ECONOMICS OF CATTLE MARKETING IN BEED DISTRICT OF MAHARASHTRA

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ECONOMICS OF CATTLE MARKETING IN BEED DISTRICT OF MAHARASHTRA

DISSERTATION

Submitted to the
tfasantrao Naik Marathwada Krishi tfidyapeeth, Parbhani
in partial fulfillment of the
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MASTER OF SCIENCE
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SEPTEMBER, 2020

CANDIDATE'S DECLARATION

I hereby declare that this dissertation

Or part thereof has not been

Previously submitted by me

For a degree of any

University or

Institute

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CERTIFICATE – I

This is to certify that the dissertation entitled **"ECONOMICS OF CATTLE MARKETING IN BEED DISTRICT OF MAHARASHTRA"** submitted by **Mr. THOMBRE VISHWAS SHANKARRAO, Reg. No. 2018A/60 ML** to the Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani in partial fulfillment of the requirements for the degree of **MASTER OF SCIENCE (Agriculture)** in the subject of **AGRICULTURAL ECONOMICS** is record of original and bonafide research work carried out by him under my guidance and supervision. It is of sufficiently high standard to warrant its presentation for the award of the said degree.

I also certify that the dissertation or part thereof has not been previously submitted by him for a degree of any university.

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Place: Latur **Thombre Vishwas Shankarrao**

Date: 30 / 09 /2020 **Reg.no: 2018A/60ML**

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INTRODUCTION

1. INTRODUCTION

General

Livestock sector includes animal husbandry, dairy and fisheries sector are considerable major sector. It plays an important role in National economy and social economic development of the country. It also plays important role in the rural economy as supplementing family incomes and generating gainful employment in the rural sector. Indian livestock industry makes up for a significant amount of world's livestock resources.

India rank first in total milk production. In the year 2018-19 total production of milk in India is 187.7 million tonnes, which was 22 per cent of that year's global total milk production of 843 million tonnes. Due to their high production per capita availability of milk in India is 394 (gms/ day). India's biggest milk producing states are Uttar Pradesh then Rajasthan, Andhra Pradesh and Gujrat state respectively. Maharashtra state ranks 7th in total production of India. Total production of milk in Maharashtra state is 11.10 MT.

Source: (Basic Animal Husbandry Statistics, DAHD & F, GoI).

Economics importance of livestock in India

Livestock plays an important role in Indian economy. Livestock is both economic engine and source of livelihood. Near about 20.5 million people depend upon livestock for their livelihood. Livestock contributed 16% to the income of small farm households as against an average of 14% for all rural households. Livestock provides employment opportunity to the people. It also provides employment to about 8.8% of the population in India. i.e. 80 million rural household are engaged in milk production.

Livestock an important source of manure for crop production, fuel for domestic use, minimizing use of non-renewable energy and important source of income for the farmers and rural poor and animal husbandry sector provides large self-employment opportunity.

The economic importance of cattle is based upon their production of both milk and work in India. The cattle males are important as drought animals and cattle females as producers of milk. The cow has been held in high esteem for her male progeny which supplies power for agriculture and her milk which is highly nutritive and wholesome food for infants, adults and invalids a like.

Demographic Dependence on Livestock

Livestock sector employs 8 per cent of total Indian work force. Percentage of population dependent of agriculture for livelihood is 49.8 per cent. Percentage of livestock owned by marginal, small and semi-medium farmers is 87.7 per cent. Percentage of area used for all types of livestock farming is 1.69 per cent.

(**Source:** www. Vetextension.com, 2019).

Benefits of livestock sector development in India

Provides subsidiary occupation to people living in drought prone, hilly, tribal remote areas where crop production is not sufficient. It is proved to be boon for sustaining livelihood of the landless and marginal farmer. Animal husbandry sector provides large self-employment opportunities.

Table- 1.1) Livestock population in India, 2019

Sr. No	Livestock	Population (in Million)
1	Cattle	192.49
2	Goat	148.88
3	Buffaloes	109.85
4	Sheep	74.26
5	Pigs	9.06
6	Mithun	0.38
7	Horses	0.34
8	Camel	0.25
9	Donkeys	0.12
10	Mules	0.08
11	Yaks	0.06
	Total	**535.78**

Source: (20th Livestock Census - 2019 All India Report)

According to Livestock census – 2019 Total Livestock population of India is 535.78 million, in which population of cattle are highest in number i.e. 192.49 million. Then after Goat,

Buffalo, Sheep respectively. In that Livestock census population of Yaks is lower in no. which is 0.07 million in number.

Contribution of livestock to people

The livestock provides food items such as Milk, Meat and Eggs for human consumption. India is number one milk producer in the world. It is producing about 187.7 million tons of milk in a year (2018-19). The value of output of livestock sector at current prices was 9,17,910 crores at current prices during 2018-19. The livestock also contributes to the production of wool, hair, hides, and pelts despite lot of advancements in the use of mechanical power in Indian agricultural operations, the Indian farmer especially in rural areas still depend upon bullocks for various agricultural operations. Dung and other animal wastes serve as very good farm yard manure and the value of it is worth several crores of rupees. For example, single murrah buffalo gives an income to the people is near about 30,000 per lactation. Cows and Buffaloes if in milk will provide the regular income to the livestock farmers through sale of milk.

Livestock offer security to the owners and also add to their self-esteem especially when they are sowing prized animals such as pedigreed bulls, dogs and high yielding cows/ buffaloes etc. People also use the animals like cocks, rams, bulls etc. for competition and sports. Despite ban on these animal competitions the cock fights, ram fights and bull fights are quite common during festive seasons.

Table- 1.2) Share of Livestock in GDP of India.

Year	GDP (Agriculture & Allied)	GDP (Livestock Sector)
	% Share to total GDP	% Share to total GDP
2012-13	18.5	4.0
2013-14	18.2	4.0
2014-15	18.6	4.1
2015-16	18.2	4.4
2016-17	17.7	4.6
2017-18	17.9	4.6
2018-19	17.32	4.11

Source: Basic Animal Husbandry Statistics (BAHS- Ministry of Agriculture)

Objectives

By considering the above aspects the present study has been under taken with following objectives. The investigation has the following specific objectives:

1) To study the general trade practices in cattle marketing.
2) To estimate the trends in arrival, disposal and price of cattle.
3) To estimate the price spread in the cattle marketing.
4) To identify the factors influencing prices of cattle
5) To study the constraints and suggestion in marketing of cattle.

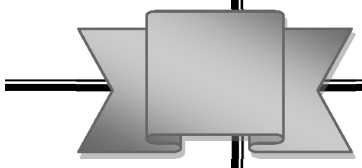
Hypotheses

1) Arrival, Disposal and Prices of cattle depends upon that season.
2) Some of the Factors that influence the prices of cattle. I.e. Breed, Age etc.
3) In order to hide the physical defects with the cattle, several malpractices are done by sellers and buyers.
4) The important constraints in marketing of cattle are high brokerage charges.

Scope and utility of the study

The study will help in providing guideline to animal sellers, buyers, traders and brokers for improving marketing of cattle. This study may be also be useful to officials of the Department of Agriculture, cooperation and marketing for planning and implementing of different programs related to the regulated cattle markets. The information would be useful in the formulation of marketing policies. The study may also be helpful to research worker for conducting further research in this area.

Scope of the present study is limited to the above said specific objectives. Even though, the sample for the study is collected from APMC Ambajogai and Gram panchayat of Salegaon village, the finding of present study would be relevant and applicable to similar situation existing elsewhere.



REVIEW OF LITERATURE

2. REVIEW OF LITERATURE

Review of literature forms an integral part of research work. Review of literature published elsewhere related under study is always useful to the investigator to outline the problem of research, formulate objectives, choose suitable methodology and avoid unnecessary duplication of efforts. It's also provides general orientation about the topic of investigation as whole. An attempt is made to review the literature on problem in this chapter. The review of literature is grouped under the following.

2.1 To study the general trade practices in cattle marketing:

Kumar *et.al.* (2007) studied the Indian livestock sector is on a high growth trajectory and currently contributes 27 per cent to the agricultural gross domestic product (AgGDP). It is of special importance as it has strong backward and forward linkages, which promote many industries like livestock-based food processing and leather industries. Thus, improving the emphasis on the development of livestock sector will not only increase its share in the agricultural and national GDP but will also assist the sector in becoming one of the major foreign exchange earners in the Indian economy in the near future.

Hadke and Jichkar (2007) studied the livestock and dairying contributing 27 per cent to the gross domestic product from agriculture and allied activities, the livestock sector is the main source of family income in the arid and semi-arid regions of the country. In milk production, the country ranks first in the world, with the output touching around 100 million tonnes in 2006-07. Further India is expected to export 0.3 million tonnes of dairy products of the total milk and milk products. While India's share of world trade in poultry and poultry products continues to be very small, in the last decade, the value of such exports has increased from Rs. 11 crore in 1993-94 to Rs. 326 crore in 2005-06.

Birthal *et.al.* (2008) studied the market liberalization and globalization is causing significant changes in food consumption pattern, production portfolio and food marketing systems in India. Food consumption pattern is changing fast. Demand for high-value food products including livestock products is increasing, and is accompanied by significant increase in their supplies. Consumers are becoming conscious about food safety and quality issues, imposing their preferences on the supply chain. These developments in demand and food marketing systems are likely to bring livestock production systems under significant adjustment pressure, in terms

of changes in production portfolio, scale of production and usage of inputs, technologies and services. Their marketable surplus is small, while local rural markets are thin, and trading in distant urban markets is not remunerative due to high marketing and transaction costs. With this background in mind, participants in this session discussed a number of important issues related to marketing and trade of livestock and livestock products and identified critical areas for policy intervention and further research.

Kumar and Lokhande (2012) studied the general trade practices, and intermediaries involved in marketing of buffaloes the typical Solapur buffalo belongs to the group macrocerus like Jafrabadi, Mehsana, Nagpuri, Surti and Pandharpuri breeds are famous as good milker and known as poor man's buffalo. As Solapur district is having a quite large population of buffaloes, almost every family in the district maintains at least a buffalo and these buffaloes play important role in improving the socio- economic condition of the farmers. Thus, it is felt necessary to probe into the marketing of buffaloes in Solapur district. Generally, traders purchased buffaloes mainly for resale those sales off within a week time in this market and other cattle market. Large number of unauthorized brokers was also reported in these markets. The study was based on the quantitative information obtained by contacting sample sellers, buyers, traders and middlemen from this market on market day in the year 2009 to 2010. Secondary data of buffalo were collected from respective Agricultural produce market committee. The data were tabulated and analyzed to work out average and percentages.

Tanpure *et. al.* (2014) in Chandrapur district it was observed that at all the markets under study majority of bullocks sold were non-descript. The trend indicated that there was no special priority to have the bullocks of descript draft breed. The farmers or sellers sold young and adult bullocks to get more income from selling, while old bullocks are sold to replace new bullocks. Greater number of sellers (78%) sold their bullocks through brokers and very few sellers (5%) had trust on broker about guarantee of payment. Maximum farmers (71% and 60%) sold their bullocks due to financial and fodder problems, respectively. All bullock purchasers (100%) considered bullock teeth to select the good bullocks. 91% sellers brought their bullocks at market place on the market day. Mostly (75%) bullock sellers came to the market along with their bullocks by walking from their villages. To sale low quality bullocks Warora market is good and for marketing of medium quality bullocks

Brahmpuri market is better and also to sale best and excellent quality bullocks Brahmpuri market is Bette.

Islam *et.al*. (2016) studied theLivestock sector plays a significant role in the welfare of India's rural population as it employs a major section of the countries labour force and also provides a large share of draft power being used to cultivate crop land. India's livestock sector is one of the largest in the world with a holding of 11.6% of world livestock population. Contribution of livestock and fisheries sectors to the national economy in terms of Gross Domestic Product (GDP) is 4.1 and 0.8%, respectively. Agriculture and allied sector contributed about 15.1% to the total GDP. Out of the total agricultural GDP, livestock sector contributed about 27.25% during 2012-13. The livestock sector is an important source of foreign exchange too and is performing well in the manner of production, value addition and export of dairy, fishery, wool, poultry and other products.

Savita *et.al.* (2017) study has revealed that the production of livestock products was continuously increases over the year except wool production that was declined. The demand of livestock products according to low income growth will be high for milk, beef and buffalo meat and chicken in rural areas, whereas the demand of mutton and goat meat and eggs will be high in urban areas. According to moderate and high income growth the demand of all livestock products will be high in urban areas. The export of poultry products was highest (624181.10 million tonnes) in 2011-12, export of buffalo meat, sheep and goat meat was increases over the year and it was highest in (1107506.24 million tonnes and 16046.91 million tonnes respectively) 2012-13. The processed meat export was declined. The import of poultry products and processed meat was highest in 2011-12 with 661.75 and 962.82 million tonnes respectively whereas the import of sheep and goat meat was highest in 2012-13 with 37.08 million tonnes.

Motta *et. al.* (2018) studied the Livestock production and trade is critical for the food security and welfare of rural households in sub-Saharan Africa. In Cameroon, animal trade consists mainly of live cattle commercialized through livestock markets. Identifying the factors contributing to cattle price formation is critical for designing effective policies for sustainable production and for increasing food availability. Finally, the model highlighted a positive association between the number of incoming trading connections of a livestock market and the price of the traded live cattle ($p < 0.01$). Although our analysis did not account for factors

informing on specific phenotypic traits nor breed characteristics of cattle traded, nearly 50% of the observed variation in live cattle prices was explained by the final model. Ultimately, our model gives a large scale overview of drivers of cattle price formation in Cameroon and to our knowledge is the first study of this scale in Central Africa. Our findings represent an important milestone in designing efficient and sustainable animal health management programme in Cameroon and ensure livelihood sustainability for rural households.

2.2 To study the trends in arrival, disposal and prices of cattle:

Prakash *et.al.* (2007) the present study was undertaken to study the current trends of livestock population, meat production and export of meat from the country; to identify the major constraints responsible for slow growth of exports and to suggest measures to boost meat exports. The study revealed that meat production of the country which was 7.64 lakh tonnes in 1970-71 has increased to 5.74 million tonnes during 2002. Bovine meat contributes the lion's share of about 60 per cent to total meat production followed by meat of sheep and goat, pig, poultry and others.

Shukla and Hussain (2007) the paper aims to study the structure of cattle fairs, marketing agencies, arrivals and disposal of animals. For the purpose six important cattle fairs, three each, were selected from the study area of the western region from two districts, i.e., Moradabad and Aligarh, to study the arrivals and sales pattern of livestock. Thus Dalpatpur, Got-Doraaha and Bilari cattle market have been selected from Moradabad district to study the cattle and buffaloes marketing pattern while Khair, Chandaus and Iglas cattle fairs were selected in Aligarh district to study the marketing pattern of small ruminants. The study showed that in Moradabad cattle fair the aggregate per cent of transaction of total arrival during the year was 26.23, 22.10 and 30.49 per cent of cows, bufon negotiation between the buyers and sellers. The month-wise variation in the sale faloes and bullocks, respectively. The procedure of purchase and sale of livestock is based of livestock of the total arrival in different seasons was not much pronounced. It ranged between 23 per cent in the month of March to 30 per cent in the month of October in the case of cows. While in the case of buffaloes the range of variation in sales pattern was between 20 per cent in the month of May to 26 per cent in the month of January. It was observed that the disposals of animals in Aligarh cattle fairs during the year to the total livestock was about 31 per cent, while the percentage of sale of total arrivals in case of cows, buffaloes, bullocks, sheep and goat was about 25, 26, 21, 43 and 43 per cent respectively.

Shukla (2007) the livestock data of Uttar Pradesh and the extent of its share in India reveal that the state has a pivotal role to play in developing the livestock economy of the country in general and that of the state in particular. The viability of livestock activity largely depends on an efficient marketing system and obviously this aspect has not been given adequate attention in the past. The extent of disposal and revenue from state level fairs shows location wise the number of animals assembled, arrived, sold, revenue collected and the sale value of animals sold in the state level cattle fairs in 2004- 05. The Makanpur cattle fair at Araul (Kanpur) ranked first in terms of total arrivals and selling of animals. The proportion of animals sold to animals arrived in the state level melas shows the only 34 per cent of animals assembled could be disposed of through meals. Cattle constitute the large chunk of animals sharing 54.8 per cent of the total animals arrived and 63.6 per cent of the total animals sold. The other important animal species sold through cattle fairs are camel and buffalo which account for 29.7 per cent and 6.9 per cent respectively of total arrivals and 25.8 per cent and 7.4 per cent respectively of total sale of animals. The study suggests measures like the supply of technological inputs for breed improvement, feeding schedule and other management aspects are to be made more attractive in the state level cattle fairs so that the marketing system is more viable.

Pundhir and Singh (2008) a total of 809 lactation record of 160 red sindhi cows, daughter of 24 sires, spread over a period a period of 48 years from 1958 to 2005 maintained at Uttaranchal government cattle breeding farm ,Kalsi, Dehradun were used to estimate the trends the estimate the of genetic trends are expressed in percentage to the herd average in lactation milk yield, lactation length ,dry period, service period and inter calving period were -2.76,-1.84,3.44,7.67and 3.34 respectively all the estimate of genetic, phenotypic and environmental trends for the traits considered in the study were significant except genetic trends for lactation length and phenotypic trends for the calving period .

Thornton (2010) the livestock sector globally is highly dynamic. In developing countries, it is evolving in response to rapidly increasing demand for livestock products. In developed countries, demand for livestock products is stagnating, while many production systems are increasing their efficiency and environmental sustainability. Historical changes in the demand for livestock products have been largely driven by human population growth, income growth and urbanization and the production response in different livestock systems has been associated with science

and technology as well as increases in animal numbers. In the future, production will increasingly be affected by competition for natural resources, particularly land and water, competition between food and feed and by the need to operate in a carbon-constrained economy. Developments in breeding, nutrition and animal health will continue to contribute to increasing potential production and further efficiency and genetic gains. Livestock production is likely to be increasingly affected by carbon constraints and environmental and animal welfare legislation. Demand for livestock products in the future could be heavily moderated by socio-economic factors such as human health concerns and changing socio-cultural values. There is considerable uncertainty as to how these factors will play out in different regions of the world in the coming decade.

Staal (2015) In India the share of livestock in the value of agricultural production has increased and was recently estimated at some 27 per cent of agricultural gross domestic product (GDP), and has held steady at 5 per cent of total GDP even while agricultural GDP has declined in share (World Bank, 2011). Bovine meat production seems also to have increased its rate of growth in recent years, possibly linked to increased exports, and there is also steady growth in small ruminant meat, demand for which is growing.

Wakchaure *et.al.* (2015) studied on disposal of cattle is very important in any dairy farm because a producer must be free of those animals that are having poor growth, breeding problems, unproductive, diseased and those that are useless in herd. The decision of producer which cows to cull and which cows to keep in the breeding herd impacts future herd performance and profitability.

Dangar and Vataliya (2017) studied the first lactation records of 1450 gir cattle progeny of 290 dams and 41 sires maintained over the period from 1987 to 2010 at cattle breeding farm Junagadh agricultural university,junagadh,gujrat were used to estimate the phenotypic, genetic and environmental tends of traits first lactation total milk yield ,first lactation total milk yield per day of first calving interval, first lactation total milk yield per day of first lactation length .the phenotypic trends were estimated. however, the estimates obtained by BLUP method had the lowest standard error and were more reliable compared to other method.

Bhattacharyya *et.al.* (2017) an investigation was undertaken to ascertain livestock marketing in Assam- purpose and effect of seasonal variation. For systematically conducting the research work a preliminary survey was undertaken by

the researcher throughout the entire state in order to have an idea about livestock marketing. Besides this secondary data were also collected from different sources and a comprehensive list of livestock markets in Assam was prepared, which included a total of twenty six livestock markets. From these twenty six markets, thirteen markets were randomly selected for the present study. From each market a total of 40 respondents were selected to make the sample size 520. The purpose of livestock marketing in Assam is exclusively socio-economic. 58.07 per cent of farmers used to sell their animals at times when there is urgent need of money. Further need of money during festivals, fear about sickness and natural calamities like flood and draught etc. were also the factors for sale of animals. A major portion of animals purchased by buyers (40.00 %) were solely meant for meat purpose and a small portion for agricultural, selling to other customer or for sacrificing purpose. In Assam, majority of the animals were marketed during winter season followed by autumn and spring seasons. The summer season happened to be the lowest marketing season.

Kumar *et.al*. (2019) dairy cattle and buffalo marketing in India is highly unorganized and their market prices are negotiated with hidden secret codes in livestock markets. In this context, the present study was carried out with the objective of identifying the pattern of sales of dairy animals and to ascertain the pricing of dairy cattle and buffaloes based on their age, breed and yield. Primary data were collected from 525 dairy cattle and buffalo farmers from seven randomly selected districts in the state of Tamil Nadu located in Southern India. The price of dairy animals differed between the species (cattle and buffaloes), age (number of calvings), presence of calf, sex of the calf, milk yield and health status of the animals. Scientific price fixation need to be implemented so as to regulate the dairy cattle and buffalo marketing.

2.3 To estimate the price spread in cattle marketing:

Pant *et.al*. (2007) the study was conducted in Udaipur district of Rajasthan with the objective to estimate the price spread in milk marketing and the marketing efficiency of different marketing channels. Girwa tehsil was purposively selected among all the tehsils of Udaipur district on the basis of highest cattle and buffalo population. In all 60 milk producers were selected from four milk-producing villages and data were collected for the year 2003-04. Four milk marketing channels were identified in the study area viz., channel I; Milk Producer-Consumer; Channel II: Milk Producer – Milk Vendor – Consumer; Channel III: Milk Producer – Halwai – Consumer; Channel IV: Milk Producer – Milk Vendor – Halwai – Consumer. The

milk producer disposed off their milk only to the private agencies. The quantity of milk sold per day through these four identified channels were 148.03, 240.76, 208.63 and 102.18 litres, which accounted for 21.16, 34.41, 29.82 and 14.61 per cent of the total milk sold, respective

Bankar *et.al.* (2010) The present study was undertaken to know the marketing cost, margin and price spread in marketing channels of buffalo milk in Ahmednagar district of Maharashtra. For the study, Jamkhed Tehsil of Ahmednagar district was surveyed in the year 200809. The results revealed that in channel-I (Producer - local consumer), price paid by consumer was Rs. 22.50 per liter of milk. Producer's share in consumer's rupee was 93.68 per cent and price spread was fond to be Rs. 1.42. In channel II (Producer processor - sweetshop owner - urban consumer), producer's share in consumer's rupee was 85.84 per cent, purchase price of consumer was Rs. 25.00 while price spread was found to be Rs. 3.34. In channel-III (Producer - milk co-op.society - chilling plant – distributor consumer), price paid by consumer was Rs. 36.00 per litre of milk. Producer's share in consumer's rupee was 60.83 per cent and price spread was fond to be Rs. 14.10. It implied that net price received by producer was higher in channel-III but producer's share in consumer's rupee was higher in channel-I than channel-II and channel-III.

Arficho (2011) this study was undertaken in the pastoral areas of Hadiya zone of SNNPR, Ethiopia with the objective of assessing the efficiency of cattle marketing. The required data were generated from both primary and secondary sources. The marketing margin analysis manifested that, butchers incurred the highest cost of 94 Birr per head followed by itinerant and amateur traders while rural collectors made the largest profit (542 Birr per head) followed by butchers (506 Birr per head). The producers share was found largest in the direct sale to consumer followed by sales directly to butchers and to butchers through rural collectors. So as to improve the gain for pastoralists it is better to integrate vertically and since adding activities adds costs and risks, identifying an appropriate technologies, training on marketing systems to be undertaken, and providing information and working capital would alleviate the problem and improve gain from marketing.

Biswal and Kumar (2011) the marketing of livestock has been studied in Orissa. Data have been collected from ninety six farmers and thirty six market functionaries, selected randomly from the randomly selected markets of the six sample districts. Four marketing channels have been found in cattle and buffalo

marketing. Farmer-Farmer marketing channel was found to be the most popular marketing channel for both male and female animal transaction. The major marketing cost components have been found as labour, market fee, misllaneous, expenditure for feed and fodder and transportation cost. Labour cost was found to be the major marketing cost for both cattle and buffalo marketing in all the four channels. The marketing cost was highest in Farmer-Middleman-Wholesaler-Farmer channel and lowest in Farmer-Farmer channel for both male and female animals. The market margin as a percentage in ultimate buyer's rupee has been found increasing in order from Farmer-Farmer, Farmer-Middleman-Farmer, and Farmer-Wholesaler-Farmer channel to Farmer-Middleman-Wholesaler-Farmer Channel. As a result, the producer's share in ultimate buyer's rupee was decreasing. Therefore, Farmer channel was found to be the most efficient marketing channel for both male and female animals and Farmer-Middleman-Wholesaler-Farmer channel was the least efficient one.

Das *et.al.* (2014) the present study was carried out to analyze the price spread and marketing efficiency of different milch cow marketing channels in the state level cattle fairs of Rajasthan. The study identified six milch cow marketing channels i.e., (1) Farmer Farmer, (2) Farmer Local Trader Farmer, (3) Farmer Local Trader, (4) Farmer Distant Trader Farmer, (5) Farmer Distant Trader and (6) Farmer Local Trader Distant Trader. Marketing efficiency and producer share in consumers rupee were the highest in channel 1 followed by channel 2 and channel 4 as price spread was the lowest in channel 1 followed by channel 2 and channel 4 across all three breed categories (non-descript, indigenous and cross-breed). Transportation cost was found to be the major cost component both for sellers and buyers in all the six milch cow marketing channels. Besides transportation, other major cost components were cost of feeding animals at fairs and miscellaneous expenses (including own expenditure). There were differences in the marketing costs across non-descript, indigenous and cross-breed both for sellers and buyers in all channels. The study suggested the need for government transportation facilities and adequate feeds and fodder availability at reasonable price during the cattle fairs. Above all, government should bring more number of local cattle fairs under the ambit of regulation to further improve the efficiency of livestock marketing system in the state.

Hamidu (2014) the study examined the profitability assessment of cattle marketing in Gombe metropolis. Questionnaires were administered to 40 marketers which were

randomly selected in the cattle market. Descriptive statistics and farm budget model were used for data analysis. The result indicated that majority of the marketers falls within the age group of 31-40 years and their Marketing experience falls within 16-20 years. It also revealed that the net profits were N17307.8, N18418.8 and N32170.7 for the small, medium and large size of cattle respectively. Similarly, the marketing margins were found to be 34.6%, 28.9% and 20.5% respectively. Inadequate capital, high cost of transportation, lack of good roads was identified as the most serious constraints to marketing of cattle in the study area. It was recommended that there should be improvement of institutional credit facilities, rehabilitation and provision of roads.

Das and Jain (2016) the present study was carried out to analyze the price spread and marketing efficiency of different bullock marketing channels in the state level cattle fairs of Rajasthan. The study identified six milch cow marketing channels i.e., (1) Farmer Farmer, (2) Farmer Local Trader Farmer, (3) Farmer Local Trader, (4) Farmer Distant Trader Farmer, (5) Farmer Distant Trader and (6) Farmer Local Trader Distant Trader. Marketing efficiency and producer share in consumers rupee were the highest in channel 1 followed by channel 2 and channel 4 as price spread was the lowest in channel 1 followed by channel 2 and channel 4 across all three breed categories (non-descript, indigenous and cross-breed). Transportation cost was found to be the major cost component both for sellers and buyers in all the six milch cow marketing channels. Besides transportation, other major cost components were cost of feeding animals at fairs and miscellaneous expenses (including own expenditure). There were differences in the marketing costs across non-descript, indigenous and cross-breed both for sellers and buyers in all channels. The study suggested the need for government transportation facilities and adequate feeds and fodder availability at reasonable price during the cattle fairs. Above all, government should bring more number of local cattle fairs under the ambit of regulation to further improve the efficiency of livestock marketing system in the state

Singh and Dubey (2016) Indian dairy sector contribute the largest segment in agriculture gross domestic product. Presently there are around 70000 village dairy cooperative across the country. The cooperative societies are federated into 170 district milk producers unions, which is turn has 22 state cooperative dairy federation. There is great variation in the marketing efficiency of different cooperative and noncooperative milk producing firms in different resource situations, due to variations

in marketing costs and marketing margins. Keeping this in view, the present study is an attempt to examine empirically the price spread, marketing costs, marketing margins, marketing efficiency, and profit efficiency among market middlemen in cooperative and non-cooperative marketing channels in the domestic trade market of liquid milk. The result shows the marketing cost was estimated higher in channel-I but marketing margin was comparatively higher in channel-II in small and medium group. The study indicates that improvement in the cooperative movement and their efficiency for increasing the profit among small and medium herd owner.

Savanur *et.al.* (2018) cattle markets play an important role in connecting sellers and buyers and an efficient market is essential to promote the growth. An ex-post facto research design was adopted to study the economic analysis of cattle marketing in eastern dry zone of Karnataka. The study sample comprised of six cattle markets and two annual cattle fairs. Ten sellers, buyers and five brokers from each market and cattle fair were selected randomly. The study revealed that majority of cattle was transacted through channel 2 (57.76%), where broker negotiated the sale of cattle between seller and buyer. Marketing cost for bullock sale was highest (Rs.3, 784.29) in channel 4, where animal brought by traders were sold to buyers with the help of brokers. Expense on transportation was the major component of total marketing cost in all marketing channels. Brokerage accounted for 5.52 per cent of total marketing cost. Least expensive (Rs.841.00) channel for marketing of cow was found to be channel 1, where direct negotiation between seller and buyer reduced the expenses. Marketing cost was maximum (Rs.1480.41) when marketed through traders and brokers (Channel 4). Transportation (Rs.46.44) and own expenditures (Rs.23.01) were major components of the total marketing cost. Most efficient channel for marketing of bullock found to be channel 1, which had least difference between price received by the seller and effective price paid by the buyer. Marketing cost was highest in channel 4 and only 88.71 per cent of buyers' rupee was received by the seller. Similar to bullocks, most efficient channel for cow marketing was channel 1. In this channel seller received 93.61 per cent of buyers' rupee.

2.4 To identify the factors influencing prices of cattle:

Hugh (2009) the objective of this study was to determine the factors associated with selling price of animals at livestock marts around Ireland. Data consisted of four distinct maturity categories: calves (2 to 84 days of age, n553 838); weanlings (6 to 12 months of age, n519 972); post-weanlings (12 to 36 months of age, n593 081) and

cows (.30 months to 12 years of age, n594 839); sold through livestock marts between 2000 and 2008. Factors associated with animal price were determined within each maturity category separately using mixed models; random effects were mart, date of sale nested within mart, and herd of origin nested within year of sale. Mean selling price was h157, h580, h655 and h592 for calves, weanlings, post-weanlings and cows, Respectively. The greatest prices were paid for singleton crossbred male calves, weanlings and post-weanlings from older dams. With the exception of the Aberdeen Angus, beef breeds and their crosses consistently received higher prices than their dairy counterparts across all four maturity categories; increased proportion of Belgian Blue and Charolais was associated with greater prices compared with other beef breeds.

Pandit *et. al.* (2009) bullocks are still the major source of farm power in India. The present study was carried out to analyze the factors affecting market price of bullocks. Four animal markets of Nadia and Hooghly districts of West Bengal were selected for this purpose. The findings of the study indicated that age, general appearance, temperament, breed and training were the most significant contributory factors for price variation in bullocks. There existed a non-linear relationship between price and age. Further, it was estimated that at 6th year bullock command maximum market price. Haryana and bullocks from Bihar were significantly higher priced than their local counterparts due to their superior working capacity. Good general appearance, good temperament and training had also significant positive impact on market price. The study suggests upgrading the native indigenous bullocks by incorporating superior germplasm for draft ability. Price fixation may be done by grading system certified by qualified veterinarians. Farmers may be advised to sell their animals at 6th year of age to fetch better market price.

Harborth *et. al.* (2010) today's tough economic environment for cattle producers makes each decision critically important, and increased knowledge of the link between pricing and genetic, management, and marketing decisions can increase an operation's sustainability and profitability. Cow-calf producers and cattle feeders have long been interested in the impact of various physical and market characteristics on feeder cattle and calf prices. As demonstrated in many previous studies, significant relationships exist between feeder cattle prices and their physical and market characteristics. Weight, lot size, health, condition, fill, muscling, frame size, breed, time of sale, and horn status significantly affect feeder cattle auction prices.

Historically, significant premiums and discounts have been associated with these particular feeder cattle physical characteristics. The purpose of this study was to gain knowledge of the current link between market pricing and genetic, management, and marketing decisions. Findings from this research will provide updated information regarding how the myriad of industry changes since the 1980s and 1990s has affected the characteristics that influence feeder cattle and calf prices

Das and Jain (2013) studied the transaction of different kinds of livestock species through the state level organized cattle fairs has been a long tradition in Rajasthan. Cattle bullocks constitute a major portion of animal transaction in the cattle fairs. In the present study an attempt has been made to analyze the different quantitative and qualitative factors affecting the price of bullocks. The study revealed that quantitative factors such as age, general appearance and body capacity and qualitative factors such as breed, inauspicious marks and training had significant impact on the price of bullocks in the cattle fairs. The study further revealed the importance of better health, housing and feeding management practices for obtaining the maximum price for bullocks. Government should take more initiatives for conservation and breeding of the famous Nagori bullock known for its excellent draft capacity.

Mafimisebi *et. al.* (2013) the factors considered important in cattle price discovery included body condition, payment mode and type of buyers while breed, seller category and color were the least important. Constraints to cattle marketers included insufficient capital, poor roads and insecurity identified by 85.0%, 83.3% and 79.7% of the respondents, respectively. The study concluded that the cattle market is well organized and that cattle marketing is a fairly profitable venture and potential employment source. Strengthening marketing institutions through capacity building for stakeholders, rail system resuscitation and fixing of bad roads are recommended as steps necessary to enhance the commercialization and performance of cattle marketing.

Fornari *et. al.* (2016) the objective of this study was to investigate the effects of genetic group and calf sex on selling prices in auctions in the state of Santa Catarina (SC), Brazil. We evaluated 33,143 animals, representing 3,587 lots in 47 auctions from 2009 to 2014. The calves were classified according to genetic groups: British breed or crossbreed (BX); Continental breed or crossbreed (CX); Zebu breed or crossbreed (ZC); British and Continental crossbreed (BC); and Bos taurus and Bos

indicus crossbreed (TI). The lots were composed of male and female calves. The years presenting low and high changes in the price of calves were similar to the variation in the price of beef cattle and, in 2014, the calf price reached its highest value (R$5.36). Male calves were sold at prices higher than female calves (average 7.8%), but this difference was driven by year of analysis, in which the closest approach occurred during periods of reduction in the price of live cattle in SC (2012 and 2013). Calves of genetic groups ZX and TI received, on average, lower prices (R$4.49 and R$ 4.64, respectively) compared with the other groups. In 2013, males from the BX group had greater variation in price compared with CX (3.9%) and BC (5.7%). On the other hand, female heifers from the BX group received higher average prices in 2011 compared with the CX, BC, IT, and ZX groups (8.1, 8.5, 14.7, and 16.5%, respectively). Recently, female British heifers have had a greater appreciation in auctions held in SC, possibly for their reproductive performance potential of beef cows. Thus, sex and different genetic groups are factors that impact the selling price of calves in the SC region.

Tavva *et.al.* (2016) an attempt was made to identify factors influencing goat production and marketing which is at subsistence level in crop-livestock production system and to scale it up to commercial level in Nangarhar and Baghlan provinces of Afghanistan. Data were collected from 240 goat producers that were randomly selected in equal proportions for rainfed and irrigated systems from 24 villages in 4 districts of target provinces. Results from the double-log linear regression model used for both meat and dairy goats indicated that age of goat and production system were significantly influencing meat goats while in case of dairy goats, these factors were non-significant but positive. However, some common determinants were live weight of goat, place of marketing, source of market information and location of goat producers. The study enables goat producers to plan their goat sales with higher incomes and reinforce their motivation to scale up production.

Bhattacharjya *et.al.* (2017*)* an investigation was undertaken to ascertain livestock marketing in Assam- purpose and effect of seasonal variation. For systematically conducting the research work a preliminary survey was undertaken by the researcher throughout the entire state in order to have an idea about livestock marketing. Besides this secondary data were also collected from different sources and a comprehensive list of livestock markets in Assam was prepared, which included a total of twenty six livestock markets. From these twenty six markets, thirteen markets

were randomly selected for the present study. From each market a total of 40 respondents were selected to make the sample size 520. The purpose of livestock marketing in Assam is exclusively socio-economic. 58.07 per cent of farmers used to sell their animals at times when there is urgent need of money. Further need of money during festivals, fear about sickness and natural calamities like flood and draught etc. were also the factors for sale of animals. A major portion of animals purchased by buyers (40.00 %) were solely meant for meat purpose and a small portion for agricultural, selling to other customer or for sacrificing purpose. In Assam, majority of the animals were marketed during winter season followed by autumn and spring seasons. The summer season happened to be the lowest marketing season.

Mitchell *et.al.* (2018) studied theHedonic modeling of Oklahoma cow auction data is used to determine the market value of bred cow characteristics. We use Agricultural Marketing Service data that let us consider more years and more lots of cattle than is typical for a cattle hedonic study. The greatest price premiums were for black, late-gestating cows, categorized as high quality by market reporters and weighing between 1,600 and 1,700 lb. Previous research on optimal cow size finds much smaller-size cows are optimal, and our research finds that larger cows receive a lower price per pound but still receive a substantially higher price per hea.

Kumar *et.al.* (2019) studied the dairy cattle and buffalo marketing in India is highly unorganized and their market prices are negotiated with hidden secret codes in livestock markets. In this context, the present study was carried out with the objective of identifying the pattern of sales of dairy animals and to ascertain the pricing of dairy cattle and buffaloes based on their age, breed and yield. Primary data were collected from 525 dairy cattle and buffalo farmers from seven randomly selected districts in the state of Tamil Nadu located in Southern India. The data were analysed through frequency, arithmetic mean, percentages and standard deviation. Majority of the dairy farmers sold their animals through middlemen and the rest sold their animals equally at their farm gate and shandies (livestock markets). The major reason for selling of animal was to meet out family expenditure.

2.5 To Study the constraints and suggestion in marketing of cattle:

Behohar *et.al.* (2007) the specific objectives of the study are (1) identify the various problems associated with the livestock marketing and (2) suggest policy reforms to overcome the problems identified for efficient livestock marketing system. Three cattle markets, namely, Ujjain, Itarsi and Mohagaon were also selected

purposively. The sellers in the animal markets generally came from nearby locality and after sale of animal during the day, they had to carry huge amount in cash because the transaction in the cattle markets takes place in the late hours of a day and thus sellers were not able to avail the facility of banks. Therefore, the banking working hours should be tuned with the market timings to avail banking facilities. Cattle shed is lacking in the market area. Cattle sheds are not available in any market, particularly on rainy days; it is a problem of sellers to keep their animals in a safest place. No availability of insurance schemes in the cattle market also creates problems and ultimately affects market efficiency. It was found that the sellers were not offered fair price for animals as expected. Poor production of crops, poor purchasing power, poor savings and poor capital for investment.

Choudhary (2007) the paper attempts to study the economics, marketing and constraints for progressive dairy units in the semi-urban areas of Raipur district of Chhattisgarh. Specifically, it aims (i) to work out the economics of milk production in different size of dairy units, (ii) to estimate the marketing cost, market margin and price spread for different marketing channels and (iii) to identify the various constraints in milk production and marketing and to suggest measures for improvement. The study is based on data collected from 16 progressive dairy units in Arang block of Raipur district of Chhattisgarh during the year 2006-07. The analysis of dairy unit revealed that the average cost of milk production Cost A was Rs. 30055.16 per milch animal per annum in large dairy unit, Rs.20243.14 and Rs.26224.85 for small and medium dairy units, respectively. On an average net return of milk production was worked out to Rs. 16423.16 per milch animal per annum. The benefit-cost ratio in the production of milk varied from 1:1.60 to 1:1.91 in different categories of dairy unit. The average benefit-cost ratio is 1:1.60. The price – spread was estimated for three channels. The producer share in milk price was high in Channel – III (88.42 per cent). Total marketing cost incurred was lowest in Channel-I followed by Channel II and III. The study also revealed that about 90 per cent of the total quantity of milk produced was sold and the remaining was consumed for home consumption. Thus production and marketing efforts need to be made to reduce the cost and to improve the productivity of milch animals. This can be done by replacing the unproductive milch animals and introducing.

Verma (2007) an attempt has been made in the paper to analyse the economics of production, marketing and constraints of buffalo milk in Indore district of Madhya

Pradesh. It examines the cost and returns per year, the net return, cost of milk production per litre, benefit-cost ratio, evaluate the resource use efficiency, price spread and marketing efficiency of small, medium and large size-groups of buffalo farms. Multistage stratified sampling method was used for the selection of the ultimate unit of the sample an unremunerative price of milk and milk products was the major constraint followed by delayed payment for milk and milk products, inadequate price for milk, poor credit facilities, disease outbreak, etc. Payments made in fractions were for the major factors which led the imperfect market situations and lower income to the producers in the region.

Kathiravan and Selvam (2011) in order to ascertain the constraints in livestock production, this study was undertaken in Tamil nadu. A total of 350 farmers, representing all the seven agro-climatic zones were chosen adopting three stage random sampling technique garrets ranking technique was adopted to analyze the problems faced by farmers in the study area on rearing cattle of different categories, buffaloes, sheep and goat. The constraints faced in rearing crossbred cows in the order of their importance were excessive feed cost, followed by inadequate price for milk and huge investment. low productivity in deshi cows was the major constraints, followed by excessive feed cost, inadequate price for milk. Lack of fodder and grazing facilities was the prime constraints in buffalo farming followed by labour shortage and infertility problem. The foremost constraints faced by overwhelming majority in sheep production and in goat production was lack of fodder and grazing facilities

Kgosikoma and Malope (2016) for smallholder livestock farmers to benefit from their livestock, they need to fully participate in the market. This study identifies the determinants of market participation by smallholder livestock farmers in Botswana. The study used data collected from 132 smallholder livestock farmers in Kweneng West in 2007. A logit model was used to identify factors that determine whether smallholder farmers will participate in the market or not. The results indicate that the age of household head negatively and significantly affects market participation, implying that older farmers are less likely to participate in the market; planting crops increases the chances of market participation, as does the accessibility to market price information. The major limitation facing smallholder livestock farmers is the requirement that the animals should have a bolus (for traceability) and veterinary permits. In order to stimulate the participation of smallholder farmers in the

market, policies aimed at promoting participation of youth in agriculture should be explored. In addition, policies should target service delivery improvement by all institutions involved in the marketing of cattle including those issuing cattle movement or veterinary permits. This will go a long way in increasing smallholders' income from livestock and hence improve their living standards.

Togarepi *et.al.* (2016) the main aim of the study was to determine the constraints and opportunities among cattle producers in the rural areas of Omulonga constituency in Ohangwena region in North Central Namibia. The primary livelihood activities in the area are mainly rain-fed arable agriculture, livestock ranching and the harvesting of natural resources. A survey was conducted in the constituency on purposively selected livestock farmers. Only farmers who own livestock were selected for the survey of which 50 farmers were interviewed using a structured questionnaire.

Addis (2017) Ethiopia is believed to have the largest livestock population in Africa. The diverse agro-climatic conditions of Ethiopia make it very suitable for the production of different kinds of livestock. Current knowledge on livestock marketing in lowland part of Ethiopia is poor and inadequate for designing policies and institutions meant to improve the livestock marketing system. In order to bridge this gap, this work is carried out in the major constraints pastoral livestock markets of Ethiopia to empirically investigate formation of livestock marketing in the supply value chain of the meat and live animal export market of the country. Among the major constraints of livestock marketing in lowland part of Ethiopia are absence of Market Information System, inadequate infrastructure, absences of veterinary services, contraband and clan conflict. Access to market information enables these producers to seek out and compare the information available for different market outlets to realize the full potential profit by getting the best prices.

Savaur *et.al*. (2018) an ex-post facto research design was adopted to study the constraints in marketing of cattle in eastern dry zone of Karnataka. The study sample comprised of six cattle markets and two annual cattle fairs. Ten sellers and ten buyers from each market and cattle fair were selected randomly. The study revealed that lack of drinking water and lack of transportation facilities were the top two constraints ranked by sellers and buyers in both cattle markets and cattle fairs. Lack of sheds for animals was the least bothering problem for sellers and buyers in cattle market. In

cattle fairs, lack of animal shed was felt more serious problem which attributed to longer duration stay in cattle fairs compared to few hours in cattle markets.

Joshi *et.al.* (2018) the present study was carried out to analyse the preferences, suggestions and constraints faced by the Badri cattle owners in Almora and Pauri Garhwal district of Uttarakhand. This study was conducted in 12 villages from 4 blocks of Almora and Pauri Garhwal district by personally interviewing 120 Badri cattle owners through semi structured interview schedule. Majority of the respondents (90.00%) faced constraints in rearing Badri cattle and felt lack of government initiative as the biggest constraint followed by poor economic condition , high cost of feeding and lack of nutritious feed and fodder Farmers suggestions for promotion of cattle were better availability of feed and nutrition for Badri cattle, appreciation/ incentives for Badri cattle owners and development of special programmes specifically for Badri cattle, followed by providing chaff cutter, organizing motivational camps, provide shed, provide loan, insurance and good quality bulls.


METHODOLOGY

3. METHODOLOGY

General

Methodology is of vital importance in the economic study.Methodology includes salient features of Beed district, sampling design, analytical technique, terms and concept used in the study are described as follows. Keeping in view the objectives of the present study the research methodology adopted in respect of size of sample, selection of markets, selection of buyers and sellers etc.

SALIENT FEATURES OF BEED DISTRICT

Salient features consist with location, soil, climate, population and cropping pattern of district whereas study has been undertaken.

Location

Beed district is located at West-central part of Aurangabad region. It lies between 18^0-28'to 19^0-28' North latitude and 74^0-54' to 76^0-57'East latitude. Beed district is bounded on the North side by Jalna and Aurangabad district, on the East by Latur and Parbhani district, on the South side by Ahmednagar and Osmanabad district while on West side by Ahmednagar district of Maharashtra state. Beed district is located on the Deccan plate of Maharashtra. Balaghat hills divides the district in two parts, one at North side known as 'Gangathadi' having gental slope while another is indulating hilly area known as 'Balaghat'. Balaghat region is having height of 2000-2200 feet from sea level. The district has 11 tehsils namely Ambajogai, Ashti, Beed, Darur, Georai, Kaij, Majalgaon, Parli, Patoda, Shirur and Wanwani. The district has 1376 villages and 1090 Gram panchayats.

Soils

Most of the Beed district has a thin layer soil. The tehsils along the bank of river Godavari has a deep black soil which is good for crop production, The Godavari is the main river in the district and the Manjra, the Sindaphana, the Bindusara and the Waan are the rivers in the district. Most of the rivers are dry in summer season. In the district out of total geographical area 2.39 per cent covered with forest. In the Beed district well and tube well are the main source of irrigation. Majalgaon and Manjra dams and other 10 dams are also available for irrigation.

Fig 3.1. Map of Beed district

Climate

In the Beed district rainy season start from middle of June and last till the end of October. It is followed by winter season from November to February and summer season from March to June. The average temperature in summer was 35.5^0C. December is the coldest month of the year with average minimum daily temperature is about 16^0C and from March onward it begins to increase rapidly. In Beed district distribution of rainfall is uneven hence there is drought condition occurs sometime. The average rainfall in the district during 2019 was 627.6 mm.

Population

In the Beed district 11 tehsils namely Ashti, Ambajogai, Beed, Dharur, Georai, Kaij, Majalgaon, Parli, Patoda, Shirur, and Wadwani, 1376 villages and 1030 Gram-Panchayats are there. Total geographical area is 10693 sq. km. which is 3.47 per cent of total state area. Out of total geographical area 41.24 sq. km area is urban while 10651 sq.km area is rural. According to 2011 census the total population of district was 25.85 lakh out of which 13.52 lakh are males and 12.33 lakh are females. This population was 2.36 per cent of Maharashtra. The sex ratio works out to 912 females per 1000 males. The literacy percentage was 73.53 per cent in which male literacy was 83.99 percent and female literacy was 62.29 per cent. The population density

according to 2011 census was 242 people per sq.km Out of total population 80.10 per cent was in rural area while 19.90 per cent was in urban area.

Cropping pattern

In Beed district, the total geographical area is 10693 sq.km and cultivated area is 9826 sq.km. Kharif and Rabi are two main seasons in Beed district for crop production, in kharif season hybrid jowar, bajra, tur, black gram, cotton groundnut and vegetables are the main crops while in Rabi season wheat, chickpea, rabi jowar, safflower, maize, mustard, turmeric, vegetables and sugarcane are the main crops cultivated in district. The district also cultivates mango, mandarin, pomegranate, lemon, ber, banana as fruit crop.

Selection of market

Beed district was selected purposively, because maximum animals of livestocks in Beed district market as compared to other district market. Beed district cattle market is the gateway to the Marathwada, where marketing of various types of animals take place.

Selection of cattle market:

Ambajogai cattle market and salegaon cattle market was selected

Sampling design

Multistage sampling design was adopted in selection of district, taluka and villages on the basis of highest cattle population.

Selection of district

At first stage, the Beed district was purposively selected.

Selection of talukas

Two talukas viz. Ambajogai and Kaij (Salegaon) was selected on the basis of highest cattle population.

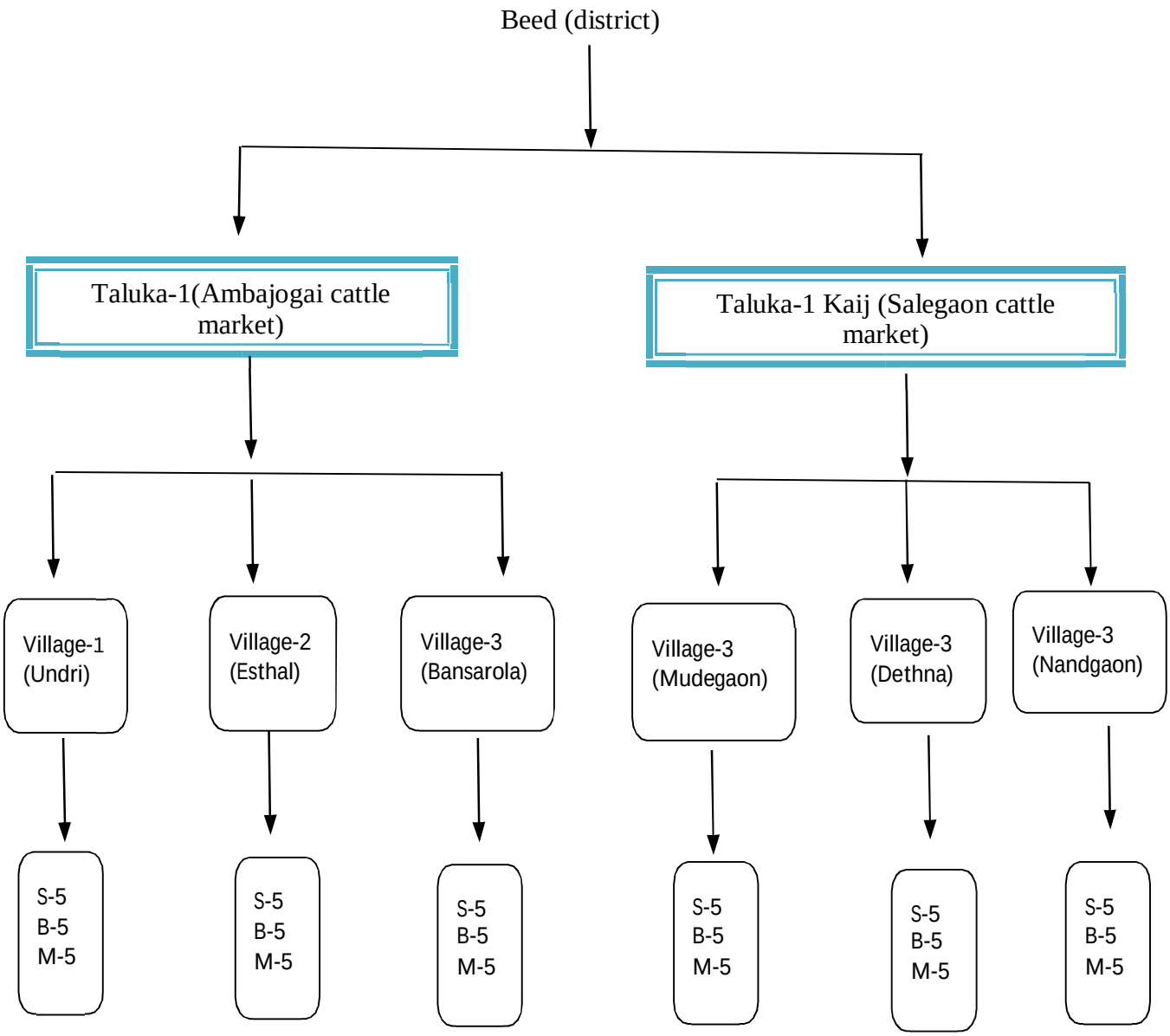
Selection of villages

From each taluka three villages viz. Undri, Esthal, Bansarola, Mudegaon, Dethna and Nandgaon was selected randomly. Thus, in all 6 villages from the two talukas will be selected.

Selection of buyer, seller and middleman:

5 buyer, 5 seller, 5 middlemen will be selected from each village.

Flow chart of sampling:



Method of collection of data:

The information was collected by survey method. For this purpose, detailed separate set of schedules and questionnaires specially meant for collection of information from sellers, buyers and agricultural produce market committee were designed. It was felt necessary to prepare separate set of schedules and questionnaires for sellers, buyers and agricultural produce market committee because the nature of information to be collected from those sources happened to be different from each other. The general information of markets buyers and sellers, agricultural produce market committee, kinds of animals, etc., was considered necessary and accordingly the questionnaire and schedules were prepared.

Analysis:

The data so collected was further processed, tabula and analysed. Some of the important aspects in the analysis of seasonal variation in arrival and disposal and factors influencing price of animals and methodology adopted are explained under following headings.

a) Arrival, Disposal and price analysis:

The data collected from marketing committee and gram panchayat were for ten years from market and for different categories of animal. The data were further analysed by working out the season wise average of arrivals, prices and disposal of animals. Similarly, price average of arrivals and disposal of animals. Similarly, price average for different season were also worked out for different categories of animal. Correlation analysis between arrival, disposal and price of important animals such as bullocks and she buffaloes were also worked out. The trend values were obtained by using exponential function of following type.

$$Y = ab$$

Where,

Y = Arrival / Disposal / price

A= Intercept

B= Regression coefficient

t = Time

Log y = log a + t log b.

r = (antilog of b – 1) × 100

b. Price spread:

The data were also analysed to give the item wise absolute as well as the percentage to the total price paid by the buyer and price spread in general.

c. Factors influencing the price of cow and buffalo:

The price of an individual dairy buffalo depends upon several factors such asper day average milk yield, age, order of lactation, stage of lactation, etc. These factors directly or indirectly affect the price of the buffalo or cow.

$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + \mu$

Y= Price

A = Intercept

B = Regression coefficient of respective variables

X_1 = per day average milk yield.

X_2 =Age

X_3 = Order of lactation.

X_4 = Stage of lactation

μ = Error term

Concept used in the study:

Some of the important concepts used in the study are explained below

(a) Demand - It refers to the number of different kinds of animal disposed during a specific period and at the various prices at which they are sold.

(b) Supply – It refers to the number of different kinds of animals arrived in the market for sale during specific period.

(c)) Livestock market – Livestock market in the investigation means the place where the activities of buying and selling of livestock takes place under the control of local agricultural produce market committee.

(d) Cattle – In the "Report on cattle marketing in India" the word cattle mean cows, bullock, she buffaloes and he buffaloes irrespective of the age and breed. The term is used with the same meaning

(e) Market charges and cost – Market charges include admission fee, sale, registration fee, brokerage, miscellaneous charges and marketing costs include market charges, transport cost and feeding and watering cost as well as cost of preparation of animal for marketing.

(f) Hatta system of sale – In cattle markets, undercover method of salefor animal iscommonly adopted. Under this method the buyer or broker indicate the price that he is prepared to pay by clasping the hands of the sellers or brokers undercover of a cloth of pressing and manipulating the fingers.

RESULTS & DISCUSSION

4. Result and Discussion

Livestock plays an important role in Indian economy. About 20.5 million people depend upon livestock for their livelihood. Livestock contributed 16% to the income of small farm households as against an average of 14% for all rural households. It also provides employment to about 8.8% of the population in India. Livestock an important source of manure for crop production, fuel for domestic use, minimizing use of non-renewable energy and important source of income for the farmers and rural poor and animal husbandry sector provides large self-employment opportunity. The economic importance of cattle is based upon their production of both milk and work in India. The cattle males are important as drought animals and cattle females as producers of milk. The cow has been held in high esteem for her male progeny which supplies power for agriculture and her milk which is highly nutritive and wholesome food for infants, adults and invalids a like.

Present investigation is intended to study the Economics of cattle marketing in Beed District of Maharashtra. For the relevant data for the study their interview was taken on specific market day. Related to secondary data regarding Arrival, Disposal and prices of cattle for year 2009-10 to 2018-19 were collected from annual report of the market committee and through Gram panchayat.

The result of the present study is presented and discussed under different headings.

1)To study the general trade practices in cattle marketing.

2) To estimate the trends in arrival, disposal and price of cattle.

3) To estimate the price spread in the cattle marketing.

4) To identify the factors influencing prices of cattle

5) To study the constraints and suggestion in marketing of cattle.

4.1) General trade practices:

a) Preparation of cattle for marketing:

Seller gives little attention towards the cattle preparation for marketing. Due to the preparation to get the better price for their animal. In some cases, for the attraction of buyer, drought animals are washed and massaged and their horns are decorticated. Also, in case of cows they are washed as like drought animals. In case of buffaloes for getting better price in market shaving is done and skin is massaged with butter milk and ole so as to look attractive. In case of old and unserviceable animals, they are generally sold for slaughtering this type of animal does not need special type of preparation for marketing.

b) Malpractices followed by Sellers and Buyers:

No. of malpractices are adopted for hide the physical defects of the animal forexample in case of drought bullocks the yoke galls, bruises and scars are generally concealed by coloring them with dyes, charcoal or tar. Some of the clever stockmen sometimes rasp the teeth and file the rings around the horns in order to hide the correct age. Some of the owners of cows and buffaloes do not completely milk their animals few days prior to sale, so as to impress the customer about their heavy milking ability. These are the malpractices followed by seller and buyer.

c) Agencies and method of assembling and distribution:

In case of buyer and seller other agencies are in market under study i.e. vyaparies and dealers etc. there are near about 18 licensed cattle dealers in Ambajogai cattle market and 56 licensed cattle dealers in Salegaon cattle market.Brokerage charge vary from one percent to five percent and even more with increase or decrease and sale value of the animal.

d) Market functionaries:

There are two important market functionaries in the cattle market 1) brokers 2) heyday. Other functionaries are bhangis which clean the premises there are some watermen and woman who supply water to thirsty animals for which they are paid five to ten rupees by seller or buyer.

e) Method of business:

Market time of cattle market is at 9 Am to 4Pm on respective weekly bazar day generally there will be 3 type unit of sale of cattle these are ‘per head’, ‘per pair’ and ‘per group’ among of the three ‘per head’ are most adopted unit. In case of bullock

per ‘per pair’ unit of sale are most adopted and in case of slaughter ‘per group’ pair are adopted

f) Market intelligence:

In Beed District cattle market, there will be no facility about the market news regarding the arrival disposal and prices of cattle in the market. Or not any organized agency for disseminating market news of cattle in the market.

The existing marketing channel of Salegaon and Ambajogai cattle market is under.In generally three type of marketing of observed in the market are as follows.

These are

Channel - I → Farmer- Farmer Buyer.

Channel – II → Farmer –Broker-Farmer Buyer.

Channel – III → Farmer – Trader –Farmer Buyer.

Plate. 1 Office market yard, Ambajaogai.

4.2) Arrivals, Disposal and Prices:

General:

In general oxen male, buffalo, caw are mention in market for verity of reason first is oxen male are used for drought purpose i.e. they are used for various agricultural operation i.e. plugging, harrowing, sowing etc. But in case of buffalo and caw are considered to be only suppliers of milk

Arrivals, disposal and prices data was collected from the to market

1) Ambajogai

2) Salegaon

1) Ambajogai Cattle Market:

4.2.1: seasonal Variation in arrival, disposal and prices of different animal.

1) Bullocks:

The details of the seasonal variation in arrival, disposal and average price of bullock in Ambajogai cattle Market for year 2009-10 to 2018-19. Are presented in table.

On the average of 10 year the result clearly indicate that magnitude of arrival, disposal and prices increased in summer season then after rainy and winter. Because in summer season there will be great demand for bullock because of want of preparatory tillage operation like ploughing, Harrowing, weeding in summer season.

Overall level of Arrival of bullock is high in summer season i.e. (539.8) then after rainy season (408.2) and winter season (356.4) respectively. With regard to disposal as like arrival there will be high in summer season i.e. (270.8) then rainy season (215.7) and lastly in winter season i.e. (179.5) respectively. With regard to prices average price is high in summer season i.e. (Rs 21970 per animal.) then after rainy season i.e. (21150 per animal) and lastly in winter season i.e. (Rs 19910 per animal). Per cent of disposal to arrival is high in rainy season i.e. (51.54) and low in summer season i.e. (48.64) respectively.

Table 4.1: Seasonal Variation in Arrival, disposal and average price of Bullock during the period from 2009-10 to 2018-19

Sr.No.	Season	2009-2010				2010-2011				2011-2012				2012-2013				2013-2014				2014-2015			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	542	307	56.64	12000	504	273	54.16	14500	498	295	5923	15000	492	250	50.81	17000	680	340	50	16000	530	272	51.32	28000
2	Winter	468	280	5982	11800	460	239	51.95	13000	490	244	49.79	14000	432	218	50.46	16500	540	279	51.66	15700	467	217	46.46	27000
3	Summer	612	356	58.16	12500	622	320	51.44	15000	762	367	48.16	16000	684	337	49.26	17500	792	408	51.51	16700	712	390	54.77	28800
	Total	1622	943	58.13	12100	1586	832	52.45	14166	1750	906	51.77	15000	1608	805	50.06	17000	2012	1027	51.04	16133	1709	879	50.26	27933

Sr.No.	Season	2015-2016				2016-2017				2017-2018				2018-2019				Overall			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	302	190	62.91	25000	212	100	47.16	26000	212	80	37.73	30000	110	50	45.45	28000	408.2	215.7	51.54	21150
2	Winter	273	132	48.35	23500	160	90	56.25	23600	205	62	30.24	28000	69	34	49.27	26000	356.4	179.5	49.42	19910
3	Summer	475	230	48.42	26600	295	130	44.06	26700	312	110	35.26	31000	132	60	45.45	28900	539.8	270.8	48.64	21970
	Total	1050	552	52.57	25033	667	320	47.97	25433	729	252	34.56	29666	311	144	46.3	27633	1304.4	657.6	51.05	21010

2) Cows:

The details of the seasonal variation in arrival, disposal and average price of cow in Ambajogai cattle Market for year 2009-10 to 2018-19. Are presented in table.

On the average of 10 year the result clearly indicates that magnitude of arrival, of cow in Ambajogai Market were higher in winter season followed by rainy season. In case of disposal of cow there will be great demand in winter season as compare to rainy and summer season. With regard to prices of cow they were sold at higher price in rainy season.

Overall level of Arrival of Cow is high in winter season i.e. (78.2) then after rainy season (66) and summer season (56.1) respectively. With regard to disposal as like arrival there will be high in winter season i.e. (52.5) then rainy season (42.2) and lastly in summer season i.e. (35) respectively. With regard to prices average price is high in rainy season i.e. (Rs 20220 per animal.) then after winter season i.e. (19920 per animal) and lastly in summer season i.e. (Rs 19645 per animal). Per cent of disposal to arrival is high in winter season i.e. (64.13) and low in summer season i.e. (60.01) respectively.

Table 4.2 Seasonal Variation in Arrival, disposal and average price of Cow during the period from 2009-10 to 2018-19

Sr.No.	Season	2009-2010				2010-2011				2011-2012				2012-2013				2013-2014				2014-2015			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	95	65	68.42	12400	150	120	75	13300	65	40	61.53	12900	75	45	60	15800	65	35	53.84	16100	65	35	53.84	23000
2	Winter	110	80	72.72	12000	170	135	79.41	13000	75	50	66.66	12500	90	55	61.11	15200	80	50	62.5	15900	72	45	62.5	22800
3	Summer	87	60	68.96	11500	130	95	73.07	12900	54	32	69.25	12000	67	37	55.22	14900	52	29	57.86	15650	52	28	53.84	22500
	Total	292	205	70.2	11966	450	350	77.77	13066	194	122	62.88	12466	232	137	59.05	15300	197	114	57.86	15883	189	108	57.14	22766

Sr.No.	Season	2015-2016				2016-2017				2017-2018				2018-2019				Overall			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	43	27	62.79	21200	42	20	67.61	21300	35	20	57.14	33000	25	15	60	33200	66	42.2	60.01	20220
2	Winter	53	35	66.03	21000	52	30	57.69	21000	45	25	55.55	32800	35	20	57.14	33000	78.2	52.5	64.13	19920
3	Summer	39	23	58.97	20800	30	17	56.66	20900	34	19	55.88	32500	16	10	62.5	32800	56.1	35	60.01	19645
	Total	135	85	62.96	21000	124	67	54.03	21066	114	64	56.14	32766	76	45	59.21	33000	200.3	129.7	64.75	59785

3) Buffalo:

The details of the seasonal variation in arrival, disposal and average price of buffalo in Ambajogai cattle Market for year 2009-10 to 2018-19. Are presented in table.

On the average of 10 year the result clearly indicates that magnitude of arrival, of buffalo in Ambajogai Market were higher in winter season then after rainy and summer season. In case disposal of the buffalo there will be great demand winter season then after rainy and summer season respectively. With regard to prices of buffalo they were sold at higher in winter season then after rainy and summer season.

Overall level of Arrival of buffalo is high in winter season i.e. (499.3) then after rainy season (377) and summer season (306.1) respectively. With regard to disposal as like arrival there will be high in winter season i.e. (347.2) then rainy season (277.3) and lastly in summer season i.e. (224.5) respectively. With regard to prices average price is high in winter season i.e. (Rs 32650 per animal.) then after rainy season i.e. (32170 per animal) and lastly in summer season i.e. (Rs 31830 per animal). Per cent of disposal to arrival is high in summer season i.e. (73.52) and low in winter season i.e. (69.49) respectively.

Table 4.3 Seasonal Variation in Arrival, disposal and average price of Buffalo during the period from 2009-10 to 2018-19

Sr.No.	Season	2009-2010				2010-2011				2011-2012				2012-2013				2013-2014				2014-2015			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	512	352	6875	18500	473	382	80.76	20000	412	300	72.81	23500	468	337	72	27000	412	318	77.18	29000	318	282	88.67	43100
2	Winter	630	450	71.42	18900	695	465	66.9	20500	518	382	73.74	23900	583	418	71.69	27300	584	406	69.52	29300	502	368	73.3	43700
3	Summer	324	254	7839	18000	472	353	84.78	19800	389	280	71.97	23100	489	327	66.87	26800	328	260	79.26	28700	202	155	76.73	43900
	Total	1466	1056	72.03	18466	1640	1200	73.17	20100	1319	962	72.93	23500	1540	1082	70.25	27033	1324	984	74.32	29000	1022	805	78.76	43233

Sr.No.	Season	2015-2016				2016-2017				2017-2018				2018-2019				Overall			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	324	218	67.28	37000	290	202	69.65	31000	272	195	71.69	49800	289	187	64.7	42800	377	277.3	73.34	32170
2	Winter	512	312	6093	37700	312	210	67.3	31200	315	212	67.3	51000	342	249	72.8	43000	499.3	347.2	69.49	32650
3	Summer	242	172	71.07	36700	205	172	83.9	30800	212	152	71.69	49000	198	120	60.6	42500	306.1	224.5	73.52	31830
	Total	1078	702	65.12	37133	807	584	72.36	31000	799	559	69.96	49933	829	556	67.06	42766	1182.4	849	71.8	32217

Plate. 2 Arrivals of Buffalo in weekly bazar of Ambajogai.

2) Salegaon Cattle Market:

Plate. 3 Arrivals of cattle in weekly bazar of salegaon market

4.2.2.: seasonal Variation in arrival, disposal and prices of different animal.

1) Bullocks:

The details of the seasonal variation in arrival, disposal and average price of bullock in Salegaon cattle Market for year 2009-10 to 2018-19. Are presented in table.

On the average of 10 year the result clearly indicate that magnitude of arrival, disposal and prices increased in summer season then after rainy and winter. Because in summer season there will be great demand for bullock because of want of preparatory tillage operation like ploughing, Harrowing, weeding in summer season.

Overall level of Arrival of bullock is high in summer season i.e. (8508.1) then after rainy season (7405) and winter season (6711.8) respectively. With regard to disposal as like arrival there will be high in summer season i.e. (6272.8) then rainy season (5873.2) and lastly in winter season i.e. (5332.7) respectively. With regard to prices average price is high in summer season i.e. (Rs 21970 per animal.) then after rainy season i.e. (21150 per animal) and lastly in winter season i.e. (Rs 19910 per animal). Per cent of disposal to arrival is high in winter season i.e. (80.4) and low in summer season i.e. (74.95) respectively

Table 4.4 Seasonal Variation in Arrival, disposal and average price of Bullock during the period from 2009-10 to 2018-19

Sr.No.	Season	2009-2010				2010-2011				2011-2012				2012-2013				2013-2014				2014-2015			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	10150	7024	69.2	12000	9840	6925	70.37	14500	8242	6720	81.53	15000	7554	6222	82.36	17000	7222	6105	84.53	16000	6752	5972	88.44	28000
2	Winter	8725	6104	69.95	11800	7892	5425	68.74	13000	7998	6124	76.56	14000	7125	6035	84.7	16500	6282	5780	92	15700	6922	5273	76.17	27000
3	Summer	12242	8112	66.26	12500	11240	7890	70.19	15000	10908	6998	64.15	16000	8403	6503	77.38	17500	7540	6304	83.6	16700	8105	6005	74.09	28800
	Total	31117	21240	68.25	12100	28972	20240	69.86	14166	27148	19842	73.08	15000	23082	18760	81.27	17000	21044	18189	86.43	16133	21779	17250	81.44	27933

Sr.No.	Season	2015-2016				2016-2017				2017-2018				2018-2019				Overall			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	6554	5468	83.42	25000	5982	4972	83.11	26000	6512	5222	80.19	30000	5242	4102	78.25	28000	7405	5873.2	79.74	21150
2	Winter	6122	5155	84.2	23500	5530	4481	81.03	23600	6002	5005	83.38	28000	4520	3945	87.27	26000	6711.8	5332.7	80.4	19910
3	Summer	6998	5900	84.3	26600	6892	5100	73.99	26700	6998	5403	77.19	31000	5755	4513	78.41	28900	8508.1	6272.8	74.95	21970
	Total	19674	16523	83.98	25033	18404	14553	79.07	25433	19512	15630	80.1	29666	15517	12560	80.94	27633	22625	17479	78.44	21010

2) Cows:

The details of the seasonal variation in arrival, disposal and average price of cow in Salegaon cattle Market for year 2009-10 to 2018-19. Are presented in table.

On the average of 10 year the result clearly indicates that magnitude of arrival, of cow in Salegaon Market were higher in winter season followed by rainy season. In case of disposal of cow there will be great demand in winter season as compare to rainy and summer season. With regard to prices of cow they were sold at higher price in rainy season.

Overall level of Arrival of Cow is high in winter season i.e. (6563) then after rainy season (5613.9) and summer season (4894.9) respectively. With regard to disposal as like arrival there will be high in winter season i.e. (4933.8) then rainy season (4383.8) and lastly in summer season i.e. (3794.7) respectively. With regard to prices average price is high in rainy season i.e. (Rs 20220 per animal.) then after winter season i.e. (19920 per animal) and lastly in summer season i.e. (Rs 19645 per animal). Per cent of disposal to arrival is high in summer season i.e. (77.17) and low in winter season i.e. (74.33) respectively.

Table 4.5 Seasonal Variation in Arrival, disposal and average price of Cow during the period from 2009-10 to 2018-19

Sr.No.	Season	2009-2010				2010-2011				2011-2012				2012-2013				2013-2014				2014-2015			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	7582	6512	85.88	12400	7105	5842	82.22	13300	6212	5116	82.35	12900	6105	4917	80.54	15800	5892	4927	83.62	16100	5124	4012	78.29	23000
2	Winter	9105	7105	78.03	12000	8002	6502	81.25	13000	7802	5812	74.49	12500	7298	5512	75.52	15200	6512	5198	79.82	15900	6098	5105	83.71	22800
3	Summer	6514	5155	79.13	11500	5892	4596	78	12900	6105	4914	80.49	12000	4914	3413	69.45	14900	5505	4817	897.5	15650	4530	3723	82.18	22500
	Total	23201	18772	80.91	11966	20999	16940	80.67	13066	20119	15842	78.74	12466	18317	13842	75.56	15300	17909	14942	83.43	15883	15752	12840	81.51	22766

Sr.No.	Season	2015-2016				2016-2017				2017-2018				2018-2019				Overall			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	5802	3842	66.21	21200	4512	3102	68.75	21300	4213	3026	71.82	33000	3592	2542	70.76	33200	5613.9	4383.8	77.04	20220
2	Winter	6503	4503	69.24	21000	4996	3472	69.49	21000	4502	3102	68.9	32800	4812	3027	62.9	33000	6563	4933.8	74.33	19920
3	Summer	4503	2953	65.57	20800	3942	2998	76.05	20900	3942	2912	73.87	32500	3102	2456	79.49	32800	4894.9	3794.7	77.17	19645
	Total	16808	11298	67.21	21000	13450	9572	71.16	21066	12657	9040	71.42	32766	11506	8025	69.83	33000	17071.8	13112.3	76.04	19928

3) Buffalo:

The details of the seasonal variation in arrival, disposal and average price of buffalo in Salegaon cattle Market for year 2009-10 to 2018-19. Are presented in table.

On the average of 10 year the result clearly indicates that magnitude of arrival, of buffalo in Salegaon Market were higher in winter season then after rainy and summer season. In case disposal of the buffalo there will be great demand winter season then after rainy and summer season respectively. With regard to prices of buffalo they were sold at higher in winter season then after rainy and summer season.

Overall level of Arrival of buffalo is high in winter season i.e. (6199.5) then after rainy season (5456.9) and summer season (4771.4) respectively. With regard to disposal as like arrival there will be high in winter season i.e. (5022.2) then rainy season (4359.9) and lastly in summer season i.e. (3732.1) respectively. With regard to prices average price is high in winter season i.e. (Rs 32650 per animal.) then after rainy season i.e. (32170 per animal) and lastly in summer season i.e. (Rs 31830 per animal). Per cent of disposal to arrival is high in winter season i.e. (79.95) and low in season i.e. (69.49) respectively.

Table 4.6 Seasonal Variation in Arrival, disposal and average price of Buffalo during the period from 2009-10 to 2018-19

Sr.No.	Season	2009-2010				2010-2011				2011-2012				2012-2013				2013-2014				2014-2015			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	7213	6105	84.63	18500	6596	5591	84.76	20000	6912	5202	75.26	23500	6432	5230	81.31	27000	5824	4942	84.85	29000	5624	4450	79.12	43100
2	Winter	8005	6723	83.98	18900	7002	5972	85.28	20500	7842	6213	79.72	23900	7242	6248	76.27	27300	7002	5922	84.57	29300	6225	4998	80.28	43700
3	Summer	6524	5012	76.82	18000	6005	5027	83.71	19800	5520	4315	78.17	23100	5352	4375	81.74	26800	5002	4078	81.2	28700	5010	4092	81.67	42900
	Total	21742	17840	82.05	18466	19603	16590	83.62	20100	20274	15730	77.58	23500	19026	15853	83.32	27033	17828	14942	83.71	29000	16859	13540	80.31	43233

Sr.No.	Season	2015-2016				2016-2017				2017-2018				2018-2019				Overall			
		A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)	A	D	% of D to A	Av. Price (Rs)
1	Rainy	5123	4042	78.89	37000	3853	2942	76.35	31000	3472	2760	79.43	49800	3520	2335	66.33	42800	5456.9	4359.9	70.09	32170
2	Winter	6198	5002	80.7	3770	4553	3520	77.31	31200	3984	2860	71.78	51000	3942	2764	70.11	43000	6199.5	5022.2	79.95	32650
3	Summer	4523	3196	70.66	36700	3508	2668	76.05	30800	3240	2530	78.08	49000	3010	2028	67.37	42500	4771.4	3732.1	77.54	31830
	Total	15844	12240	77.25	37133	11914	9130	76.63	31000	10696	8150	76.19	49933	10472	7127	68.35	42766	16428	13114.2	79	32217

4.3) (a) Cost of marketing and price spread:

In cattle market, cost of marketing includes following services these are cost of preparation of animal for sale, transportation charges, and brokerage charges. Marketing cost is generally measured by the difference of prices received by its producers. Middleman play important role in cattle marketing due to the cost of marketing help to knowing the intermediary agencies interve between the producer and consumer. Details of the study of cot cattle marketing may help to suggest the way and means of reducing the same.

Preparation of animal for sale:

For getting better price in the market many sellers prepare the animal for sale that include washing the animal, grooming, coloring, decorticating the horns. Shaving for the buffalo but in some cases some of the owner do not take very little or no attention in all respects cost of preparation of animal is negligible.

Distribution of cost amount different Agencies:

In village level some of the owner they can sold cattle at village / or on the farm that 'way cost of distribution is nil. Due to this owner share in the price paid by the buyer is 100 %. In case of long distance from farm to cattle market various additional charges are required these are

a)Transport charges

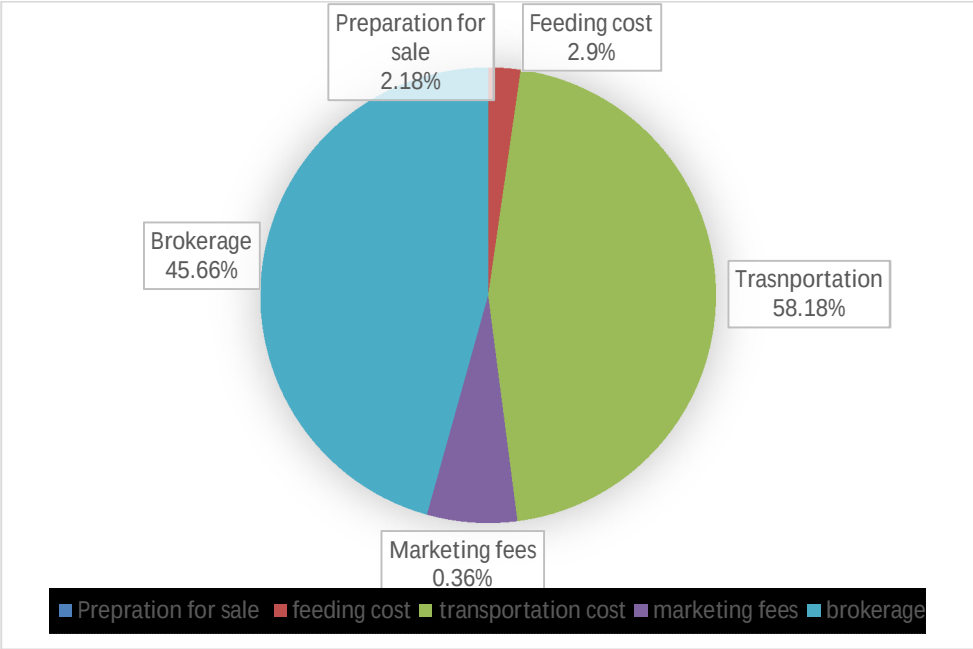
b) Market charges

c) Feeding charges

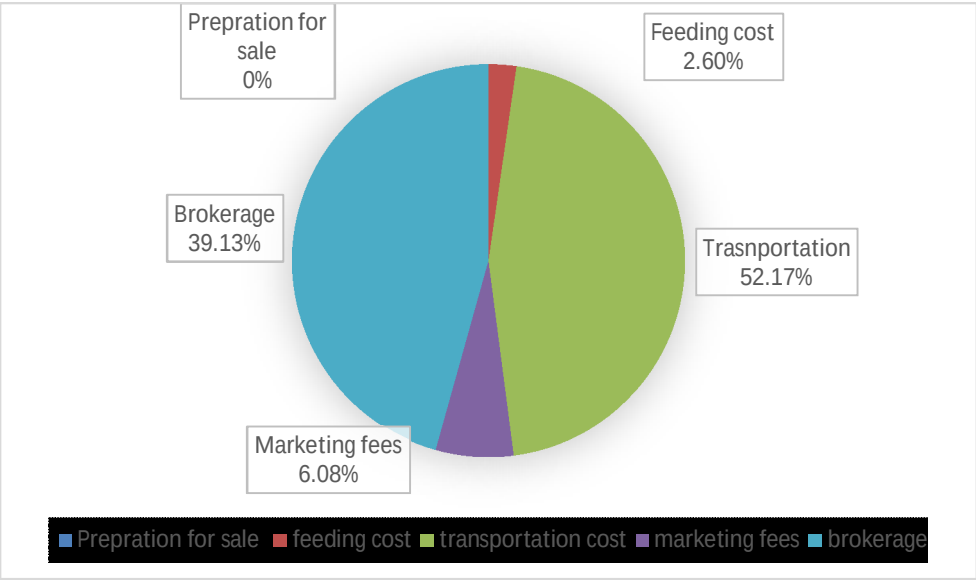
These charges are required to be paid both by the sellers and buyer. This information can collate form selected seller and buyer of different of animals. On the basis of data, per animal marketing cost has been incurred by seller and buyer on the above-mentioned cost items.

Table 4.7) – details of cost of marketing for different types of animal

Sr. no	Particulars	Kinds of Animal					
		Bullocks		Cow		Buffalo	
		Cost payable by		Cost payable by		Cost payable by	
		Seller	Buyer	Seller	buyer	Seller	buyer
1	Negotiated price of animal	25511	25511	12800	12800	20000	20000
2	Marketing cost						
a)	Preparation for sale	30.00 (2.18)	-	20.00 (2.09)	-	40.00 (2.87)	-
b)	Feeding cost	40.00 (2.90)	30 (2.60)	30.00 (3.14)	20.00 (2.83)	45.00 (3.23)	25.00 (2.28)
c)	Transportation cost	800.00 (58.18)	600 (52.17)	500 (52.35)	300 (42.55)	800 (57.55)	500 (45.66)
d)	Marketing fees	5.00 (0.36)	70 (6.08)	5.00 (0.52)	85.00 (12.05)	5.00 (0.35)	70.00 (6.39)
e)	Brokerage	500.00 (36.36)	450 (39.13)	400 (41.88)	300 (42.55)	500 (35.97)	500 (45.66)
f)	Total cost	1375	1150	955	705	1390	1095
3)	Sellers or buyer actual price	24136	26661	11845	13505	18610	21095

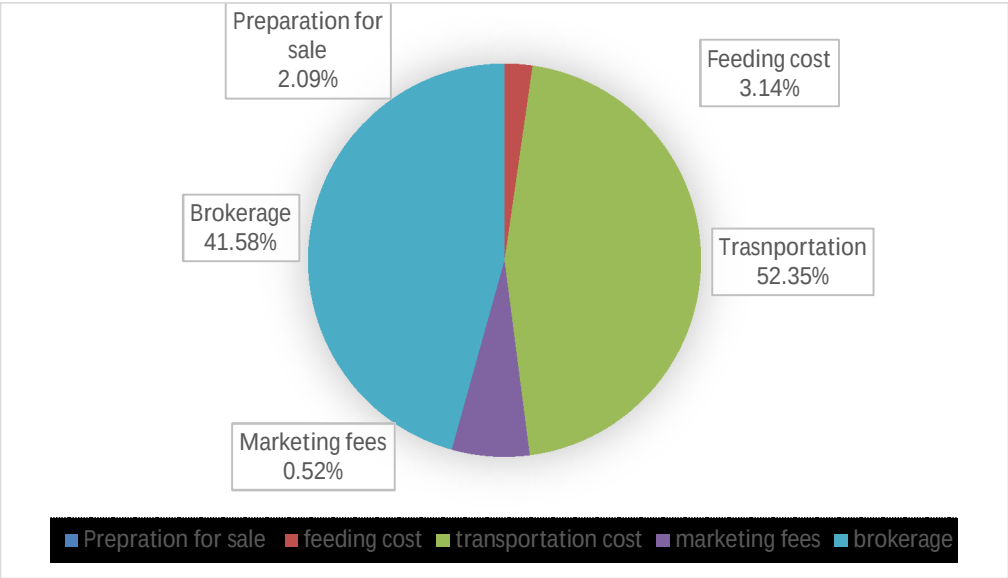


Bullock Rearer – seller

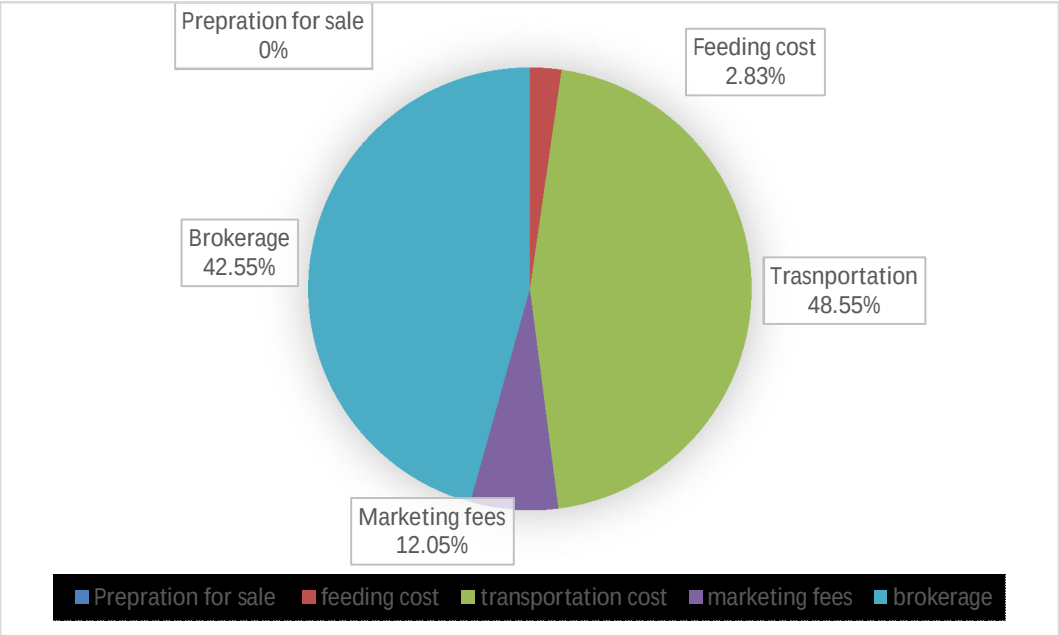


Bullock Rearer –Buyer

Fig 4.2: Share of different items of cost in the total cost and marketing of bullock by the bullock rearer as seller and farmer as buyer.

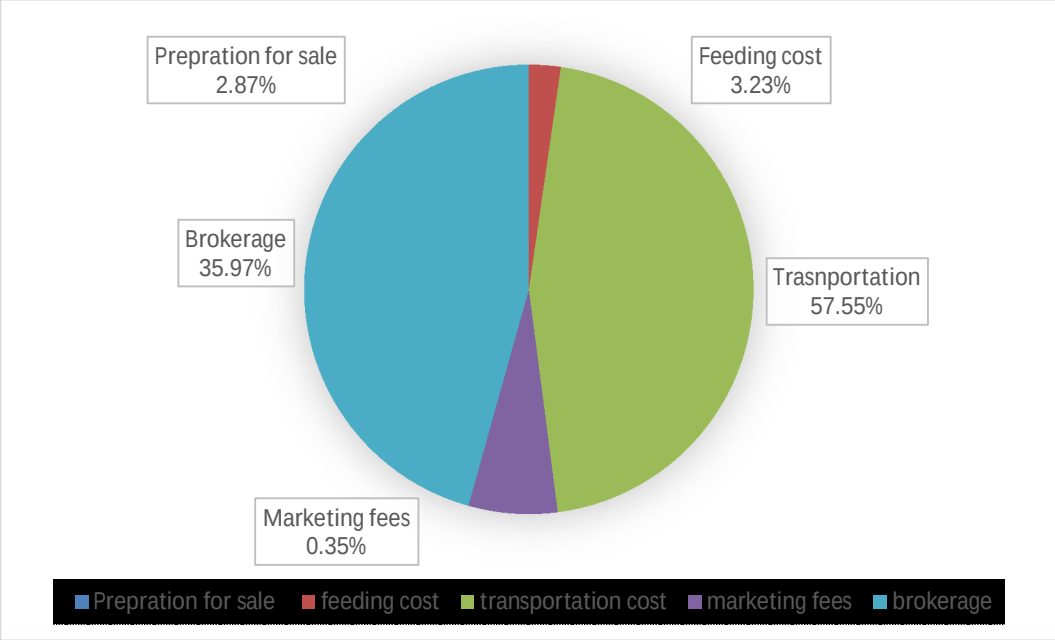


Cow rearer as –seller

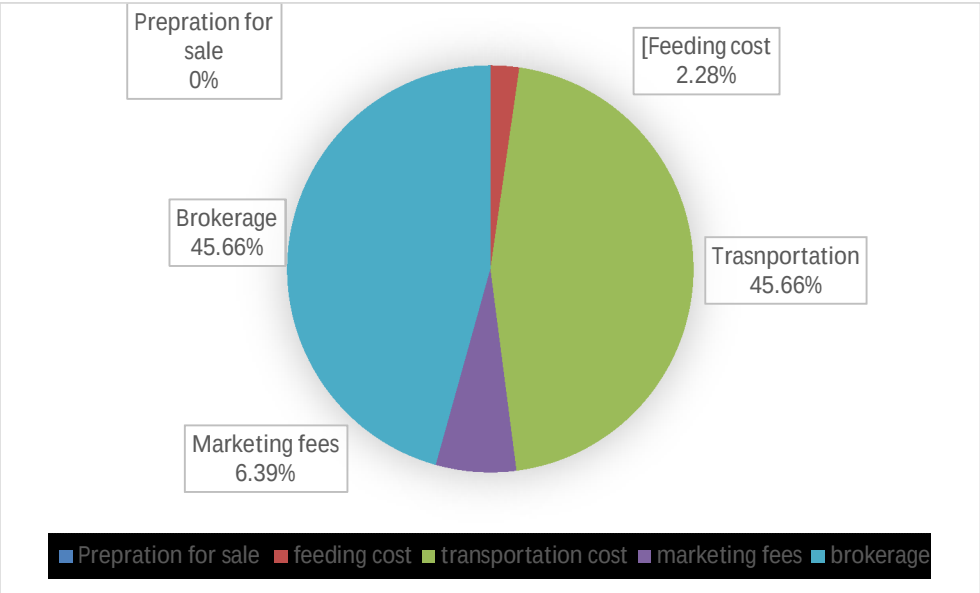


Cow Rearer – Buyer

Fig 4.3: Share of different items of cost in the total cost and marketing of cow by the cow rearer as seller and farmer as buyer.



Buffalo Rearer – Seller



Buffalo Rearer –Buyer

Fig 4.4: Share Different items of cost in the total cost of marketing of buffalo by the buffalo rearer as seller and farmer as buyer.

Above table shows that cost incurred on the preparation of animals for market was more or less same. It was 2.18, 2.09, and 2.87 per cent of total cost of bullock, cow and Buffalo respectively. In case of buffalo 2.87% of total cost for preparation for sale this is high as compared to bullock and cow. This is because the buffaloes are prepared for sale by washing, oil massage, shaving etc. feeding cost incurred by seller for bullock, cow, and buffalo was 2.90, 3.14, and 3.23% of the seller total cost respectively. Above table shows that feeding cost of the buffalo was comparatively high than another animal.

In total marketing cost transportation cost is major cost of the cattle marketing. Near about transportation cost was more or less same for all animals. Variation in the transportation cost occurred because distance to be covered from seller home to market place to the home of the buyer and time required to cover this distance.

Notable difference found in marketing fees. Market fees paid by the buyer and seller separately in case of all animals. This difference due to the seller has to pay only admission fee whereas the buyer has to pay all remaining charges that include attestation fees, market fees, supervision charges etc.

2) Transportation cost:

Transportation cost is major cost in total marketing cost. Transportation cost depends upon the distance. From seller village to the market. And market to the buyer village. Animal's rearer is mainly from the distant places, so they bring their animals for selling through trucks, tempos or any other vehicle etc.

2) Feeding cost:

Feeding cost include charges paid by the feeding and watering of the animal. Feeding cost of the seller start from the time they leave their village and ends after the animal handed over to the buyer. And feeding cost of buyer start from the time of taking the animals into possession till it reaches to his home.

3) Marketing charges:

Market committee fixed marketing charges. Marketing charges paid to both buyer and seller. Admission fee is pay by the seller. And attestation fee which varies according to the sale value of the animal

4) Brokerage

Broker play important role in cattle market brokerage charge depends upon the price of that animal. And broker gives charge from both seller and buyer. Sale value

of the animal to be paid by both buyer and seller separately. As transportation cost brokerage charge are near about same this is about brokerage.

4.3 (b) Price Spread of Different Animals:

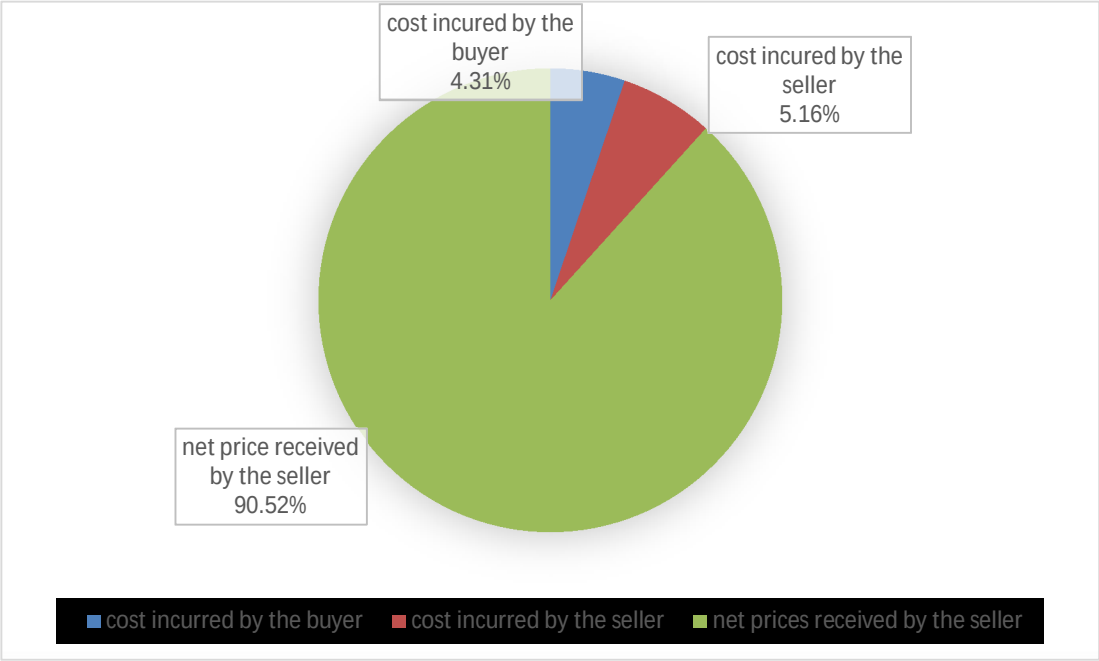
Due to the price spread it is important to knowing about the exact income or benefit received by the market intermediaries as well as producer / seller to the price received from final buyer form the following table it is to be clear that cattle owners share in general varied from 87.70 to 90.52% maximum share in case of bullock and minimum share in case of cow.

This variation is due to the different in price fetched by the respective animal in the market form the percentage of cost incurred by the seller have to spend proportional more than buyer in the marketing of animals. The reason is buyer are not required to spend any thing on items as like preparation of animals and at time on transportation also.

In case of percentage total intermediary charges paid both buyer and seller varies from 9.47 to 12.29 % showing there more contribution in the buyer price.

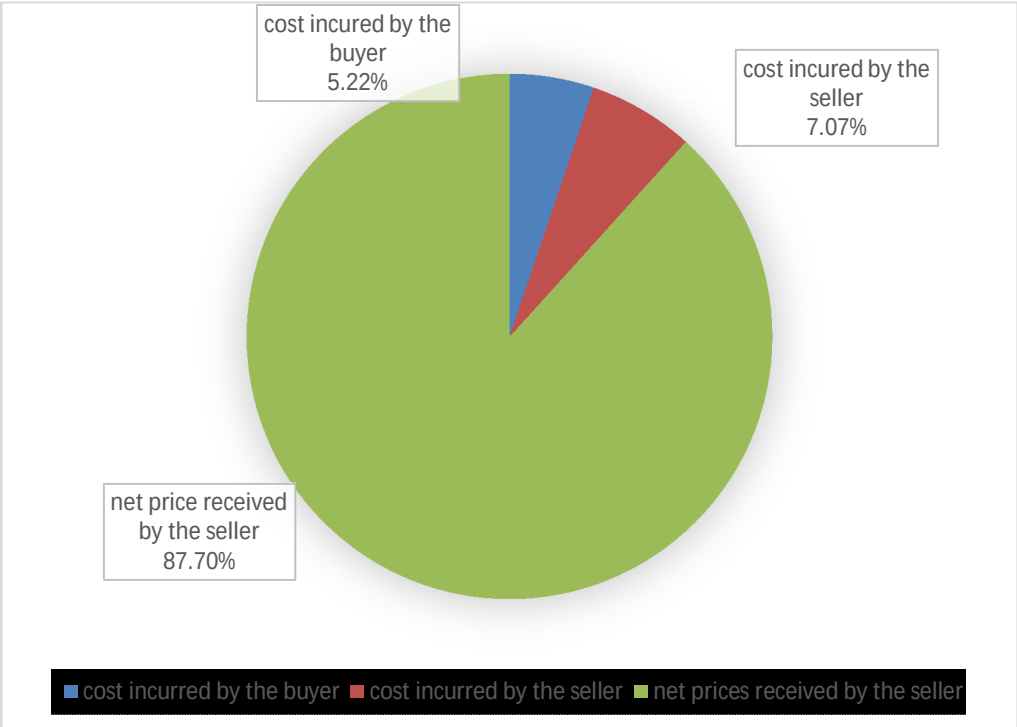
Table 4.8- Price spread of different kinds of animal

Sr. No	Particulars	Kind of Animals		
		Bullock	Cow	Buffalo
1)	Total price paid by the buyer	26661 (100)	13505 (100)	21095 (100)
2)	Cost Incurred by buyer	1150 (4.31)	705 (5.22)	1095 (5.19)
3)	Net price paid to seller	25511 (95.68)	12800 (94.77)	2000 (94.80)
4)	Cost incurred by seller	1375 (5.16)	955 (7.07)	1390 (6.5)
5)	Net price received by seller	24136 (90.52)	11845 (87.70)	18610 (88.21)
6)	Total intermediary charges	2525 (9.47)	1660 (12.29)	2485 (11.78)



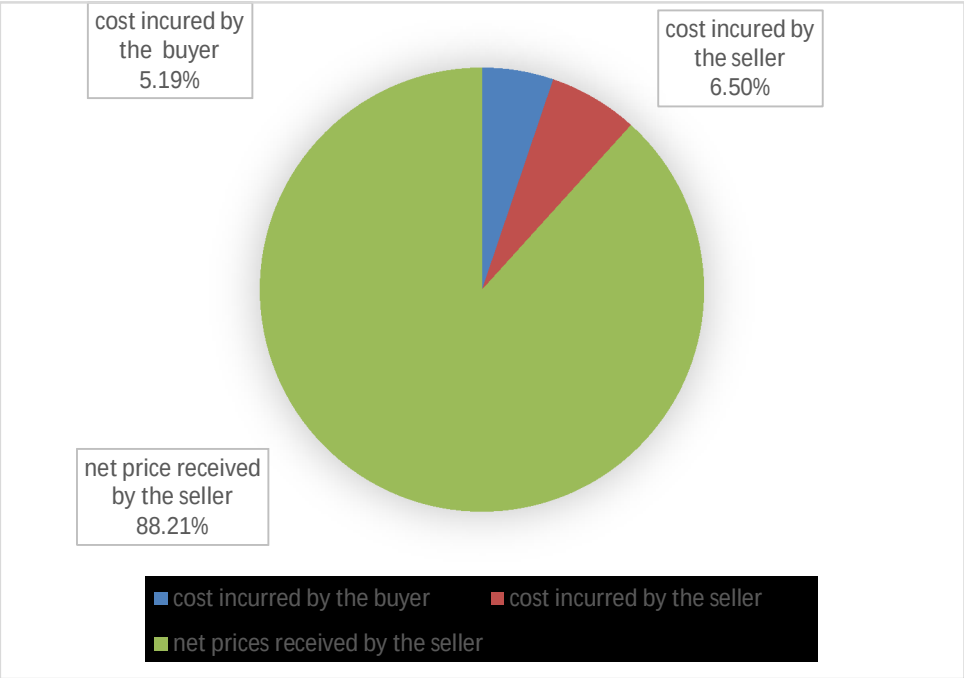
Bullock

Fig 4.5: price spread in marketing of bullock



Cow

Fig 4.6: price spread in marketing of cow.



Buffalo

Fig 4.7: price spread in marketing of Buffalo.

Plate. 4 Buyer judging the age of bullock.

4.4) Factors influencing prices of different animals

1) Factors influencing price of Bullock:

An attempt has been made to estimate the price function with four independent variables. Viz. Age (X_1), Breed type (X_2) and color of Bullock (X_3) by fitting multiple linear regression model to the data. The estimated multiple linear regression model for the seller is given below.

$P=10124.13-513.25^{**}X_1+1420.40^{**}X_2+230.15X_3$

(312.14) (825.15) (640.30)

(Figure in partheness indicates that standard error of respective regression coefficient.)

$R^2=0.7496$

**significant at 5 per cent level

*significant at 10 per cent level

The regression analysis revealed that 74% of total variation in the price of bullock has been explained together by age, breed type and colour. A positive and highly significant relationship was found between a colour breed and price of the bullock on the other hand significant but negative relationship was observed in price of bullock and age of bullock indicating decrease in the bullock price with the increase in age of bullock.

The value of regression coefficient indicates that with the increase in age of animal by one-year price of bullock decrease by Rs.513.25.

The multiple linear regression model for the buyer is given below.

$P=-9824.45-635.40^{**}X_1+1320.20^{**}X_2+150.60$

(290.15) (750.70) (510.30)

$R^2=0.7615$

**significant at 5 per cent level

*significant at 10 per cent level

The regression analysis result revealed that 76 per cent of the total variation in price of bullock has been explained together by age, breed and colour. A significant negative relationship between price o bullock and age of bullock indicating decrease in the bullock price with the increase in the age of bullock. The value of regression coefficient indicates that with the increase in bullock age by one-year price of bullock would decrease by Rs. 635.40.

2) Factors influencing the price of Buffalo:

The price of an individual buffalo at a point of time and place depends upon the several factors. Although the price settled is a result of some estimate of qualities of the animal, yet there is no standard scale which could estimate the quality point according to which prices may be fixed. An attempt has been made to estimate the price function with four independent variable Viz. average daily milk yield (x), age of buffalo (x), order of lactation (x) and stage of lactation (x) by fitting multiple regression to the data. The estimated multiple linear regression models for the seller is given below

$P=5614.14+530.20^{***}X_1-750.15X_2+180.20X_3+1260.30^{***}X_4$

(52.12) (330.20) (415.29) (51.28)

$R^2=0.8689$

The regression analysis result revealed that 86 per cent of total variation in price of buffalo has been explained together. A positive and highly significant relationship was found between average daily milk yield and price of buffaloes as well as stage of lactation and price of buffalo. On the other hand, a significant but negative relationship was observed in price of buffalo and age of buffalo indicating decrease in the buffalo price with the increase in the age of buffaloes.

The value of the regression coefficient indicated that with the increase in buffalo average daily milk yield by one liter, price of the buffalo would increase by Rs. 530.20., Similarly, with the increase in the age o buffalo by one year, price of buffalo would decrease by Rs. 750.15.

The estimated multiple linear regression models for the buyer is given below.

$P=4122.12+490.20^{***}X_1-317.12X2+105.1X_3+1153.20^{***}X_4$

(52.16) (266.50) (205.79) (49.80)

$R^2=0.9150$

***denote significant at 1 per cent level

(Figures in parentheses indicate standard error of respective regression coefficient)

The regression analysis results revealed that 91 per cent of the total variation in price of buffalo has been explained together. A positive and highly significant relationship was found between average daily milk yield and price of buffalo. As well as stage of lactation and price of buffalo. On the other hand. a significant but negative relationship was observed in price of buffalo and age of buffalo indicating decrease in the buffalo price with the increase in age of buffalo. The value of regression

coefficient indicates that with the increase in buffalo average daily milk yield by one liter, the price o buffalo would increase by Rs 490. 11. Similarly, with the increase in the age of buffalo by one-year price of buffalo would decrease by Rs. 317.12.

4.5- To Study the Constraints and Suggesting in Marketing of Cattle

General:

Constraints in marketing of different kinds of animal:

In Beed district cattle market and process of sale and purchase of the animals depends upon the type of market in Beed District cattle market seller, buyer and broker play important role in marketing of cattle. Constraints faced by these categories ware of deferent nature. Due to the regulated market several problems are faced by the above said categories. It is important to know the contract so as suggest the suitable remedies and imprudent to overcome the constraints. The details regarding constraints in encountered in marketing of cattle and different level are as follows.

Farmers / cultivators / sellers:

Constraints expressed while marketing of the animals by the farmer are presented.

In all of 60 farmers i.e. 30 sellers and 30 buyers more constraints are faced while at the time selling and purchasing of animal. Major constraints faced by seller and buyer are method of sell which is commonly known as Hatta or under cover method. In that method both buyer and seller are completely ignorant and both are not benefited they may be cheated by broker in fixing final price by negotiation. Other constrains faced by seller are inadequate market facility no guarantee of performance of animal, market fees are not well defined, no credit facility, brokerage charge are not fixed these are some constraint faced by farmer/ cultivators/ seller.

Table 4.9-Constraints of farmers in marketing of animal (seller and buyer)

Sr.No.	Particulars	No. of Farmer	Percentage (%)
1	Hatta Method of sale	55	91.66
2	Inadequate market facility	25	41.66
3	Brokerage charge are not fixed	15	25
4	Market fees not well defined	18	30
5	Insufficient time for transaction	12	20

Absence of inadequate market facilities included space for examining the animals, water supply, sheds and lodging facility to the buyer seller in the market.

Brokers:

As like the seller and buyer in the market, broker has faced some problem in cattle market. As like procedure is clumsy for getting a permission to become a authorized broker. They have to pass through long channel for getting the authorization also they have faced many problems at time of market. These are undefined sale process, customer experience, lead generation, work-flow efficiency, uncertainty in the market, new and emerging risk and cheating through seller and buyer.

Suggestion in marketing of cattle.

Seller suggestion:

It is important to know the contract so as suggest the suitable remedies and imprudent to overcome the constraints. Seller gives suggestion for better marketing of cattle. These suggestions are Increase the no. of buyer in the market due to this there will be great demand for cattle price. Then provides animal shed this suggestion is useful for seller for protecting the animal from sunlight. Then Reduce cheating through broker, some restriction on broker is needed. And lastly providing facility like road, water etc. These are some suggestion given through seller.

Buyer suggestion:

It is important to know the contract so as suggest the suitable remedies and imprudent to overcome the constraints. Buyer gives suggestion for better marketing of cattle. These suggestions are Increased size of the market this will be useful for select the good cattle in the market. Then provide the parking space near the cattle market, Increase the no. of seller in the market this will be helpful for selecting the animal in the market and provide banking facility near the market these are the suggestion given from the buyer.

Broker/ Middleman suggestion:

It is important to know the contract so as suggest the suitable remedies and imprudent to overcome the constraints. Broker gives suggestion for better marketing of cattle. These are Increase the no. of Buyer and seller in the market, providing the banking facility near the market, Develop the internal road in the market and providing parking space near the market.

SUMMARY AND CONCLUSION

5. SUMMARY AND CONCLUSION

Livestock play an important role in Indian economy. Due to the cattle market in Beed district they can provide thousands of employment opportunities in Ambajogai and Salegaon cattle market. Due to this study different aspect are knowing related to the cattle marketing. i.e. demand for sale, supply of, price trends and cost of marketing are known. Due to this study helps the producers for improving the economic prospects. And reducing the excess marketing cost. Due to this investigation study will be useful for Businessman engaged in the business activity.

There are 10 cattle market in Beed district controlled by different Gram panchayat and APMC.APMC, Ambajogai cattle market and Salegaon Gram panchayat cattle market was purposely selected for present study. APMC, Ambajogai cattle market shared 20% of total cattle transaction in Beed district. And Salegaon cattle market share 40% of cattle transaction Beed district. In the study 30 sellers, 30 Buyers, 30 Brokers was selected. For the relevant data for study their interview was taken on specific market day. Related to secondary data regarding Arrival, Disposal and prices of cattle for year 2009-10 to 2018-19 were collected from annual report of the market committee and through Gram panchayat. The data were compiled and analyzed for interpretation of result. In analysis of primary and secondary data, simple statistical tools are used. i.e. Average, Per-cent and multiple regression technique were used.

With this objective in view the investigation into “Economics of cattle marketing in Beed district.” Was undertaken for study. The objectives of investigation are as under.

1) To study the general trade practices in cattle marketing.
2) To estimate the trends in Arrival, disposal and prices of cattle.
3) To estimate the price spread in the cattle marketing.
4) To identify the factors influencing prices of cattle.
5) To study the constraints and suggestion in marketing of cattle.

Main finding of the study:

The Finding of the study are briefly summarized as below.

In case of general trade practices, in Ambajogai and Salegaon cattle market unfortunately cattle owners pay little attention to the preparation of animals for sale. In cattle market grading is not done according to color, weight etc. In cattle market there is uniformity among the stock presented for sale. Some cattle sellers to hide the physical defects of animal certain malpractices are adopted for example oiling and massaging the body, coloring etc. As like the broker other functionaries are involved i.e. bhangies, waterman for providing the water to thirsty animals and cleaning market premises. For unit of sale commodity 'per head', 'per pair' and 'per group' are sell. "Per head" unit is widely adopted in almost all the transaction. In case of slaughter per group are adopted. And in case drought animal, unit of per pair.

In case of Arrival, Disposal and prices of cattle, The Bullock power is the main source available as the farm power in the rural area. And Buffalo and Cow are maintained as supplier of milk. As regards the variation in Arrival, Disposal and prices of Bullock in the market, it was observed that the overall level of Arrival, Disposal and prices of Bullock high in summer season then after rainy and winter season respectively. As regards the variation in Arrival, Disposal and prices of cow in the market, it was observed that the overall level of Arrival, Disposal of cow is high in winter season then after rainy season. As regards to variation in Arrival, Disposal and prices of Buffaloes in the market, it was observed that at the overall level of Arrivals of Buffalo in winter season were higher than rainy and summer season.

In Ambajogai cattle market Overall level of Arrival of bullock is high in summer season i.e. (539.8) then after rainy season (408.2) and winter season (356.4) respectively. With regard to disposal as like arrival there will be high in summer season i.e. (270.8) then rainy season (215.7) and lastly in winter season i.e. (179.5) respectively. With regard to prices average price is high in summer season i.e. (Rs 21970 per animal.) then after rainy season i.e. (21150 per animal) and lastly in winter season i.e. (Rs 19910 per animal).

Overall level of Arrival of Cow is high in winter season i.e. (78.2) then after rainy season (66) and summer season (56.1) respectively. With regard to disposal as like arrival there will be high in winter season i.e. (52.5) then rainy season (42.2) and lastly in summer season i.e. (35) respectively. With regard to prices average price is

high in rainy season i.e. (Rs 20220 per animal.) then after winter season i.e. (19920 per animal) and lastly in summer season i.e. (Rs 19645 per animal).

Overall level of Arrival of buffalo is high in winter season i.e. (499.3) then after rainy season (377) and summer season (306.1) respectively. With regard to disposal as like arrival there will be high in winter season i.e. (347.2) then rainy season (277.3) and lastly in summer season i.e. (224.5) respectively. With regard to prices average price is high in winter season i.e. (Rs 32650 per animal.) then after rainy season i.e. (32170 per animal) and lastly in summer season i.e. (Rs 31830 per animal).

In salegaon cattle market, Overall level of Arrival of bullock is high in summer season i.e. (8508.1) then after rainy season (7405) and winter season (6711.8) respectively. With regard to disposal as like arrival there will be high in summer season i.e. (6272.8) then rainy season (5873.2) and lastly in winter season i.e. (5332.7) respectively. With regard to prices average price is high in summer season i.e. (Rs 21970 per animal.) then after rainy season i.e. (21150 per animal) and lastly in winter season i.e. (Rs 19910 per animal).

Overall level of Arrival of Cow is high in winter season i.e. (6563) then after rainy season (5613.9) and summer season (4894.9) respectively. With regard to disposal as like arrival there will be high in winter season i.e. (4933.8) then rainy season (4383.8) and lastly in summer season i.e. (3794.7) respectively. With regard to prices average price is high in rainy season i.e. (Rs 20220 per animal.) then after winter season i.e. (19920 per animal) and lastly in summer season i.e. (Rs 19645 per animal).

Overall level of Arrival of buffalo is high in winter season i.e. (6199.5) then after rainy season (5456.9) and summer season (4771.4) respectively. With regard to disposal as like arrival there will be high in winter season i.e. (5022.2) then rainy season (4359.9) and lastly in summer season i.e. (3732.1) respectively. With regard to prices average price is high in winter season i.e. (Rs 32650 per animal.) then after rainy season i.e. (32170 per animal) and lastly in summer season i.e. (Rs 31830 per animal).

In case of marketing cost, Notable difference exists in the market fees paid by the buyer and seller separately. This is due to the reason that the seller has to pay only admission fees whereas the buyer has to pay attestation fee, market fees, supervision charges etc. However, the percentage expenditure incurred on this account, it is considered separately for class of buyers and sellers done. In the total cost of

marketing, transport cost and Brokerage cost is comparatively very high than other items of marketing cost.

In case of price spread, the percentage share of cattle owner in the final price paid by the buyer varied from 86% to 91%. The maximum share (90.52) per cent in case of Bullock and minimum share (87.70) percent in case of Cow. The percentage total intermediary charges paid both by buyers and seller varies from 9.47 to 12.29 %.

In case of factors that effects on price, the regression analysis of seller revealed that 74% of total variation in the price of bullock has been explained together by age, breed type and colour. A positive and highly significant relationship was found between a colour breed and price of the bullock on the other hand significant but negative relationship was observed in price of bullock and age of bullock indicating decrease in the bullock price with the increase in age of bullock. The value of regression coefficient indicates that with the increase in age of animal by one-year price of bullock decrease by Rs.513.25.

The regression analysis of buyer result revealed that 76 per cent of the total variation in price of bullock has been explained together by age, breed and colour. A significant negative relationship between price o bullock and age of bullock indicating decrease in the bullock price with the increase in the age of bullock. The value of regression coefficient indicates that with the increase in bullock age by one-year price of bullock would decrease by Rs. 635.40.

The regression analysis of seller result revealed that 86 per cent of total variation in price of buffalo has been explained together. A positive and highly significant relationship was found between average daily milk yield and price of buffaloes as well as stage of lactation and price of buffalo. On the other hand, a significant but negative relationship was observed in price of buffalo and age of buffalo indicating decrease in the buffalo price with the increase in the age of buffaloes. The value of the regression coefficient indicated that with the increase in buffalo average daily milk yield by one liter, price of the buffalo would increase by Rs. 530.20., Similarly, with the increase in the age o buffalo by one year, price of buffalo would decrease by Rs. 750.15.

The regression analysis of Buyer results revealed that 91 per cent of the total variation in price of buffalo has been explained together. A positive and highly significant relationship was found between average daily milk yield and price of buffalo. As well as stage of lactation and price of buffalo. On the other hand. a

significant but negative relationship was observed in price of buffalo and age of buffalo indicating decrease in the buffalo price with the increase in age of buffalo. The value of regression coefficient indicates that with the increase in buffalo average daily milk yield by one liter, the price o buffalo would increase by Rs 490. 11. Similarly, with the increase in the age of buffalo by one-year price of buffalo would decrease by Rs. 317.12.

In case of constraints, the main constraints faced by the farmer were method of sale which is commonly known as Hatta method of sale (91.66%). As like other is Inadequate market facility (41.66%) and in sufficient time for dealing (20%). As like seller Broker has also face some constraints that is procedure to become authorized broker, they have to go through long channel for getting authorized (60%).Then undefined sales process (20%), Uncertainty in the market (20%), and Lead generation (15%). etc.

In case of suggestion, Seller, Broker and buyer gives suggestion regarding marking of cattle. Seller gives suggestion for better marketing of cattle these are Increase the no. of buyer in marketing of cattle. And some restriction on broker. As like seller buyer also gives suggestion these are Increase the size of the market then providing the parking space near the market and provide the banking facility near the market. Broker suggestion regarding marketing of cattle is Increase the no. of buyer and seller I the market then develop the internal road in the market.

Conclusions

Bullock power is one of the sources of farm power available on the farm in the area because of which bullock have great demand in the Beed district. Buffalo are considered as suppliers of milk in the study area. So, there is a great demand for Buffalo throughout the year in the market. There is greater demand for Buffalo in Ambajogai cattle market. In case of milk animals there is great demand for Buffalo than Cow. There is greater demand for Bullock in Salegaon cattle market.

In the total marketing cost, preparation cost accounted to be the highest in case of Buffalo followed by Bullock and Cow respectively. The transportation cost was more or less same of all categories of animals. Brokerage charge also paid both the Buyer and Seller. The cattle owner's share in general varied from 86 to 91 % to the total price paid by the Buyer. The maximum share (90.52%) in case of Bullock and minimum share (87.70%) in case of Cow. On an average percentage share of intermediaries in the Buyer's price was 11.18 %.

The price of millch animals were influenced by daily milk yield, age and order of lactation. In case of draft animals' prices are influenced by characters like Age, color, Breed type.

The people in area faces many problems regarding marketing of cattle like method of sale, Inadequate market facility, no well-defined market fees, insufficient time for dealing and procedure to become authorized broker.

Policy implication:

1) APMC required attention to make the easy procedure to the broker for making authorized broker.
2) APMC and gram panchayat does not give special attention towards the cattle marketing, that's way they have to need separate market committee on the basis of no. of arrival of cattle in the market.
3) APMC and Gram panchayat meager facility like parking space, shed, rest house. Due to these types of addition of facility more seller and buyer are attracted in the market.
4) Give some restriction on broker for their activity and fixed brokerage charges are required per cattle.
5) In cattle market buyer paid more tax than the seller that's way need a revision by the market committee.
6) To stop the undercover method of sale is essential because both buyer and seller are in completely dark.

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6. LITERATURE CITED

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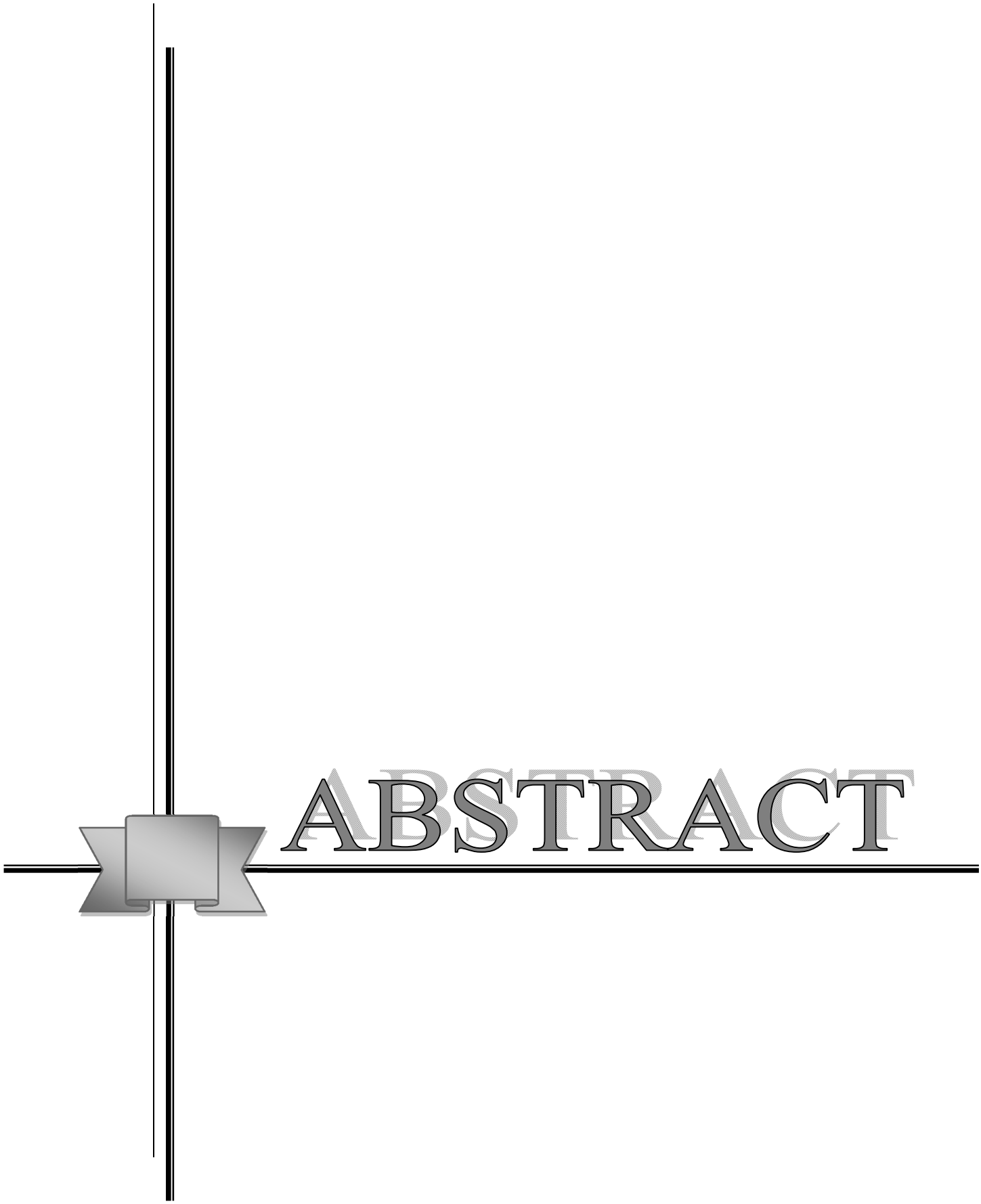

ABSTRACT

ABSTRACT

ECONOMICS OF CATTLE MARKETING IN BEED DISTRICT OF MAHARASHTRA

By

Mr. THOMBRE VISHWAS SHANKARRAO

A Candidate for the degree

Of

MASTER OF SCIENCE (AGRICULTURE)

In

AGRICULTURAL ECONOMICS

Vasantrao Naik Marathwada krushi Vidhyapeeth, Parbhani

Research Guide	:	R. D. Shelke, Associate Professor.
Department	:	Agricultural Economics

The present investigation was intended to depict economics of cattle marketing in in Beed district of Maharashtra. The main objectives of the study were to study the general trade practices in cattle marketing to estimate the trends in Arrival, disposal and prices of cattle, price spread in the cattle marketing, to identify the factors influencing prices of cattle. And study the constraints and suggestion in marketing if cattle. The APMC, Ambajogai and Gram panchayat Salegaon was purposely selected for the present study on the basis of highest cattle transaction in Beed district. The study was based on the quantitative information pertaining to the year 2009-10 to 2018-19 collected by contacting 30 sellers, 30 buyers and 30 brokers.

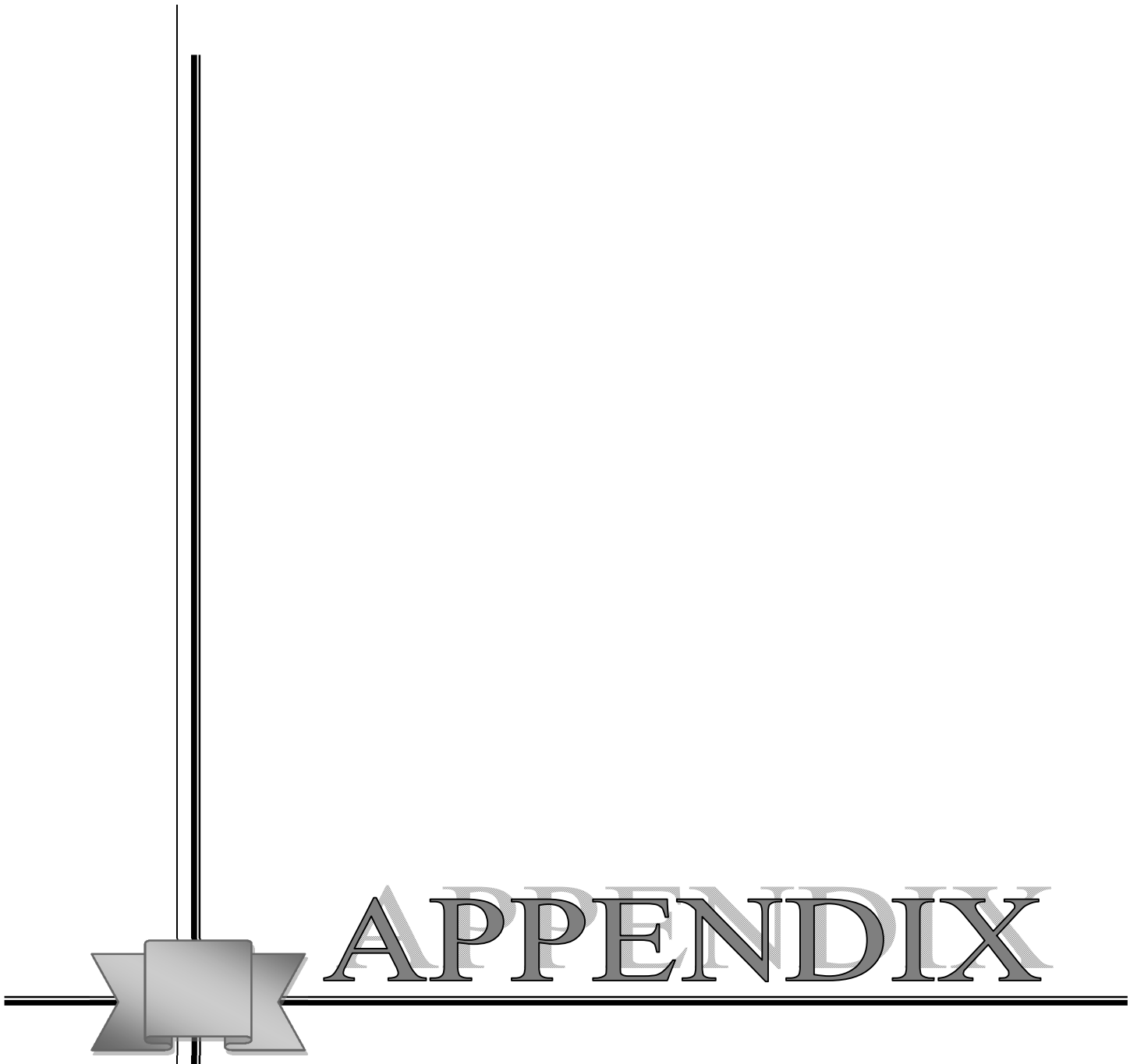
The secondary data for the year 2009-10 to 2018-19 on Arrival, disposal and prices of cattle were also collected from the annual report of Ambajogai market and Salegaon cattle market. The data were compiled and analyzed for interpretation of results with help of both tabular and functional method of analysis.

The data related to geographical features and land utilization pattern, cropping pattern etc. were collected from secondary sources. The result of the study revealed

that existing marketing channel observed in the cattle market are farmer(seller)-farmer (buyer), farmer (seller)- cattle farmer (buyer), farmer (seller)- cattle farmer (buyer) and cattle farmer (buyer)- farmer (seller).

Most of the livestock rearer paid very little attention to the preparation of cattle for sale. In order to hide physical defects various malpractices are adopted. By the sellers for getting the higher prices. “Per head” unit of transaction in animal’s price agreement took place by negotiation undercover method and mostly through brokers. In the total cost of marketing, Transport cost and Brokerage cost is comparatively very high than others items of marketing cost.

The per cent share of cattle owner in the final price paid by the Buyer varied from 86% to 91%. The maximum share (90.52) per cent in case of Bullock. And minimum (87.70) per cent in case of Cow. The per cent age total intermediary charges paid both by buyers and Sellers varies from 9.47 per cent to 12.29 per cent.


APPENDIX

APPENDIX: 1

TITLE: ECONOMICS OF CATTLE MARKETING IN BEED DISTRICT OF MAHARASHTRA

1] Questionnaire for seller of animal

1. Name of the market :
2. Name of the seller :
3. Native Place :
4. Distance from the market :
6. Occupation : Farmer/ Animal rarer
7. Resource for sale of animal/ animals:
   I. Financial difficulties
   ii. Fodder Problem
   iii. Sale dry animal
   iv. Defective animal
   v. Old age animal
   vi. Resale
8. Day on which an animal/animal is/ are brought in the market.
   Day of bazaar / previous day of bazaar.
9. Method of bringing animal / animals to the market:
   By bullock cart / Road / By truck / Other
10. Did you bring an animal / animal
    By yourself: Yes / No.
    If not, labour or vehicle charges paid : Rs…….
11. Have you brought Kadabi of your own for an animal/ animal? Yes /No
12. Price of Kadabi : Rs……
13. How many times did you bring an animal / animal before this?
    Once / Twice / Thrice / more than three times.

14. Price of animal / animals sold

Sr. No	Animal	Price (Rs)
1	Animal I	
2	Animal II	
3	Animal III	
4	Animal IV	
	Total price (Rs)	

15. Description of animal sold.

Sr. No	Animal	Breed	Age	Average dairy milk yield (lit)	Dry / Pregnant	Order of lactation (No.)	Stage of lactation (no.)	Stage of lactation (Months)	Quality good / Average / low
1	Animal I								
2	Animal II								
3	Animal III								
4	Animal IV								

16. Through whom you sale your animal? Self / through broker

17. Did you give guarantee of milk yield of animal at the time of sale Yes / No

18. Have you given guarantee of accepting animal in the event of any defect in Future yes/ No?

19. Expenses incurred on selling a animal

I. Preparation for sale : Rs. ……

ii. Feeding : Rs. ……...

iii. Transportation : Rs. …….

iv. Entrance Fee : Rs. …….

v. Dalai / Brokerage : Rs. ……

vi. Expenses on travel, meal etc. : Rs. ……

20. What are the different factors influencing prices of animals?

i) ……

ii) ……

iii) ……..

21. What did you tell about marketing management of animals?

i) …….

ii) ……

iii) ……...

22. Which improvement will you suggest for better marketing management of animals?

i) ……..

ii) …….

iii) ……

Constraints:

1. _____
2. _____
3. _____
4. _____

Suggestions:

1. _____
2. _____
3. _____
4. _____

II. Questionnaire for buyers of animals.

1. Name of the market :
2. Name of the Buyer :
3. Native Place :
4. Distance from the market :
6. Occupation : Farmer/ Animal rearer
7. Resource for sale of animal/ animals:
   (1) Guaranteed animal for cheap in price:
   (2) Purchase of dry animals for earning profits in future
   (3) Ample availability of fodder
   (4) Resale.
8. Through whom you sale your animal?

   Self / through broker/through trader
9. Traders Charges : Rs. ……
10. Brokerage (Dalali) : Rs. ……
11. Description of an animal / animals purchased.

Sr. No	Animal	Breed	Age	Average dairy milk yield (lit)	Dry / Pregnant	Order of lactation (No.)	Stage of lactation (no.)	Stage of lactation (Months)	Quality good / Average / low
1	Animal I								
2	Animal II								
3	Animal III								
4	Animal IV								

12. Whether purchased on cash or credit?

    Cash /Credit
13. If purchased on credit then period of payment? …….....

14. Price given for purchased animal / animals?

Sr. No	Animal	Price (Rs)	
		Cash	Credit
1	Animal I		
2	Animal II		
3	Animal III		
4	Animal IV		
	Total price (Rs)		

15. Expenses incurred on selling a animal

i. Feeding cost : Rs.……

ii. Market fee : Rs. ……...

iii. Transportation cost : Rs. …….

iv. Supervision fee : Rs.…….

vi. Attestation fee : Rs. …….

v. Dalali / Brokerage : Rs. ……

vi. Expenses on travel, meal etc. : Rs. ……

16. What are the different factors influencing prices of animals?

i) ……

ii) ……

iii) ……..

17. What did you tell about marketing management of animals?

i) …….

ii) ……

ii) ……

Constraints:

1._____

2. _____

3._____

4._____

Suggestions:

1.

_____

2.

_____

3.

_____

4.

_____

III. Questionnaire for the broker or Dalal.

1. Name of the market :
2. Name of the Broker :
3. Native Place :
4. Distance from the market :
6. Occupation : Farmer/ Animal rearer
7. Period of business : ----------Years.
8. Do you attend every market day? Yes / No
9. if not, then give the period of absence.
10. As a broker, what are your duties?
    i. Price negotiate
    ii. Watching the animals
    iii. To give guarantee
    iv. To sale on credit
    v. To make payments
    vi. Others
11. Which are the methods of negotiation of prices of animals?
    i. Open auction method
    ii. By undercover (hatta)
    iii. Adjusting Prices
    iv. Others
12. What are the brokerage charges per animal?
    i. Minimum Rs. ……..
    ii. Maximum Rs. ……..
13. How much do you get at each market day?
    i. Minimum Rs. ……..
    ii. Maximum Rs. ……..
14. How much do you earn as a broker per year?
    i. Minimum Rs. ……..
    ii. Maximum Rs. ……..
15. At the time of negotiation, are you need help of other broker? Yes / No
16. If yes, then nature of help?

17. Do you work for known persons or for all?

For known persons only/ for all.

18. How the brokerage charges are decided?

_____

_____

_____

_____

19. Is the ……permission of market committee to this business

Yes / No

20. If yes, then how much you have to pay for licence fee? Rs.

21. When are you getting brokerage charges?

Before transaction / after transaction

22. Difficulties faced by you as a broker?

i. _____

ii. _____

iii. _____

23. What did you tell about marketing management of animals?

_____

_____

Constraints:

1) _____

2) _____

3) _____

4) _____

Suggestions:

1) _____

2) _____

3) _____

4) _____

APPENDIX: 2

MARKETING OF CATTLE

1] General Information:

Marketing channel	Name of Marketing Channel	Name of Market	Distance (km)
Channel – I			
Channel – II			
Channel – III			
Channel-IV			
Channel-V			

2] Marketing cost incurred by Producer:

Sr. No	Item of cost	Unit	Qty.	Channel-I	Channel-II	Channel-III	Channel-IV	Channel-V
1.	Labour charge							
2.	Transport charge							
3.	Fodder charge							
4.	Market fee							
5.	Other							
	Total							

3] Marketing cost incurred by Slaughter house/ Merchant:

Sr.No.	Item of cost	Unit	Qty.	Channel- III	Channel-IV	Channel-V
1.	Labour charge					
2.	Transport charge					
3.	Fodder					
4.	Water					
5.	Market fee					
6.	Other					
	Total cost					

4] Marketing cost incurred by Trader:

Sr. No.	Item of cost	Unit	Quantity	Channel- V
1.	Labour charge			
2.	Transport charge			
4.	Fodder			
5.	Water			
6.	Market fee			
8.	Other			
	Total cost			

5] Price paid by consumer:

APPENDIX: 3

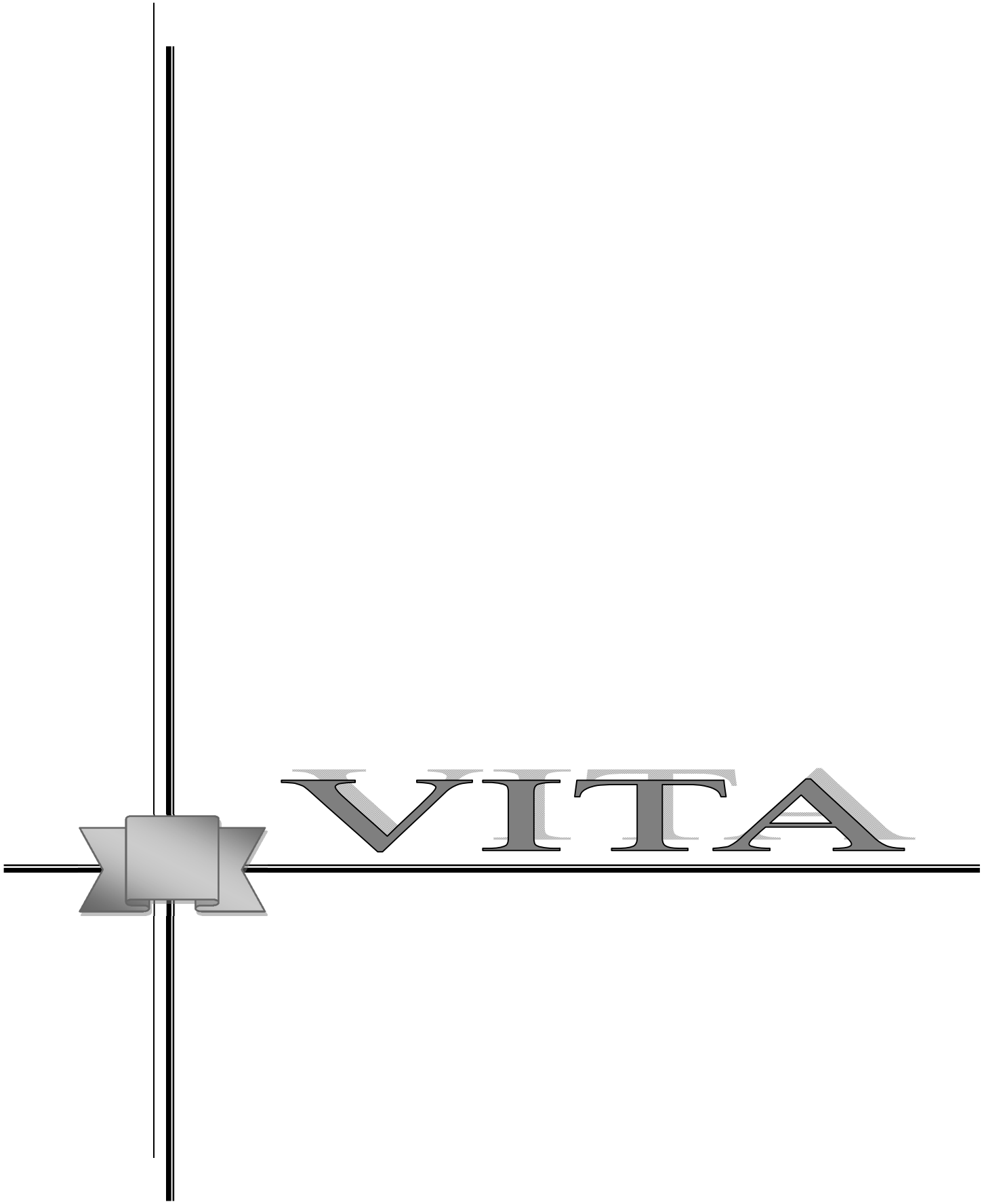
Market charges, No. of permitted traders and their annual per head fee and No. of licensed brokers and their license fee in APMC, Ambajogai and Gram panchayat Salegaon.

1. Market charges

a) Entrance fee/ animal- Rs 5.00
b) Market fee- 10 % of the price of the animal.
c) Supervision fee- 10 Paise per 100 rupees price of animal
d) Attestation fee- Rs 1.00 per animal
e) Drinking water charges- Rs 5.0 per animal

2. No of permitted brokers- 55

a) Stam fee- Rs 25.00
b) Form fee- Rs 5.00
c) Annual fee- Rs 50.00
d) Late fee- Rs 10.00


VITA

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Of
MASTER OF SCIENCE (AGRICULTURE)

In

AGRICULTURAL ECONOMICS

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● **Major field** : Agricultural Economics

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