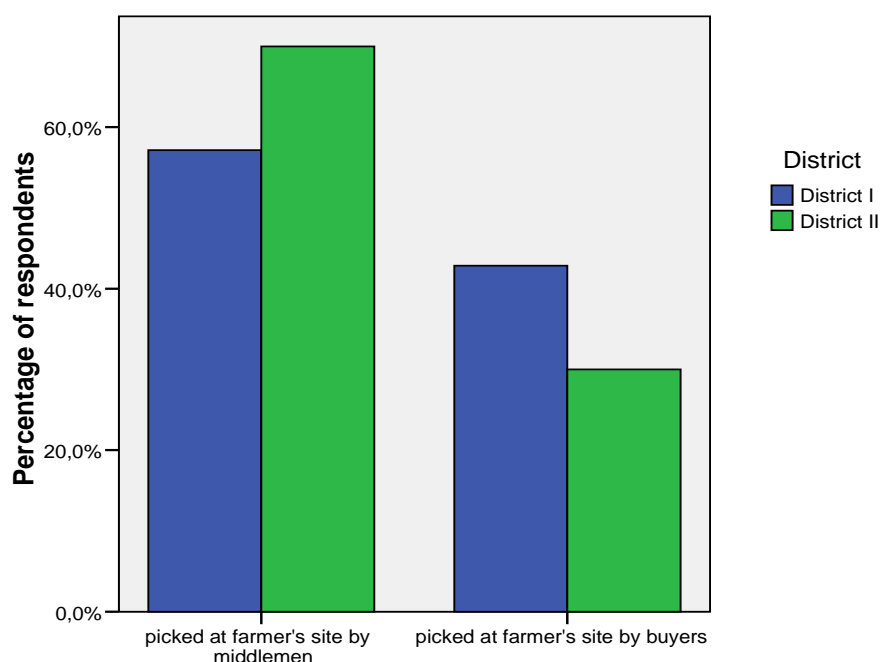


Figure 3. How Cattle is Marketed

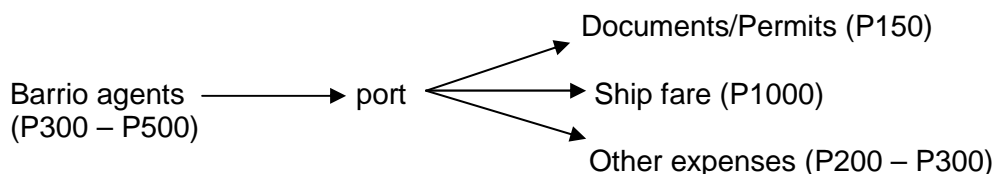
Fifty-seven (57) percent and 70 % of the respondents in District I and II, respectively, market their cattle using middlemen while only 43% and 30%, respectively, depend on direct buyers (Figure 3 and Appendix H). There is no significant difference in the marketing channel employed among the two Districts (Appendix L) which means that the marketing system using middlemen is favored by farmers in the whole province.

4.3.2 Marketing Facilities or Structures

In a case study done with the Office of the Provincial Veterinarian, in the persons of the Assistant Provincial Veterinarian and the Market Specialist II, it was learned that there are 3 non-functional auction markets, located in Calapan City, Victoria and Bansud.

4.3.3 Costs Incurred in Marketing Cattle

According to livestock traders, transporting live cattle from the farmers' sites to the port of Calapan City and finally, to Metro Manila would entail them P1350 – P1950¹ per animal, broken down as follows:



¹ Philippine peso to euro exchange rate is P1= 66.897e (September 5, 2008).

4.3.4 Source of Market Information

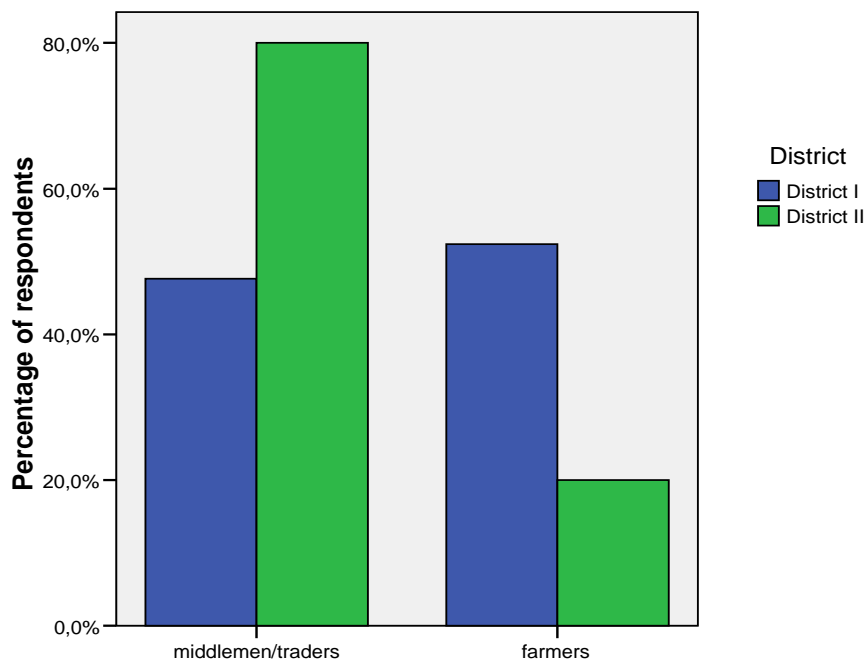


Figure 4. Source of market information

Figure 4 and Appendix I show that market information, particularly, on pricing is generally, coming from either the traders or farmers. In District I, 52% of the respondents claimed that they get information on prices from other livestock farmers while 48% are informed through middlemen. In District II 80% said information is obtained from middlemen. There is a significant difference on how market information is obtained by farmers in the 2 Districts (Appendix L).

From interviews with middlemen, pricing of live animals is based on the prevailing price of carcass in the market and the average dressing percentage of the animals. With a 50% dressing percentage (PASO,2008), a 200 kg cattle will have a selling price of approximately P16,500.00 if the prevailing carcass price per kilogram is P165.00.

4.3.5 Role of Middlemen

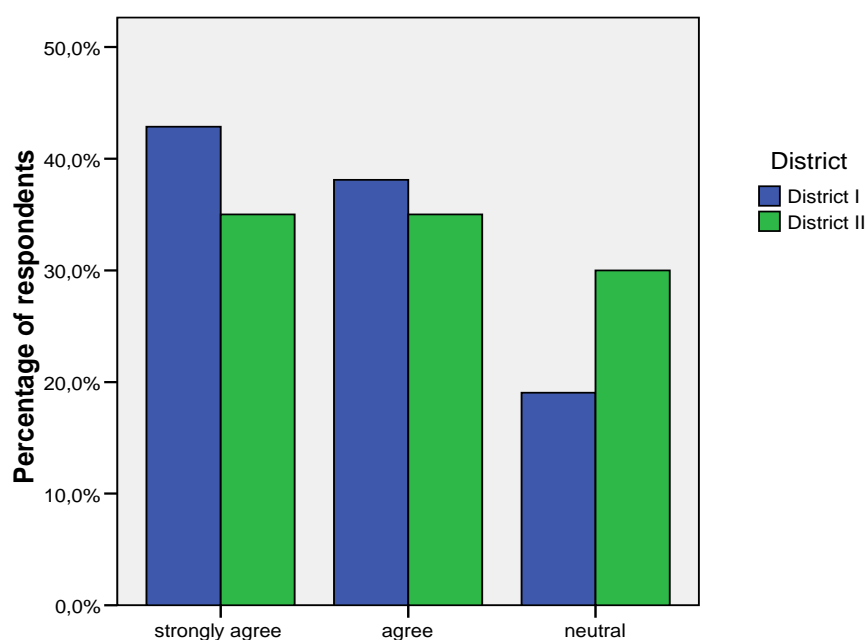


Figure 5. Perception of farmers on importance of middlemen

Figure 5 and Appendix J show that majority of the livestock farmers in both Districts I and II agree on the importance of middlemen. Only 19% and 30% of the respondents in Districts I and II, respectively, believe that middlemen are not important in marketing their cattle. This perception is not significant between the 2 Districts (Appendix L) which means that farmers in the whole province believe that middlemen are important.

4.3.6 Role of Government in Beef Cattle Marketing

At present the OPV's major concern in terms of cattle industry improvement is increasing production. With increased production, possibility of strengthening the auction markets in the province is considered. This is contrary to the belief that marketing system have to be enhanced first to convince farmers to increase beef cattle production. However, the OPV strongly adhere to the importance of formal markets to help cattle farmers increase their margins and have more access to market information.

Livestock marketing is an important component of the livestock industry. On the national level, one of the measures to address marketing problems was the issuance of Administrative Order No. 16 Series of 2004 providing for the framework on the implementation of LAMs in the country. The BAI is the major implementer of the program.

As of October 2006, there are 157 LAMs established in strategic areas in the country, of which one hundred nine (109) are operational, forty-four (44) are non-operational and one (1) was converted to a slaughterhouse. Twenty-four (24) LAMs need upgrading and repair of facilities. Of the 44 non-operational markets, 15 fall under the status of "dead markets"².

² Dead markets are LAMs which have been non-operational for years and structures have been dilapidated or transformed into other facilities.

4.4 Need for a Formal Market

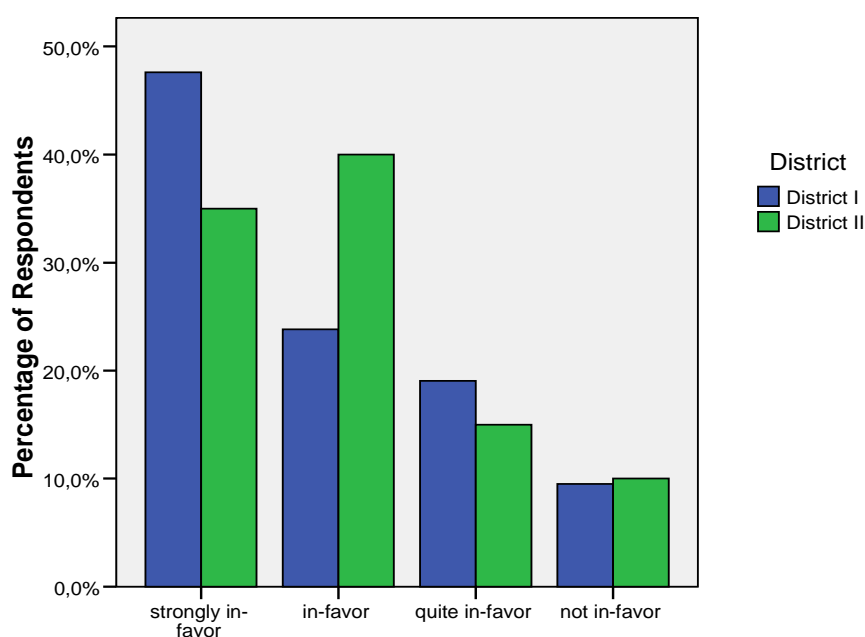


Figure 6. Perception of farmers on need for formal market

Results show that most farmers in both Districts are in-favor of having a livestock formal market (Figure 6 and Appendix L). Only 19% and 15% are quite in-favor in Districts I and II, respectively and 9% and 10% are not in-favor. But this does not show a significant difference in the perception of farmers in both Districts.

4.4.1 Benefits of a Livestock Formal Market

To be able to determine the benefits of a livestock formal market, a case study was done in the Padre Garcia LAM, located in the CALABARZON Region. This LAM is the largest in the whole Philippines. Every market day, approximately 1,200 cattle are brought, of which 80% are sold. Weekly income is about P115M from sales of animals including carabao, horses and goats coming from different regions, like, MIMAROPA, Bicol, Ilocos, Cagayan Valley and Central Luzon (Appendix C) and other adjacent municipalities.

The benefits of a livestock formal market, based on actual experiences of farmers and traders doing transactions at the Padre Garcia LAM are access of farmers to resources, support services and modern infrastructure, proper documentation of animals which lessens the fear of buying stolen animals, encouragement of farmers to increase production and farm income, wide choices of animals for buyers and fair trading between sellers and buyers.

4.4.2 Problems Encountered by a Livestock Formal Market

Still based on the case study conducted, source of funds for establishment and rehabilitation of the market is the most common problem. In the case of the Padre Garcia LAM, they have sourced P 1.5M each from the Congressional Oversight Committee on Agriculture and Fisheries and Modernization (COCOFAM) and the Livestock Development Council (LDC) for the upgrading of weighing scales, repair of railings, loading and unloading ramps, corrals and animal shed. At present, the

LGU has a pending proposal for the Agricultural Competitive Enhancement Fund (ACEF) for the continuous modernization of the LAM.

One of the negative impacts of LAMs is the effect on the environment. If not properly taken cared of, the wastes will increase with the increase in the volume of animals brought in the market. Moreover, possibility of traffic congestion is expected due to added trucks of traders coming in the area.

4.4.3 Requirements for Establishment of a Formal Market

According to Administrative Order #16 of the Philippines, the following are the criteria for establishment of livestock formal market:

1. A centrally located livestock producing area with good transport facilities;
2. A livestock market originally holding sales or pooling place;
3. Interest and willingness of local official to establish a livestock auction market;
4. Support of the LGUs towards continuous livestock production;
5. Must be at least 25 kilometers away from the nearest accredited livestock auction markets with a different market day.
6. The LAM should be established away from the slaughterhouse (A.O. 32)
7. Availability of funds for the construction of the LOM facilities.
8. The project site should be owned by the LGU's, Cooperatives or NGO's.
9. Should implement R.A. 7394 [Consumer Act] and R.A. 8485 (Animal Welfare Act)
10. The LGU can create a Livestock Marketing Superintendent position to oversee the operation of the LAM.

CHAPTER 5. DISCUSSION OF RESULTS

5.1 Demographic Data

Based on the results (Tables 4 - 6 and Appendix F), there are no significant differences in the number of years in cattle fattening, number of cattle raised and income per head of cattle between District I and District II. This implies that the beef supply chain in the province is mainly run by smallholder cattle farmers who raise 3 – 5 head although majority of them have been raising cattle from 3 – 10 years already. It also shows that cattle farming has really been a part of the agricultural system in the province.

Income per head is P7000 – P10,000 per head, which is generally fattened for 2 – 3 years. Cattle fattening has been tied to the farmers' way of life so that it has become an easy way of earning cash. As described in the supply chain, Oriental Mindoro employs a rice-based farming system so that feeding of animals is basically from the rice by-products and other improved forages.

5.2 Influence of the Beef Cattle Supply Chain on Marketing

From Table 2, showing the number of cattle shipped-out monthly, it could be deduced that there is a constant supply of live animals in the province, although it has been mentioned by the PVO that one problem associated with marketing is the dwindling cattle population. It could also be seen that selling of cattle is highest in the months of June – August which is in time for school fees of children. This trend could be an indicator of the production cycle the farmers may employ. However, it should be important to note that increasing the productivity of the animals is the most efficient way of producing more meat by doubling the yield of meat per animal than by increasing the number of animals (Bender, 1992).

The beef cattle supply chain in the province is fragmented in that each actor functions separately. A link between farmers and traders have been established (Section 4.3.5) but not between the farmers and the consumers. Urban (1991) describes vertical coordination as industrialization by which consumers' wants and needs are fed back into a production and distribution system to provide the desired quality, availability and prices of food products.

5.2.1 Stakeholders of the Chain

The Department of Agriculture, together with the LGU, has a major role in the improvement of the chain. Although it has been working to improve the marketing system through the Bureau of Animal Industry, more concern is given to the production by provision of new technologies through research and extension.

Farmers have not grouped into organizations or cooperatives which could have contributed to the strength of the chain. Bosc. et.al (2002) cited that cattle producers should approach production and marketing as teams, creating alliances that can capture higher prices and profitability, decrease exposure to market risks and volatility and help producers to respond to competition from other protein sectors.

5.2.2 Problems Incurred in the Chain

The most common problems identified by the farmers are also some of the problems of the beef cattle production in the Philippines identified by Castillo (2000).

The most common problem identified is lack of improved breeds. According to Castillo, this is due to inefficient cattle breeding management and marginal quality of existing stock. At present, intensification of artificial insemination is being done by the Department of Agriculture.

Decreasing areas for pasture was also identified by the farmers which conforms with the information shared by the PVO during the case study conducted. One reason for this is the Comprehensive Agrarian Reform Program (CARP). The CARP was formulated into law in 1988 through Republic Act 6657 to distribute agricultural lands to qualified landless farmers. The law states that landlords have to retain only 5 hectares and 3 hectares for each heir and the rest are bound for distribution. Consequently, pasture areas have decreased and many landowners are selling their lands.

Problem on unstable prices, still according to Castillo is due to inadequate market information. This could also be explained by the dependency of farmers on middlemen for source of market information(Section 4.3.4).

Farmers lack capital to increase the number of animals they are raising. Most farmers are depending on the “paiwi” system described in Section 2.7. According to Castillo, livestock loan programs are characterized by stringent lending policies and procedure, especially those pertaining to collateral requirements, interest rates and repayment period.

With the focus of the LGU on improving cattle production, some farmers still identified lack of new technologies as one of the problems, which is in contrast to the report of Castillo that farmers are not very receptive to new recommended production technologies.

5.3 The Beef Cattle Marketing System in Oriental Mindoro

5.3.1 Marketing of Beef Cattle

Figure 3 and Appendix H show that marketing of beef cattle by backyard raisers has two major channels. One is, direct buying of consumers who go to the farmers’ area, where they have the chance to choose and pick the kind of animal they want based on the price asked for by the farmer. There are only a few of these buyers since the animals are slaughtered locally and most of the time, payment is delayed.

The other channel involves cattle participation of traders from the Southern Tagalog and National Capital Regions (Appendix C) who go directly to the farmers’ place to pick-up their cattle through an agent that gathers the animals in one place in the barangay or municipality. These traders have their own vehicle or truck. The agents are given P300 – P500 per head.

Farmers in both Districts prefer to sell their animals using middlemen because no additional costs are incurred on their part. Since farmers raise only 3 – 5 animals, transporting these animals to Calapan City or the mainland would entail them additional costs and time. Further, there are risks in transporting animals, like shrinkage, death or even inferior carcass quality (ENTREPinoy, 2008). According to the farmers, they have trusted these traders who pay them on cash basis.

A study conducted in China by Gong, et. al (2007), showed similar results. It was found out that choice of marketing channel is affected by the number of animals

sold by farmers and method of payment. Farmers who have a small number of cattle to sell have relatively low bargaining power and tend to use the spot markets or intermediaries. At the same time, the farmers who chose to sell cattle through direct sales were subjected to payment delays so that they sell through intermediaries since payments are generally received immediately by farmers.

5.3.2 Marketing Facilities or Structures

The 3 livestock auction markets in Calapan City, Victoria and Bansud were established May 1989, December 1983 and September 1978 (BAI, 2006). These structures have been non-functional for almost 15 years and are now considered as “dead markets”, from personal communication with Mr. Lary Nel Abao, Senior Agriculturist of the Marketing Development Division of BAI. Operation of these markets have not been sustainable due to less volume of animals being brought regularly and changes in leadership in LGUs wherein support for LAMs are not the priority.

Although the local government adheres to the importance of a livestock formal market it seems it is not its priority. More effort is given to increasing livestock production through introduction of new livestock production technologies and disease prevention. They believe that with the Strong Republic Nautical Highway, cattle marketing would be enhanced, just like any other agricultural products of the province.

5.3.3 Costs Incurred in Marketing Cattle

In marketing cattle in the province, it shows that costs incurred are shouldered by middlemen or traders which proves why livestock farmers have chosen the marketing channel using middlemen (Section 5.3.1).

Most livestock traders have their own trucks to ferry the animals, mostly a 30 to 50-head capacity truck. Expenses on gasoline depend on the distance of the municipality from the port. Further, other expenses refer to payments given to “cowboys”³ which has been an acceptable practice in the system to facilitate easy crossing to borders. This contributes about 15% of the total transaction costs. This practice is similar to the livestock trade in the West Africa. However, illicit costs contribute only 1 – 3% of the total transaction costs (Quarles van Ufford, et.al, 1995).

Still according to these traders, their net return per cattle is only P500 – P1000 with the risks they have to bear during the transport. They have to have enough capital to maximize their stay in the island, and at the same time, they have to utilize barrio agents to facilitate less time for purchase of animals.

5.3.4 Source of Market Information

Pricing of cattle, as the most common practice in the Philippines, is through eye estimates. There are no available weighing scales to have exact weights of animals.

The difference in how information is obtained by the 2 Districts (Appendix L) could be attributed to their location. Farmers could be well-informed in District I due to its nearness to the port and to their access to information from the Office of the City and Provincial Veterinarian. Farmers in District II usually depend on traders saying that prices in the mainland are low. Most often, they just have to rely on this information to have a quick disposal of their animals which give them less opportunity to negotiate prices.

³ Cowboys refer to people who contribute to illicit expenses incurred by traders, including ship employees, policemen, etc., who help facilitate easy crossing to borders.

Market information is important to enable farmers to make rational and relevant decisions and strengthen their negotiating ability during transactions with buyers and consequently prevent possible exploitation by better informed buyers (Musemwa, et. al., 2008)).

5.3.5 Role of Middlemen

Middlemen play a major role in the marketing of cattle in Oriental Mindoro. It has been found out that livestock farmers have really become dependent on middlemen, as what has been mentioned by the Market Specialist of the OPV during the case study conducted. According to the farmers, with middlemen they could easily sell their cattle without spending much time and money. They also believe that these middlemen do not get too much profit from selling their animals.

In the Philippines, and even in many developing countries, middlemen are generally considered less beneficial to farmers as mentioned in many literatures. In an island province, like Oriental Mindoro, farmers have trusted middlemen as what has been perceived in Zimbabwe (KIT and IIRR, 2008) and in Cambodia (Neou, 2007). Farmers could not afford the costs incurred in shipping their animals to the mainland. Further, even if they would sell their animals locally, transportation costs are also expensive, also considering the poor farm-to-market roads in some areas. Trust and transparency have already been established between the livestock farmers and the middlemen.

Similarly, at the Bodeja market in Ibudan, Oyo State in Nigeria, middlemen stand as surety for a buyer, in which cattle can be sold on credit and such credit process is based on mutual trust between producers and middlemen on the one hand and between middlemen and buyers on the other hand (Filani, 2005).

5.3.6 Role of Government in Beef Cattle Marketing

According to the BAI report (2004), the LAMs have done much to improve the system in livestock marketing. Its technical contribution particularly had paved the way towards better price for good quality animals, hence, increased profitability of producers. This has helped in increasing awareness among livestock raisers to shift from raising natives to upgraded breeds. Moreover, inspection and issuing of veterinary health certificates in LAMs helped farmers become aware of their medication/vaccination programs for their animals. For its socio-economic contribution, the convenience of buying/selling at the LAM has encouraged farmers to channel back livestock production as a source of income. It has also helped increased the income of the municipalities operating the livestock auction market as discussed in Section 4.4.1.

5.4 Need for a Formal Market

According to farmers, in formal markets, there will be standard prices for their cattle and these prices may be fair between them and the traders since weights of the animals will be determined by weighing.

Further, the middlemen/traders were similarly agreeable of a formal market in the province. According to them, with a formal market they do not have to pay barrio agents and costs for gasoline expenses would be reduced. They would also have a fair opportunity to select from different kinds of animals. A systematic and convenient transaction will shorten the trading time and enable the traders to engage in other activities.

The OPV strongly adheres to the importance of formal markets to help cattle farmers increase their margins and have more access to market information. However, the dwindling cattle population in the province is the primary reason why livestock formal markets are not successful in the province.

Since the 1990s, many commercial farms have stopped operation due to insurgency problems. Revolutionary taxes are being asked from commercial farm owners which resulted to transfer of cattle producers to other provinces.

The decreasing population of cattle could also be accounted to decreasing areas for pasture due to the Comprehensive Agrarian Reform Program (CARP) of the government as described in Section 5.2.2. Furthermore, inheritors of cattle farmers are becoming less interested in cattle farming and many have preferences on non-agricultural activities.

Another reason for the failure of auction markets in the province is the traditional cattle marketing system employed. Farmers have become dependent on middlemen or traders.

5.4.1 Benefits of a Livestock Formal Market

Results of the case study showed that having a marketing venue, livestock farmers have been encouraged to increase production up to 10% and farm income to 30%. This goes with the statement of Musemwa, et. al. (2007) that with an improved marketing system, small-scale farmers could go to commercial farming and earn a higher income.

With the centralized marketing system, the problem of marketing stolen animals are prevented with the implementation of proper documentation.

Livestock farmers, traders and the LGU all benefit from the formal market. The local livestock farmers whose income mainly depend on livestock production can now access to all the resources, support services and infrastructure the auction market will provide. With that volume of animals being traded every market day, traders from different provinces are assured of selling and buying animals everyday. And with facilities available, there would be a fair transaction between the seller and the buyer. The LGU, in turn, benefits from the taxes and tariff collected in the business transaction.

Other indirect benefits include job opportunities for scavengers and out-of-school youth. Scavengers segregate bio-degradable and non-biodegradable wastes. Recyclable wastes are being sold and serve as additional income for them. The out-of-school youth generate additional income by taking care of animals, feeding and pasturing them while at the LAM. Further, organic fertilizer could be generated from animal wastes.

5.4.2 Problems Incurred by a Livestock Formal Market

Availability of funds either for the establishment or rehabilitation of livestock markets is a common problem. However, with the political will and cooperation of different stakeholders this will have a better solution.

In Oriental Mindoro, environmental problems would not be much a concern since the volume of animals that would be traded are not so large compared to Padre Garcia LAM.

5.4.3 Requirements for Establishment of a Livestock Formal Market

One of the most important consideration for a livestock formal market is a vibrant livestock industry. In Batangas province where Padre Garcia LAM is located, population of cattle alone is 125,373 head as of end of 2005 (Abao, 2006).

Considering the 1,200 head cattle being brought to the LAM every market day (Section 4.4.1), the 359 head available in Oriental Mindoro monthly is far too less. However, this is a considerable offtake since these animals come from only one province while those being sold in Padre Garcia come from different provinces.

For a livestock market to become sustainable, there is really a need for political will. The LGU should have a head and a heart devoted to promote the livestock industry. Mayor Amadeo Perez of Urdaneta, Pangasinan cited that “putting up and running a viable LAM can be a great challenge for both national and local government units due to bureaucratic red tape. But this obstacle can be hurdled if local officials themselves who are hosts to such a facility invest in human, physical and financial resources for its upkeep” (Abao, 2007). Urdaneta LAM is the country’s best managed auction market.

The success of LAMs in Negros Oriental can be traced to the support given by the host municipal government, the provincial government, the Bureau of Animal Industry and the financing arrangement forged among stakeholders, like the municipalities themselves paying for construction of facilities through credits from banks. (Abao, 2005).

The LGU shall provide competent personnel who have knowledge and skill for the efficient operation of LAMs while there should also be technical support services from other line agencies, like the BAI.

According to Abao (2006), a LAM shall invite more traders so that it becomes a seller’s market rather than one for buyers. Being a buyer’s market, it holds a considerable influence in the pricing of animals. On the other hand, by becoming a seller’s market, the livestock farmers can wield considerable influence on trading of the animals and hence, obtain more profits.

Good roads and transport facilities, as well as modern communications and equipments for better information system shall be addressed.

5.4.4 Opportunities in the Province That Contribute to the Improvement of the Cattle Marketing System

Considering the opportunities identified in the PEST analysis in Section 2.8, the beef cattle marketing system has a great potential for improvement.

Cattle raising, being one of the major agricultural activities, has been a part of the farmers’ way of life and that potential for increasing production, together with productivity, is high considering efforts given by the LGU and the Department of Agriculture through research and extension services.

Since there are no livestock formal markets, the existence of the Strong Republic Nautical Highway could help facilitate easy transport of live animals to the mainland.

CHAPTER 6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The beef cattle supply chain in the province is fragmented, in that each actor functions separately. The link between farmers and middlemen has been established but the integration between farmers and consumers is missing. Problems identified are lack of improved cattle breeds, decreasing pasture areas, unstable pricing of cattle, lack of capital and lack of new technologies.

The beef cattle marketing system has been characterized as the traditional system wherein traders from other provinces in the mainland go directly to the farmers' place to pick their animals through an agent that gathers the animals in one place in the municipality. Farmers perceived the role of middlemen as important in marketing their animals since all costs incurred are shouldered by middlemen. Farmers can save time and money by this traditional practice. Through the years, trust has been developed. Furthermore, trading in an island province like Oriental Mindoro would entail a lot of capital, as it would cost P1350 – P1950 to transport a head of cattle to the mainland, which a farmer raising 3 – 5 head cattle cannot afford.

All stakeholders, including the farmers, middlemen and the LGU, are in-favor of having a livestock formal market to improve the marketing system. However, it is evident that increasing production is the priority of the LGU. The LGU believes that increasing production would enhance the marketing system, in contrast with the national government which is strongly pushing for establishment of formal markets to encourage farmers to increase their production (Section 4.3.6). Therefore, efforts on improving both production and marketing shall then be maximized to develop a strong beef cattle supply chain in the province.

The success of the Padre Garcia LAM, the Urdaneta LAM and Negros Oriental LAMs can influence an island province like Oriental Mindoro in revitalizing its cattle industry. With the need for a livestock formal market being realized, there should also be a need for strong cooperation between the LGU, the farmers and all other stakeholders.

Based on the findings, it could be concluded that the cattle marketing system in Oriental Mindoro is not that inefficient as it was thought to be considering the low input production practiced by the farmers (Section 2.7.1), the continuous supply or offtake of live animals (Table 2) and the income the farmers are getting per head of cattle (Table 6). However, there is still a great potential for a more improved marketing system.

6.2 Recommendations

Based on the assessment of the beef cattle marketing system in Oriental Mindoro, the following recommendations are made.

1. Strengthening of the beef cattle chain

Cattle production shall be improved by continuous research and extension on new production technologies. Furthermore, extension officers shall extend more effort in having discussions with farmers, through Participatory Rural Appraisals, and empowering them in identification of production and marketing problems and possible solutions.

A market-oriented production program, that is, an organized and timely breeding and weaning of cattle, shall be adopted. As such, supply of cattle will be sufficient and marketing will be sustainable.

Although farmers find middlemen important in marketing their animals, it is necessary to form into organizations or cooperatives for more economic growth, social development and empowerment. By being organized, farmers can have the opportunity to achieve better economies of scale in accessing services, information, infrastructures and markets.

A research or survey on consumer preference, in terms of quantity and quality, can be done so that farmers will know what the market demands for beef are. It is also recommended to create awareness on the implementation of HACCP-compatible standards on domestic meat output to have market access that will require a guarantee of food quality and safety to consumers. By this, the link between farmers and consumers will be eventually realized.

2. Revitalizing 2 Livestock Auction Markets

At least one LAM for each District could be revived to facilitate fair trading between the farmers and the buyers and increase degree of competition. Bongabong and Calapan are the most strategic locations, considering that they are most likely the center municipalities in each District. Inspection of old structures which have been considered as “dead markets” should be done with the assistance from BAI to determine the extent of damage and the costs it would incur to revitalize.

Market day for each LAM shall be decided by the LGU, at least twice a month to accommodate more number of animals. The Municipal Agriculture Office in each municipality shall make arrangements with the LGU for use of available loading trucks which will transport the animals to the LAM. Gasoline expenses may be subsidized by the LGU or may be divided among farmers depending on the number of animals they will transport.

For funding sources, the Agricultural Competitive Enhancement Fund (ACEF) is at present available for such kind of agricultural improvement.

3. Long-term Planning

In the long term, with vertical integration having been attained, all stakeholders may attempt to move towards globalization by proposing an upgraded slaughterhouse and provision of refrigerated vans to transport good quality and safe meat, thus reducing transport of live animals.

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APPENDICES

Appendix A. Inventory of Beef Cattle by Type of Production, Philippines

Year	Backyard	%	Commercial	%	Total
2003	2,400,727	93	168,019	7	2,568,746
2004	2,406,475	94	162,435	6	2,568,910
2005	2,365,534	94	158,116	6	2,523,650
2006	2,375,514	94	157,634	6	2,533,148
2007	2,399,849	94	157,619	6	2,557,468
Mean	2,389,620	94	160,765	6	2,550,385

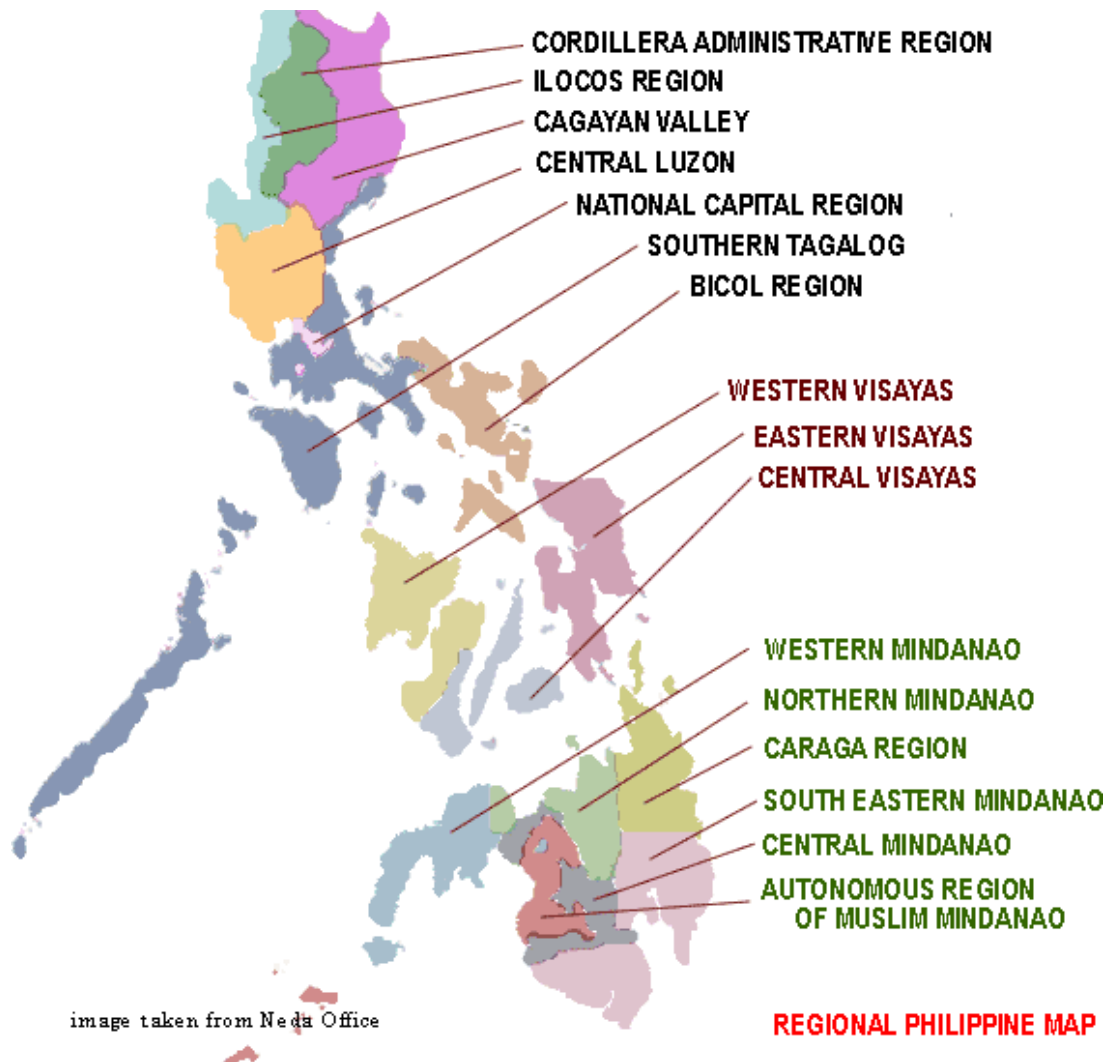
Source: Bureau of Statistics

Appendix B. Volume of Beef Cattle Production (000 MT Liveweight)

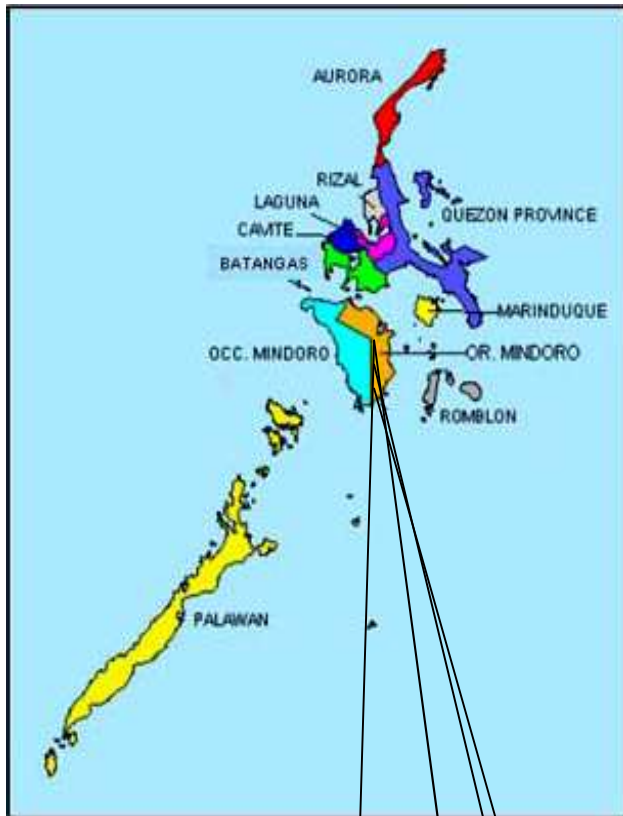
Year	2003	2004	2005	2006
Production	258.45	255.98	246.75	238.27

Source: Bureau of Statistics (Philippines)

Appendix C. Regional Map of the Philippines



Appendix D. Map of the Southern Tagalog Region (IV) Showing the Study Areas



Appendix E. Field Research Questionnaires

E1. Survey Questionnaire

Improvement of Beef Cattle Marketing System in Oriental Mindoro, Philippines

1. Location (Municipality): _____
2. How many years have you been in cattle fattening?
 < 3 years 11-15 years
 3-5 years > 15 years
 6-10 years
3. How many cattle do you raise?
 1-2 head 6-10 head
 3-5 head >10 head
4. How are animals marketed?
 brought to a particular site and transacted with middlemen
 picked at farmer's site by middlemen
 picked at farmer's site by consumer/buyer
 delivered to consumer
 others _____
5. Who determines prices?
 farmer middlemen others
6. How are prices determined?
 by weight eye estimate others
7. Where do you get market information?
 from middlemen from government
 from farmers from other sources, specify _____
8. What is your income per head of cattle?
 P1,000.00 – P3,000 P 7,001.00-P10,000
 P3,001 - P5,000.
 P 5,001 - P7,000 > P10,000
9. Are you satisfied with the pricing of your animals?
 fully satisfied satisfied neutral less satisfied not satisfied
10. Are you in favor of a formal market?
 strongly in-favor in-favor neutral quite in-favor not in-favor
11. Do you agree that middlemen are important in selling your animals?
 strongly agree agree neutral not so much not agree
12. What problems do you encounter when marketing your animals?
13. Possible suggestions for the industry

E2. Case Study 1 - CALABARZON Beef Cattle Marketing System

1. How many animals are brought to the auction market every market day?
2. How many animals are sold?
3. How is market information determined?
4. What is the monthly/yearly income?
5. From what provinces do the animals come from?
6. What are the benefits and constraints encountered?
7. What support does the government give?

E3. Case Study 2 - Middlemen

1. Where do you get market information?
2. What are costs incurred in marketing cattle?
3. What is the profit per head of cattle?
4. What is your preference : formal or informal market?

E4. Case Study 2 - Local Government Unit

1. What are the available structures and marketing facilities?
2. How is market information transferred to farmers?
3. What are the plans and priorities of the government with regards to cattle marketing?
4. Is there a possibility of establishing a formal market? What would be the constraints?

Appendix F. Independent Sample Tests Comparing District I and District II

Factors	df	Sig. (2-tailed)
Years in Cattle Fattening	39	0.539
No. of Cattle raised	39	0.126
Income per Head of Cattle	39	0.825

Appendix G. Distribution Table for Problems Incurred in the Chain

District	Pricing		Breeds of Cattle		Lack of Pasture Area		Capital		Lack of New Technologies		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
I	5	24	5	24	4	19	4	19	3	14	21	100.0
II	2	10	6	30	5	25	4	20	3	15	20	100.0
Total	7		11		9		8		6		41	

Appendix H. Distribution Table for Marketing of Beef Cattle

District	Picked at Farmer's Site by Middlemen		Picked at Farmer's Site by Consumers		Total	
	Count	%	Count	%	Count	%
I	12	57	9	43	21	100
II	14	70	6	30	20	100
Total	26		15		41	

Appendix I. Distribution Table for Source of Market Information

District	Middlemen/Traders		Other Farmers		Total	
	Count	%	Count	%	Count	%
I	10	48	11	52	21	100
II	16	80	4	20	20	100
Total	26		15		41	

Appendix J. Distribution Table for Perception of Farmers on Importance of Middlemen

District	Strongly Agree		Agree		Not Agree		Total	
	Count	%	Count	%	Count	%	Count	%
I	9	43	8	38	4	19	21	100
II	7	35	7	35	6	30	20	100
Total	16		15		10		41	

Appendix K. Distribution Table for Perception of Farmers on Need of a Formal Market

District	Strongly In-favor		In-favor		Quite In-favor		Not In-favor		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
I	10	48	5	24	4	19	2	9	21	100
II	7	35	8	40	3	15	2	10	20	100
Total	17		13		7		4		41	

Appendix L. Chi Square Tests Comparing District I and District II

Variables	Value	df	Sig. (2-sided)
Problems Incurred	1.464	4	0.833
Marketing Channel	0.730	1	0.393
Source of Market Information	4.630	1	0.031*
Perception on Role of Middlemen	0.693	2	0.707
Perception on Need for Formal Market	1.341	3	0.719

***significant at 0.05 level**