

Final

Exploring dynamics of small ruminant meat market

Abetting livestock keepers: findings from Ajmer, Rajasthan



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We hope you find this documentation useful and it contributes to helping people deal with "marketing of meat" in a manner that the small livestock producer gains to benefit, and that the consumer is assured of quality produce.

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CHAPTER-1

Introduction

Background

The total value of livestock products has been increasing over the past few decades. However, dairy and poultry are considered as high growth sectors. Small holder producers are generally not part of these sectors. Absence of a pro-poor policy, non-inclusiveness of small holder producers and growing complexity of value chain might further marginalize the small holder producers. With this as background, Rainfed Livestock Network (RLN) proposed a micro-level study to understand the dynamics of village level animal markets (especially for meat) focusing on small-ruminants.

The study is undertaken as part of the RLN and the same is anchored by Foundation for Ecological Security (FES), Anand, Gujarat. It examines the marketing of meat with specific focus on small ruminants and, in this context; the case of 'Ajmer catchment' as an area in central Rajasthan has been identified and discussed from a multi-stakeholder perspective and standpoint but, nevertheless, keeping the livestock keepers at the centre of it all.

Context

Indian Meat industry registered an annual growth of more than ten percent since 1990-91 with the unorganized sector accounting for a major share. Maharashtra, Andhra Pradesh, Uttar Pradesh, Bihar, West Bengal, Karnataka, Rajasthan & Punjab are major producing states of meat in India. Small ruminants account for a major share of the meat production. Slaughter rate for cattle as a whole is 1.37%, for buffaloes it is 3.54%, sheep 29.02% and 34.08% for goats in the year 2007-08 (Halal in India, 2010). The rate of goat meat production (18.6 per cent) in 1997-2007 was double the production rate (9.3 per cent) in the previous decade. Despite a steady increase in supply, goat meat prices are continuously rising (Kumar Sambhav, 2010).

In Rajasthan, more than 80% rural families keep livestock in their households. Rearing of goats and sheep is an important activity among the farmers in Rajasthan. Generally, the farmers integrate small ruminants in their farming system and take keen interest in managing their local stock. It is observed that the number of sheep and goats increased between 1951 and 2003 by 87% and 202% respectively. Between 2003 and 2007, the number of goats increased by about 28% (highest increase among all the livestock categories in Rajasthan) and sheep increased by about 11% (18th Livestock census, 2007). Therefore, small ruminants, both sheep and goats, are gaining more in importance as one of the key source of income for the rural poor in Rajasthan.

Small ruminants are an important income source especially in the central and western parts of Rajasthan. The type of animals owned, though, varies in terms of species and breed. Goats are more predominant in the central part, which is mainly semi-arid region comprising of districts that are part of Ajmer division. Sheep dominate in the arid region, i.e. western parts of Rajasthan comprising of districts in Jodhpur division.

The study covers the traditional local markets and new emerging ones that cater to and serve urban areas. It also assesses opportunities and threats to small-scale livestock keepers or producers in the context of produce-supply chain.

To this end, the overall objective of the study is to gather a complete understanding on small ruminant animal trade (especially for meat) both at the village level and/or at the traditional animal markets with a view to identify key interventions for policy advocacy and programmatic action in

order to increase economic returns to small holder producers. And, in this context, the specific objectives of the study are to:

- identify the dominant market channels in the study area; and
- estimate marketing costs, margins, price spread and marketing efficiency.

Market channels, in selected villages, are examined starting from the producers (i.e. the animal keepers and/or those engaged in rearing the animals) and going all the way up to the major trading centers in the region covered under this study.

In terms of geographical spread, the study covers Ajmer district as a whole and some adjoining parts of its neighbouring districts and, therefore, such an area has been termed as the 'catchment' for the purpose of this study.

Methodology

The methodology developed and applied during the course of the study includes information collation from various sources, selection of villages and sample households, identification of traders and butchers for collecting primary information, data compilation and analysis. Indeed, primary information / data were generated through structured and semi-structured interviews and focus group discussions at various levels (community at large and animal keepers, traders and butchers in particular).

Selection of villages

Initially, the Principal Investigators undertook a reconnaissance of Ajmer and the catchment area. Based on the interactions with the practitioners i.e. small-scale livestock keepers and the various traders, the catchment area was delineated into mainly five circles, namely:

- Deogarh-Bhim-Asind-Shahpura (SR 1)
- Merta-Parbatsar-Roopangarh-Kishengarh (SR 2)
- Shrinagar-Arain-Nasirabad-Bhinai-Sarwad (SR 3)
- Beawar- Masuda-Bhim (Rajsamand) (SR 4)
- Raipur-Sojat-Nimaj (Pali) - Parts of Beawer Tehsil (SR 5)

Representative villages from each circle were selected for undertaking interviews of the households, traders and butchers. A total of 450 households, 39 traders and 30 butchers were interviewed.

Collection of information / data

The study is based on secondary information from various sources as well as primary information at the household level. Semi-structured focus group discussions were conducted in order to understand the structure of the markets in the selected villages. Primary information was generated through structured household interviews for selected households, traders and butchers involved in the trade of animals. Appropriate set of questionnaires were used for systematic collection of data.

Data analysis

The collected data has been compiled through appropriate data entry formats and cleaned before it was processed. This was followed by tabulation and analysis of data. The analysis includes descriptive statistics for generating profiles of the different actors and their access to markets.

The analysis also includes quantification of market costs and related margins. The gross market margin has been worked out by subtracting the net price received by the producer farmer from the effective price paid by the ultimate buyer (in this case the selling price at the respective *mandis*). The effective price means the purchase price plus the marketing cost.

Marketing efficiency has been calculated using the Shepherds' formula (Shepherd, 1965) given by:

$$ME = (V/I) - 1$$

Where,

ME = Index of marketing efficiency

V = Value of the animal at ultimate buyer's level

I = Gross marketing cost

Process

A participatory approach was followed together with NGOs, livestock development practitioners and community members (goat/ sheep owners, small traders and large traders operating in Ajmer *bakra mandi*) to select villages and design questionnaires for the study. The various set of questionnaires designed were pre-tested, in the field, by the investigators and, consequently, were suitably modified (as appropriate) before these were finalized.

Some five field investigators were engaged and hired to conduct the survey in selected sample villages. A two days residential orientation-cum-training programme for the field investigators was carried out and, subsequently, each one of them were assigned specific villages on a sub-region basis. Later, a one day review meeting of the field investigators was held with a view to undertake mid-course corrections and to steer the study in the right direction.

The study team took logistical support and assistance of local field NGOs in order to organize and conduct focus group meetings as well as carry out interviews with selected sample households. In addition, the Principal Investigators also participated in several focus group discussions and meetings with the local communities.

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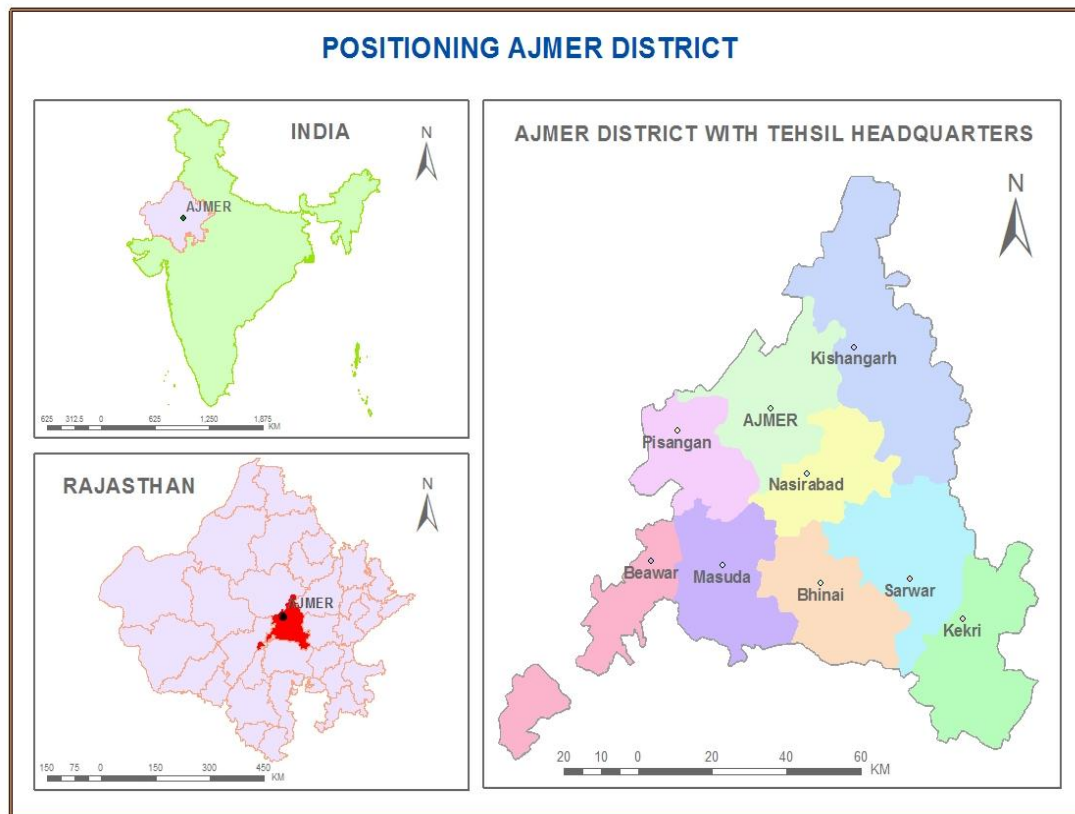
CHAPTER-2

Ajmer Bakra Mandi

The major actors and the process of market operations at 'Ajmer *mandi*' (or market yard) are described and discussed in this chapter.

Introduction

The 'Ajmer Bakra Mandi' has been in existence since early 1950's. At present, the *Ajmer Bakra Mandi* is located on Ajmer-Beawar road (NH-8) on the outskirts of Ajmer town. The *mandi* is operational twice a week (i.e. on every Tuesday and Saturday) and, therefore, is working for eight days a month.



Map 2.1: Location map.

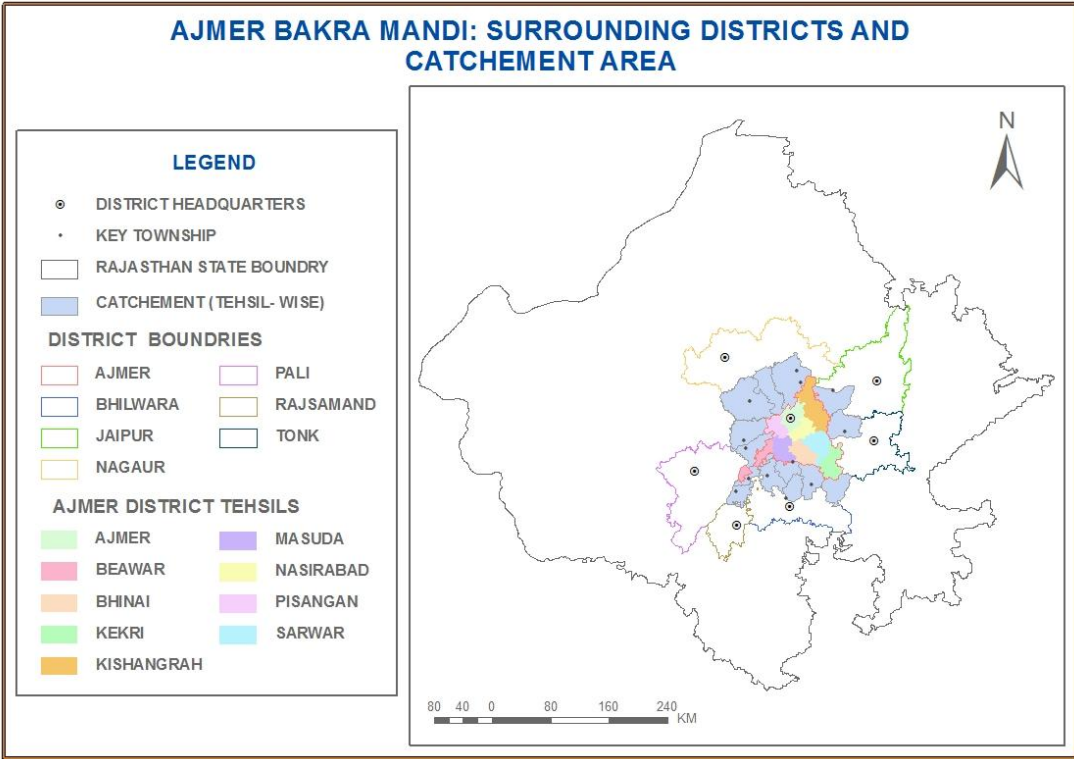


Plate 1 : Ajmer Bakra Mandi

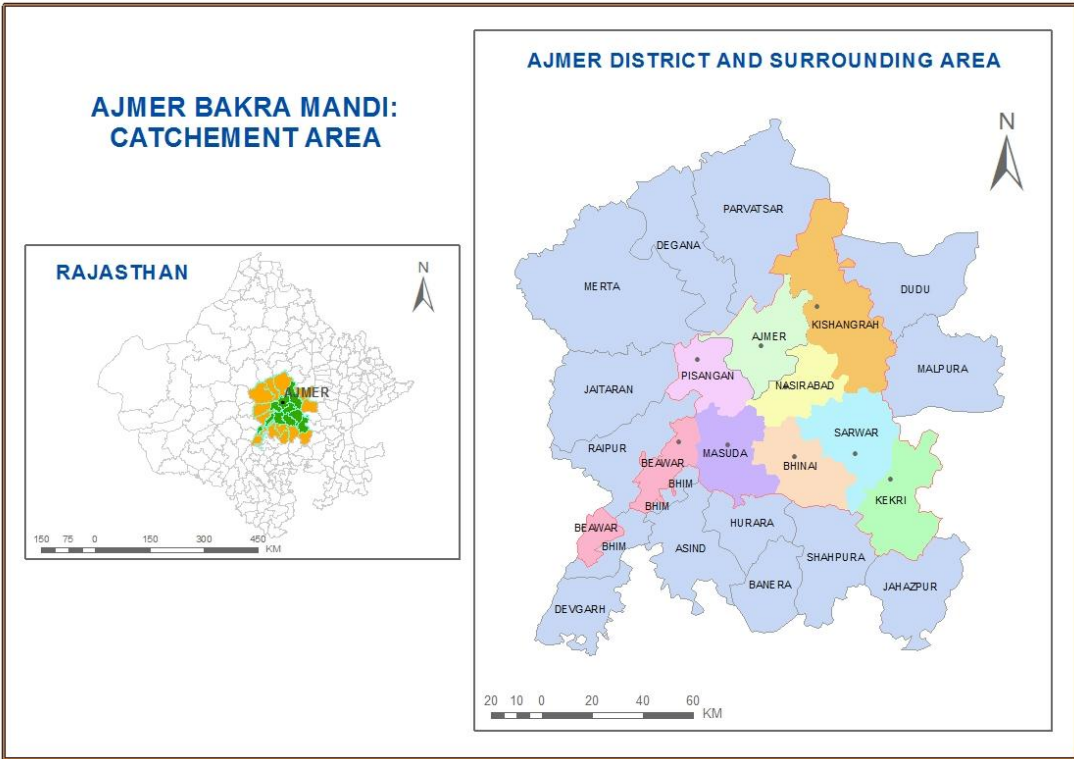


Plate 2 : Ajmer Bakra Mandi – another view.

The catchment of Ajmer Bakra mandi includes Ajmer district as a whole and the adjacent parts of Nagaur, Pali, Rajsamand, Bhilwara, Tonk and Jaipur districts. (Please refer to the map 2.2).



Map 2.2 : Surrounding districts.



Map 2.3 : Catchment area.

Functionaries and market operations

Except for the land allocation, government's role in the day to day operations is negligible. The Ajmer *mandi* is dominated by commission agents (*Dalals*). There are about 36 Dalals operating at Ajmer *mandi*. Each Dalal is linked with several local level traders and livestock keepers.

The other functionaries are those who play a supporting role, such as managing the enclosures, holding of animals for sale, feed for animals, helping in loading and unloading of animals. There are also the buyers, local as well as outsiders. Lately, the Municipal authorities have sublet the 'certification' process and procedure, for the animal to be slaughtered, to local contractors. Earlier, this was in the domain of the government animal husbandry department and a veterinary doctor was assigned such a role/ function and responsibility.

The major functionaries in the Ajmer *mandi* are summarized as below:

Functionaries	Number
Primary (local) traders	250 per day
Secondary (large) traders	20-25 regular traders
Commission agents (<i>Dalals</i>)	36
Helpers	More than 200
Certification by veterinary doctor	This has been sublet to a contractor by the Ajmer Municipal Corporation

The Dalals, effectively control the market. They handle a major share of the market and are price setters as they purchase animals in bulk and have direct linkages (both forward and backward) with large *mandis* outside the state. A lot of goats and sheep are supplied to the defense contractors, who usually approach these big Dalals. The local traders do not have much say in the market. This market structure has been prevalent for more than 3 generations now and there has not been any change in this situation.

The Dalals charge 4% per animal as commission for the auction services. There is no *mandi* entry fee imposed by the market association. However, both before and after transaction, grazing and enclosure facilities are charged at the rate of Rs.1/- per animal.

The major purchasers in the *mandi* are distant traders and commission agents. Based on interaction with key informants at the *mandi*, the approximate number of animals purchased in a week by various buyers is given in the following table:

Purchaser	Approximate number of animals purchased in a week
Commission agents (Dalals)	7500
Distant traders	6000
Army contractors	500-700
Breeders	500
Local butchers	600

The price setting between the sellers and buyers is not done in a transparent manner. The price negotiations happen under a piece of cloth wherein the buyers and sellers arrive at a price by whispering in each other's ears. The selling is mostly between the small local traders and the secondary traders or the Dalals.



Plate 3 : Whispering in the ear.

Infrastructure facilities

In terms of infrastructure, there are about 56 enclosures, each having a covered area of nearly 140 square yards. On an average, about 300 animals fit into an enclosure.

There are two slaughter houses in Ajmer. One is used for slaughtering only by the *Jhatka* method (slicing head of the animal in one stroke). This is to cater to Hindu consumers. In the other, the *halal* method of slaughtering is practiced. This caters to the muslim consumers. Both the slaughter houses have capacity of about 250 animals per day and operate from 4 A.M. to 6 P.M. About 100 animals per day are slaughtered at these slaughter houses. The Ajmer Municipal Corporation has sublet the responsibility of certification of animals to be slaughtered to a contractor. The stamping fee levied by the Municipal Corporation is about Rs.3 per animal.

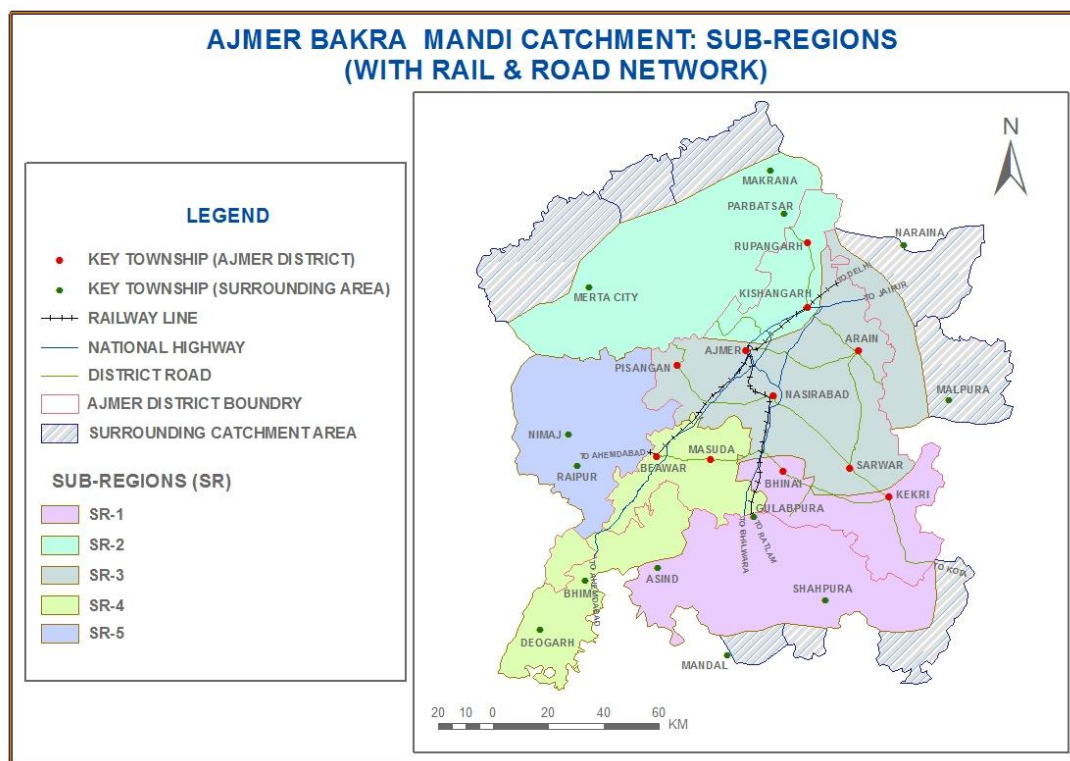
Incidentally, nearly, 750 to 1000 animals are slaughtered in the backyards of butcher's residence cum shops in Ajmer town. The animals are mainly purchased from the mandi.

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CHAPTER-3

Market Analysis

This Chapter and the related sections include the major market channels prevalent in the area. It presents the costs and returns incurred in marketing of goats at the household level, trader level and butcher level. A price spread analysis is also undertaken for different markets.



Map 3.1 : Catchment area - sub-regions.

Introduction

The first level of goat and sheep marketing occurs at the door step of the livestock keeper. Goats are reared by all classes and communities. A large proportion of the sample households kept a herd of 15 to 20 animals. Sheep are reared predominantly in the SR-3 and SR-4 regions.

The surplus goats (marketable goats) are not available in bulk but are distributed in small numbers, generally in the form of one to two goats from a large number of scattered households. In case of sheep more animals are traded at one time as people own sheep in large flocks. The dispersed nature of goats as a commodity for marketing requires extra efforts for collection, assembling and transportation.

Major Market Channels Identified

The most dominant market channel for sale at the household level is through traders, who collect the animals at the door step of the households (see Table 1 on the next page).

Table-1
Major market channels: animals sold through each channel by the sample households

Market Channels	SR 1	SR 2	SR 3	SR 4	SR 5	Total
Other livestock keepers	9 (2)	53 (11)	45 (6)	9 (1)	12 (4)	128 (3.6)
Local butchers	17 (4)	295 (63)	0 (0)	46 (3)	204 (64)	562 (15.9)
Local traders	381 (83)	94 (20)	739 (94)	1457 (96)	104 (33)	2,775 (78.3)
Ajmer mandi	0	9 (2)	0 (0)	0 (0)	0 (0)	9 (0.3)
Commission agents	50 (11)	0 (0)	0 (0)	0 (0)	0 (0)	50 (1.4)
Commisson agents (distant)	0 (0)	15 (3)	3 (0.4)	0 (0)	0 (0)	18 (0.5)
Total number of animals	457 (100)	466 (100)	787 (100)	1512 (100)	320 (100)	3542 (100)

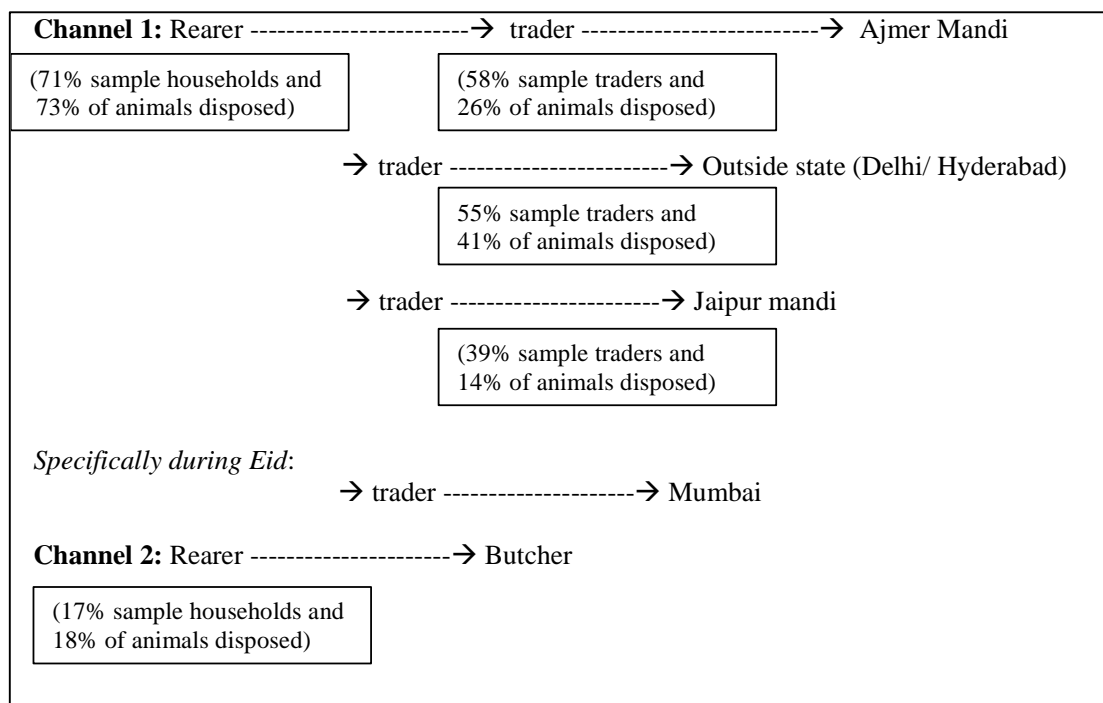
Almost 71% of the sample households sold their animals through the traders (please refer to the Figure 1). This accounted for almost 78% of the total animals that were sold by the sample households. The traders usually belong to the 'Khatik' caste among the Hindus and the 'Kasai' community among the Muslims, who make regular rounds across the villages and directly purchase animals from the livestock keepers. The traders in turn sell the animals at multiple locations. About 58% of the sample traders indicated that they sell their animals at Ajmer mandi even though in terms of animals sold this accounted to only 26% of total animals sold by the sample traders. It was observed that 55% of sample traders sold their animals in Delhi mandi (accounting for nearly 41% of the total animals sold by them). The other markets indicated in the sample are Hyderabad and Surat. Further, about 38% of the sample traders sold their animals at Jaipur mandi (accounting for 14% of total animals disposed by the sample traders). It would not be out of place to mention here that the data presented and discussed as above is for all animals that were traded by the traders. Also, here we do not distinguish between the goats and the sheep.

It is interesting to note that majority of the sample households indicated that they had sold the animals to the traders mainly with "*profit motive*". The next important reason for selling off animals was "*for immediate household needs*".

The second most important market channel for the sample households is through the butchers (almost 17% of sample households and 18% of total animals disposed by the sample households). This channel is most prominent in the case of SR-2 (refer Table 1). This can be attributed to the demand and supply factor prevailing in the market. In this region, goat husbandry is an important livelihood option and average ownership of small ruminants is found to be high on one hand and the region with good numbers of 'Ruhr-urban' centres having large presence of the Muslim community (followers of Islam), who by and large are non-vegetarians and, as such, the consumer demand for meat is also high on the other.

It is interesting to note that overall none of the sample households sold their animals directly at Ajmer mandi or any other market for that matter. Based on focus group discussions cutting across all subregions, the system and practice of selling animals through the traders exists since the early 1950s and continues to be the same without much change and/or difference till date.

Figure-1
Major market channels identified



The Table 1 also reveals that some livestock keepers sold their animals to other livestock keepers within their area, especially in the *Merta-Parbatsar-Roopangarh-Kishengarh* (SR-2) and *Shrinagar-Arain-Nasirabad-Bhinai-Sarwad* (SR-3) regions. This sale of animals is primarily for breeding purpose. In addition to local level sales, the demand for such animals also exists from outside the state and the same is being catered to by the local traders who buy elite animals and pass these on to the breeders through distant trader. For more details, please see the box item given below.

Trading animals for breeding purpose

During focus group discussions, it also became evident that there are certain traders who purchase large number of animals (with best phenotypic characteristics) for selling them to breeders outside the state. In addition, commercial breeders too visit Ajmer mandi in order to purchase animals for breeding purpose. The authors during their several visits to the Ajmer mandi came across such breeders from as far as Tamil Nadu in the south and parts of western Uttar Pradesh. It was observed that these breeders have linkages with the local primary and secondary level traders. During the course of brief interaction with one of them, it was revealed that he had already purchased about 1000 animals in a span of 3 weeks. These selected animals were being maintained and managed at the doorstep of the local traders. Of course, the cost of maintaining the animals is borne by the breeder.

Further, during the course of focus group discussions, the livestock keepers indicated that such large purchases of elite animals is depleting the breeding stock in the region. Also, it was expressed that this kind of trade seems to be growing in recent years. This according to them is detrimental to their interests and they fear shortage of good quality breeding stock in the long run.

Livelihood options

The study area is located in the semi-arid region of Rajasthan. Agriculture is mainly rainfed and therefore dependence on livestock is high. It is observed that given the geography of the study area, agro-climatic conditions and social structure there are sub-regional differences. Accordingly, the livelihood options also vary among the sub-regions.



Plate 4 : Dependence on livestock.

The major income sources of the households including contribution of small ruminants to the household income is described in this sub-section.

Livelihood characteristics of the sample households

In general, small ruminant rearing, wage employment and agriculture are the most important sources of income. In the entire catchment area, the major income sources of the sample households include wage employment (31% of total income), meat from goats and sheep (21% of total income) and agriculture (20% of total income). The livelihood of the households varies within the catchment area. Small ruminant rearing is most dominant in SR-2 and SR-3. It accounts for 39% and 34% of the total household incomes respectively (see Table 2). The contribution of small ruminants to the total household income is lowest in SR-5. Agriculture is prominent in SR-1 accounting for 31% of the total household income. Wage employment and regular employment are important in SR-4 accounting for 45% and 21% of total household income respectively.

Table-2
Average annual household income from various sources across the different sub-regions (in Rs. / annum)

[Figures in parenthesis indicate percentages]

Major Income Sources	SR 1 (N=101)	SR 2 (N=57)	SR 3 (N=99)	SR 4 (N=100)	SR 5 (N=99)	All subregions (N=455)
Agriculture (own land)	14,228 (31)	7,167 (13)	14,197 (24)	7,845 (14)	12,855 (20)	11,638 (20)
Agriculture (leased-in)	820 (2)	0 (0)	0 (0)	2,915 (5)	3,750 (6)	1,630 (3)
Dairy	1,283 (3)	3,367 (6)	4,106 (7)	0 (0)	9,318 (14)	3,607 (6)
Meat (Goat and Sheep)	10,795 (23)	22,228 (39)	20,374 (34)	8,160 (14)	3,164 (5)	12,089 (21)
Sheep penning	423 (1)	936 (2)	912 (2)	103 (0.2)	1,108 (2)	671 (1)

Regular employment	4,594 (10)	772 (1)	7,901 (13)	11,963 (21)	7,673 (12)	7,118 (13)
Wage employment	12,574 (27)	17,800 (31)	12,152 (20)	25,253 (45)	19,685 (30)	17,455 (31)
Business	1,832 (4)	4,337 (8)	677 (1)	300 (1)	7,048 (11)	2,681 (5)
Total income	46,549 (100)	56,606 (100)	60,318 (100)	56,538 (100)	64,602 (100)	56,888 (100)

Income from small ruminants

Goats and sheep yield multiple products. Sale of live animals for meat purpose and dairy are the most important products derived from goats for the sample households. Among the five sub-regions, SR-2 had the highest average income from sale of live animals (Rs.24,648/-) and also from dairy (Rs. 9,816/-) (see Table-3 below). Sheep is most important only in the case of SR-3 as compared to other sub-regions.

Table-3
Annual income (in INR) from various products from goat and sheep

Products	SR 1 (n=101)	SR 2 (n=59)	SR 3 (n=99)	SR 4 (n=100)	SR 5 (n=99)	All Subregions (n=458)
Milk	6970	9816	4778	8623	3556	6486
Live meat (Goat)	6713	24648	13716	7051	4999	10241
Live meat (Sheep)	2869	2086	6739	2561	2274	3409
Manure	2473	2928	2618	3275	2223	2684
Wool	0	510	0	25	141	102
Goat sale for breeding purpose (Male)	50	1776	0	0	0	240
Goat sale for breeding purpose (Female)	0	0	0	0	0	0
Sheep sale for breeding purpose (Male)	0	0	45	0	0	10
Sheep sale for breeding purpose (Female)	0	0	0	0	0	0
Total income from goat and sheep husbandry	19074	41765	27897	21536	13194	23171

Production aspects

This section examines the stock size and changes over a year, the sale of animals (age and season), maintenance costs and selling prices of the animals.

Stock details of sample households

The average herd size of goats among the sample households is about 14 animals (see Table 4 on the next page). The same was maintained both at the beginning and at the end of the year (i.e. Nov. 2009 and Nov.2010 respectively). The stock holdings of the sample households range from a minimum of 2 to a maximum of 72 animals. Almost 66% of the sample households maintained a herd size of about 20 animals during the period 2009-10. On an average, about 8 animals are born in a year and about 6 animals are sold in a year.

Table-4
Stock details of goats among the sample households (2009-10)

	Mean	Std. Deviation	Minimum	Maximum
Stock size (2009)	13	9	2	72
Born	8	5	1	38
Died	2	3	0	30
Sold	5	4	0	39
Stock size (2010)	13	8	1	74



Plate 5 : Farmer giving feed concentrate.

The herd size of sheep is higher than that of the goats. The average flock size was about 54 (as of Nov. 2009) and 49 (as of Nov. 2010) (see Table 5). The flock size ranged from a minimum of 3 to a maximum of about 250. On an average, 24 animals were born and about 19 were sold to the traders by the animal owners.

Table 5
Stock details of sheep among the sample households (2009-10)

	Mean	Std. Deviation	Minimum	Maximum
Stock size (2009)	50	46	3	250
Born	23	22	2	115
Died	9	13	0	80
Sold	18	17	0	85
Stock size (2010)	46	45	5	249



Plate 6 : Sheep rearing.

Age and season-wise sale of animals

From among the sample households, a total of about 1677 animals were sold during the year 2009-10. Out of these, 43% of the animals sold were of less than six months of age and 24% of the animals were in the age group of 6-12 months. This is an indication that farmers prefer to dispose of their animals at the earliest. The reason why the livestock keepers adopt this as a practice is to counter and overcome fodder problems and also the risks associated with maintaining the animals for longer periods.

From the stand point of the scientific community and market researchers, this aspect can also be interpreted as an indicator of “distress sale” by the livestock keeper. Apparently, this distress sale is a strategy adopted by the livestock keeper to combat fodder shortage, which is a frequent phenomenon resulting from erratic and depleting rainfall patterns in this agro-climatic region.

Indeed, a negative consequence of the “distress sale” is that under developed animals are slaughtered. In other words, animals are prematurely slaughtered before they are well developed. This in turn affects the quality of meat available to the ultimate consumer. But again, this is subject to consumer preference of the animals and, in order to know more about it (e.g. preference), a detailed analysis at the consumer level is needed. However, possibility of niche markets wherein consumers prefer tender meat is neither negated nor ruled out.

The major selling periods are the winter season (Oct. to Feb.) and summer season (Mar. to Jun.) for animals less than six months old. For animals in the age group of 6-12 months, winter and rainy (Jul. to Sept.) seasons are the most important selling periods (see Table 6 below).

Table-6
Total number of animals sold (age-wise) by the sample households

Type of animal	Winter	Summer	Rainy	Total animals sold	Percent (%)
Male					
< 6 months	387	245	88	720	43
6-12 months	201	80	122	403	24
> 12 months	48	3	76	127	8

Female					
Yearlings	70	56	89	215	13
Does	53	42	37	132	8
Old	57	4	10	71	4
Total animals sold	816	430	422	1668	100
Percent (%)	49	26	25	100	

Maintenance costs of animals

The maintenance costs are relatively higher for rearing goats as compared to sheep. The total production cost for rearing goats is about Rs.581/- per animal whereas it is about Rs.194/- per animal in the case of sheep (see Table 7 below).

Table-7
Maintenance costs

Particulars	Goats	Sheep
	Rs./ animal	Rs./ animal
Fodder (Hired) costs	234 (40.3)	90 (46.3)
Fodder (own) value	52 (8.9)	17 (8.6)
Feed costs	274 (47.1)	70 (35.9)
Health costs	22 (3.8)	18 (9.2)
Total costs	581 (100)	194 (100)

The major production costs incurred by the livestock keepers is for procurement of fodder trees, grasses and feed concentrate for goats as well as for sheep. The cost of hiring fodder trees, for example, Khejri (*Prosopis cineraria*), Desi babul (*Acacia nilotica*), Orinja (*Acacia leucophloea*), Ardu (*Alianthus excelsa*), and Neem (*Azadirachta indica*) is about Rs.234/- per animal in the case of goat. In case of sheep, the animal keepers during prolonged stress periods either migrate to other regions or pay extra to graze their animals especially in degraded forest lands (almost Rs.90/- per animal). The higher cost in the case of goats is primarily due the fact that the goat keeper has to hire fodder trees, especially during the stress period. Sheep being a grazer is dependent on availability of grasses from own agriculture land, village commons, revenue lands, wastelands (private and revenue) and degraded forest lands.



Plate 7 : Fodder trees – *Prosopis cineraria*.

The cost of feed concentrate in the case of goat was Rs.274/- per animal. While for sheep it was Rs.70/- per animal.

Expenditure on health was relatively higher for goats at about Rs.22/- per animal as compared to Rs.18/- per animal for sheep.

In almost all the sample households under the study, no hired labor was used to look after the animals. The family members themselves took upon the responsibility of grazing the animals. In our computation of total costs we have not included the imputed value of family labor as small ruminant rearing is one of the primary livelihood sources and most often children are engaged in this activity. In other cases, old i.e. elderly members of the family take on the responsibility of managing the animals. If the imputed value of own labor is included in the costs, then goat and sheep rearing is not as profitable as it appears to be. In the study sample, however, no one specified any expenses for hired labor. Should one estimate based on daily wage rate for own labor of say one person for the entire year, in that case, we may be overestimating the costs.

Selling prices of animals

Table 8 provides the age-wise and season-wise average selling prices of goats during the non-festival period. The livestock keepers get the highest price for animals that are greater than 12 months old. But it should be noted that not many goat keepers hold on to their animals for such a long time. As observed earlier (kindly refer to Table 6), highest number of animals sold by the keepers belonged to the age group of less than 6 months. In terms of season, there is not much difference in the selling prices.

Table-8
Selling prices of animals (in Rs./ animal) (Livestock keepers)

Age group	Winter	Summer	Rainy
< 6 months	1241	1139	1470
6-12 months	2064	1843	2144
> 12 months	3292	-	3080

Trader Level Analysis

It is observed that the trade of animals for meat market is carried out by traders, who can be placed in different categories. It is also observed that most often the categorization is not very distinct and that the role of traders changes according to market demands.

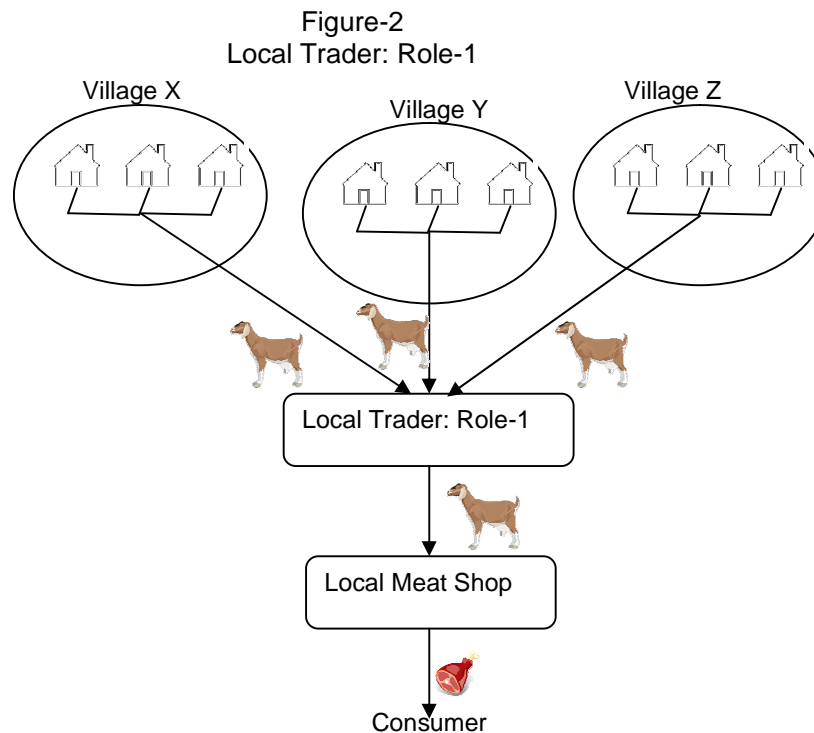
Types of Traders

Given the level at which they operate and their various role/ functions, the traders can be described as follows:

Local level trader:

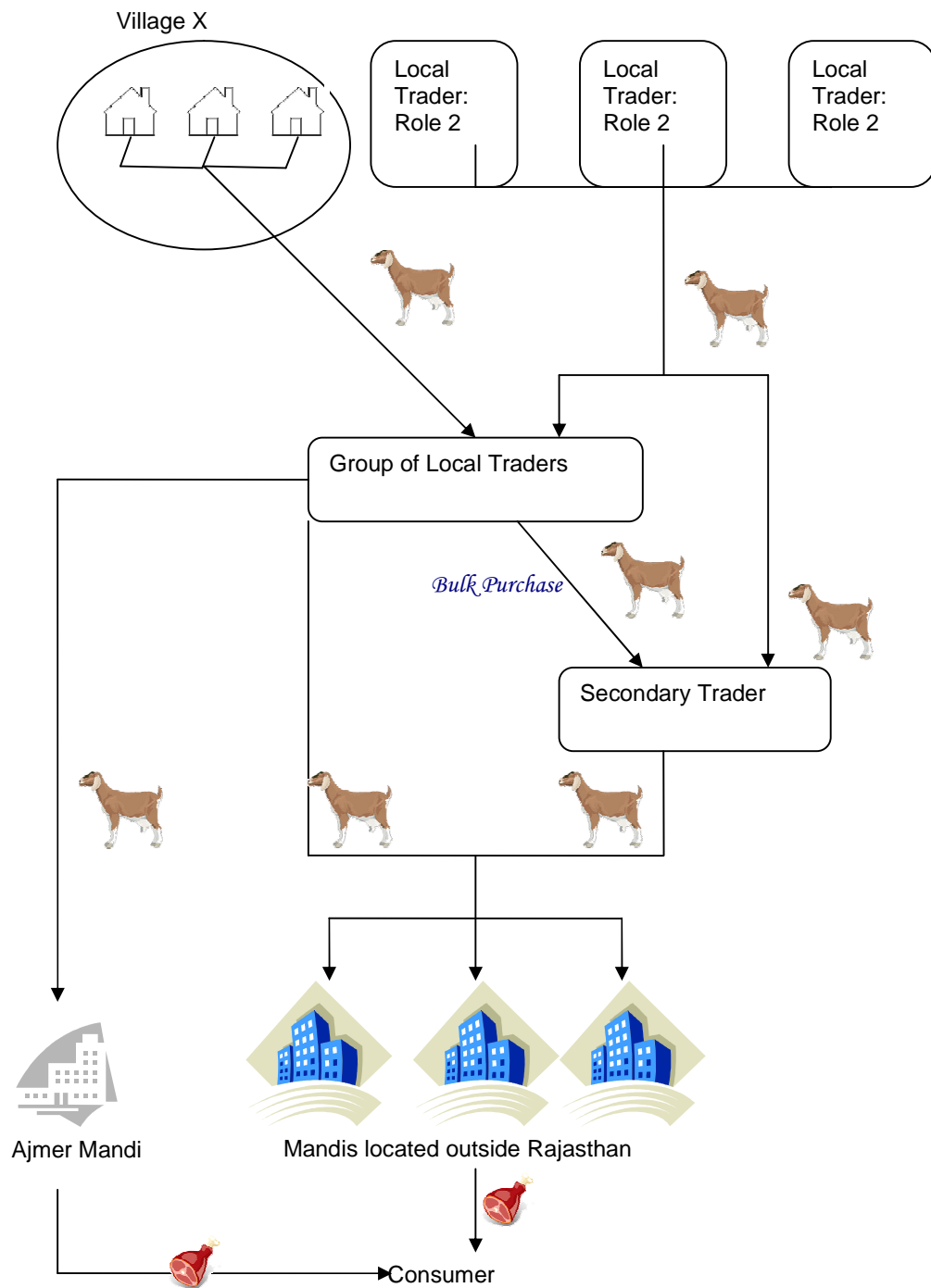
The local level trader can be considered as the key primary trader. He has more than one role to offer. The different role / functions are described below:

- Role-1, who as the local trader goes out scouting and collecting (from village to village and from household to household) and sells to meat shopkeepers in the nearby local market and/or to the *Bakra mandi Dalal* (see Figure 2).



- Role-2, who as the local trader purchases live animals for immediate local meat market (including *Ajmer bakra mandi*) and sells surplus animals either to a group of traders (comprising of 3-5 persons), who in turn sell the animals directly in the secondary market (i.e. in *mandis* outside Rajasthan) or to Secondary trader (refer Figure 3).

Figure-3
Local Trader: Role -2



Secondary trader

Secondary trader engages in forward selling of the animals in *mandis* outside Rajasthan. Their modus operandi is to collect from the local primary traders at the village level and, often bypassing the Ajmer mandi, will sell their collection of live animals directly to buyers in *mandis* outside the state of Rajasthan (refer Figure 3).

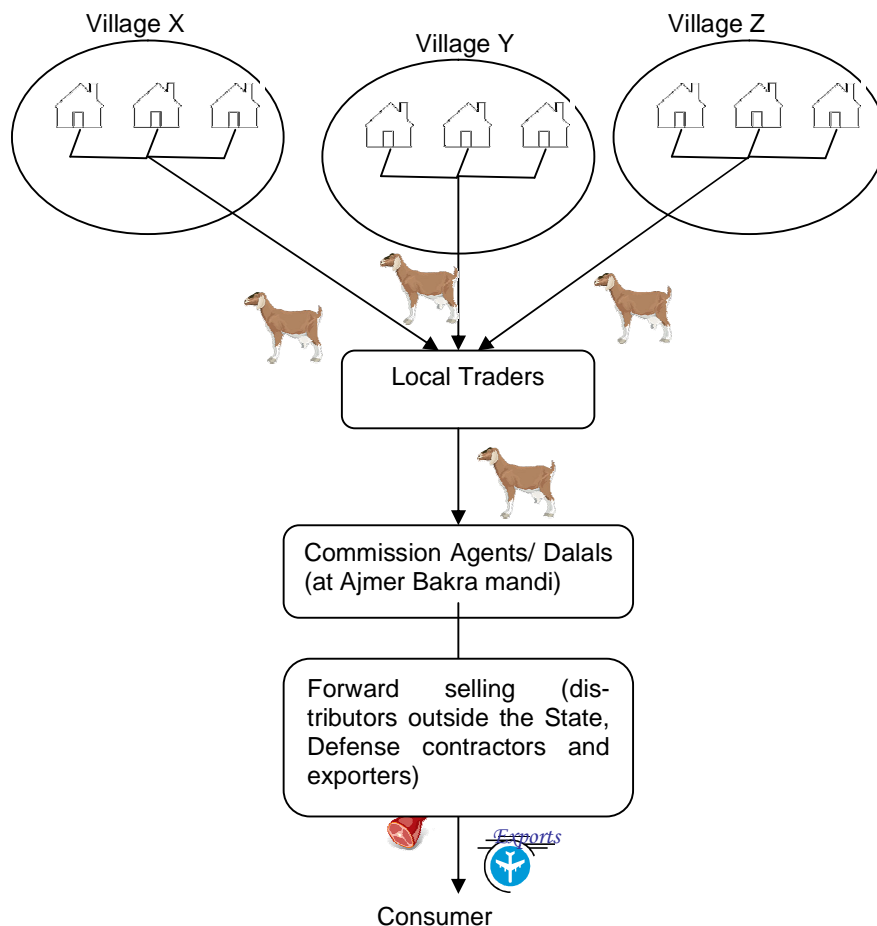
Secondary trader-cum-distributor

The secondary trader-cum-distributor is not a local player. He is somebody who does not belong to the Ajmer bakra mandi catchment area. He purchases animals directly from the Ajmer mandi Dalal (commission agent) for forward selling to buyers in mandis located outside Rajasthan (e.g. in Delhi, Surat, Mumbai, Hyderabad) and/or to Defense suppliers/contractors and exporters.

Commission Agent or Dalal

This is the category of traders who are based at the Ajmer Bakra mandi and directly buy live animals from the local primary trader. In addition, they also receive/ take orders to supply animals for forward selling and export (refer Figure 4).

Figure-4
Commission agents (Dalal) at Ajmer bakra mandi



Roles / functions of local traders

The primary traders operate at different levels depending upon the demand for animals. Their scales of operations vary with season and special occasions. Some of the traders operate only during the festive occasions such as *Bakra Eid*.

The major functions performed by the trader are assembling and transportation of animals to the mandi. Apart from these, he also shoulders the risk of mortality of animals during maintenance and transportation of animals. The trader has local knowledge about the availability and quality of animals in the villages and specific animal keepers or farmers. Traders operating at the higher level such as secondary traders and Dalals have good knowledge about prices at distant markets and are also very well aware of various modalities for transporting of animals to these distant markets.

Assembling and maintenance of animals

The trader (primary / secondary) usually operates from his village. The trader moves around in the neighboring villages (approx. radius of 7-10 km) on his bicycle or motor cycle gathering small number of animals. These are assembled at his doorstep/ house and once sufficient numbers of animals are gathered (linked to the available mode of transport – pick-up jeep, Tata 407), these then are transported to the mandi for sale.

On fairly more regular basis, the animals are maintained approximately for about 5 days by the trader before they are sold off at the *mandi* (Ajmer, Delhi or Jaipur). However, in the context of "*Bakra Eid*", the animals are maintained for an average of about 19 days (based on the sample traders). It is also observed (based on focus group discussion) that there are some traders who specifically maintain procured animals for about 3-5 months at their doorstep before selling them in the market on the occasion of *Bakra Eid*.

The cost of assembling and maintaining the animals during regular period is about Rs.60/- per animal which accounts for approximately 34% and 23% of total costs in the case of Ajmer mandi and Delhi market respectively. During the '*bakra eid*' this cost is about Rs. 1,121/- accounting for almost 70% of total costs (see Table 9). This increase in cost is not only due to relatively higher expenditure on feed and health but also due to the long duration of care and upkeep of animal.

Table-9
Costs incurred by the local trader while selling at different markets

Particulars	Ajmer mandi	Delhi market	Mumbai (For Eid)
Assembling and maintenance	60 (33.8)	60 (22.7)	1121 (69.7)
Vehicle hiring costs	21.33 (12)	68.2 (25.8)	246 (15.3)
Helper costs	1.43 (0.8)	9.5 (3.6)	12 (0.7)
Labor charges for uploading and unloading of animals			5 (0.3)
Feed costs			13 (0.8)
Miscellaneous (sentry charges etc.)	1.62 (0.9)	32.7 (12.4)	53 (3.3)
Baranii		2.9 (1.1)	0
Market fee (mandi gate)		0.5 (0.2)	0

Dala		1.5 (0.6)	0
Gwala		5.3 (2.0)	32 (2.0)
Return charges	1.29 (0.7)	1.5 (0.6)	3 (0.2)
Own expenses	1.62 (0.9)	1.8 (0.7)	23 (1.4)
Commission of Dalal	90.00 (50.8)	80.0 (30.3)	100 (6.2)
Total costs incurred for marketing animals	177 (100)	264 (100)	1607 (100)

Transportation of animals

In the case of Ajmer mandi, the animals are largely transported by Tata 407 or pick-up van, namely, Mahindra utility (capacity of about 80 and 60 animals respectively). In the case of long distance such as Delhi or Mumbai, the animals are transported by 6-tyre (*6-chakka*) or 10-tyre (*10-chakka*) trucks. The capacities of 6-tyre and 10-tyre trucks are approximately 250 and 300 animals respectively. Usually, 2-3 traders share the cost of transportation.



Plate 8 : Transporting by pick-up van.

On regular days, the hiring charges of the vehicles for transporting the animals are about Rs.21/- and Rs.68/- per animal in the case of Ajmer mandi and Delhi respectively. It accounts for about 12% and 24% of total costs respectively. During the *Bakra Eid* period, the hiring charges of vehicles are as high as Rs.246/- per animal accounting for almost 15% of the total costs incurred by the trader. According to the traders, the cost almost doubles during the festival period.

Other costs

Apart from the hiring of vehicles, there are numerous other costs such as hiring helpers, managing the sentries at various check points and other miscellaneous costs. The commission of Dalals is another significant cost which is a flat charge in the range of Rs.80/- to Rs.100/- per animal. This alone is a major share of total costs in Ajmer mandi accounting for almost 51% of the total costs. It accounts for 30% and 6% of total costs in Delhi and Mumbai *mandis* respectively.

Selling prices of animals

The Table-10 provides a comparison between the average prices of goats as received by the trader vis-à-vis the livestock keepers. There is a big difference in the prices received during regular days and those at the time of special occasions such as *Bakra Eid*. For '*qurbanī*' or *Bakra Eid* male goats that are more than 12 months old are preferred and these also fetch the highest price. The traders as well as the animal keepers receive relatively higher prices during this time. There are many traders who operate only during the *Bakra Eid*.

Table-10
Average prices (Rs./animal) received by local trader and livestock keeper

Age	Regular days		During Bakra Eid	
	Trader	Rearers	Trader	Rearers
Male goats (< 6 months)	1488	1247		
Male goats (6-12 months)	2685	2044		4206
Male goats (> 12 months)	3438	3246	10188	6859

Local Butcher Level Analysis

The butcher caters to the local demand for meat. The local butcher purchases the animals directly from the households as well as from the local level traders. During special occasions including *Bakra Eid*, many butchers also assume the role of a trader.

Age and season-wise procurement of animals

The Table -11 below presents season-wise and age-wise details of the average number of animals handled by the butcher during the year 2009-10. On an average, about 186 animals in the age group of 6-12 months were purchased by the butchers during the year 2009-10, which is the highest as compared to all other age groups. This is followed by animals in the age group of less than 6 months with mean value of 155 animals. The number of animals purchased was relatively higher during the winter season as compared to summer and rainy seasons.

Table-11
Average number of animals handled by the local butcher (2009-10)

Age	Winter	Summer	Rainy	Annual Total
Goats				
Males				
< 6 months	69	51	45	155
6 to 12 months	85	57	48	186
> 12 months	44	37	35	105
Females	29	29	21	75
Sheep	29	27	20	69

Maintenance costs

On an average, the butcher holds the animals for about 6 days (see Table-12 on next page). During this period, the only cost incurred by the butcher is on feeding the animal, which is about Rs.18/- per animal per day during winter and about Rs.12/- per animal per day in the rainy season. The cost per animal works out to be about Rs.115/- in the winter, Rs.116/- in summer and Rs.65/- in rainy seasons. The mean cost across all the seasons is about Rs.99/- per animal.

Table-12
Maintenance of animals by the local butcher

Parameters	Winter	Summer	Rainy
Average number of animals assembled per week	15	12	9
Holding duration per animal (no. of days)	6	7	5
Feed costs (Rs./animal/day)	18	17	12
Total feed costs (Rs./ animal)	115	116	65

Returns

After slaughter, the different parts of the animal fetch different prices. The Table 13 gives the mean values of various body parts derived from an animal. This approximately gives the total returns to the butcher from a single animal. The chest, chops and hind part give the highest returns in an animal. These generate about Rs.641/-, Rs.624/- and Rs.589/- per animal respectively. The neck portion of the animal fetches about Rs.506/- per animal. The total return from an animal to the butcher is about Rs.3,142/- per animal.

Table-13
Average returns to the butcher from various body parts of an animal

Particulars	Value (Rs./animal)
Head	241
Neck	506
Chest	641
Chops	624
Hind	589
Hoofs	213
Liver	225
Kidneys	59
Testicles	76
Total value per animal	3142

Price Spread Analysis

The price spread analysis has been carried out for each market channel (location) separately and the same is presented in Table-14 (see below). The gross market margin is the difference between the effective price paid by the ultimate buyer (in this case the distant trader in the respective mandis) and net price received by the producer i.e. the livestock keeper. In the first channel (in the context of Ajmer mandi), the animal keeper receives about 80% of the buyer's rupee. The gross market margin was 20% and the marketing efficiency was 4.08.

Table-14
Price spread in goat and sheep marketing (values in Rs./ animal)

[Figures in parenthesis indicate percentages]

Particulars	I Goat Channel Rearer- trader- Ajmer	II Goat Channel Rearer- trader- Delhi	III Goat Channel Eid Rearer- trader- Mumbai	IV Sheep Channel Rearer- trader- Delhi	V Goat/ sheep Rearer - Butcher
Rearer price	1690 (80)	1690 (69.9)	5323 (52)	1305 (82)	2124 (96)
Cost incurred by rearer on marketing					
Local traders purchase price	1690	1690	5323	1305	
Cost incurred by local trader	177 (8)	264 (10.9)	1607 (16)	264 (17)	
local Traders net margin	237 (11)	463 (19.2)	3258 (32)	13 (1)	
Distant traders / butchers purchase price	2104	2417	10188	1582	2124
Cost incurred by distant trader/ butcher					99 (4)
Effective price of distant trader/ butcher	2104 (100)	2417 (100)	10188 (100)	1582 (100)	2223 (100)
Gross margin	414 (20)	727 (30.1)	4865 (48)	277 (18)	99 (4)
Marketing efficiency	4.08	2.32	1.09	4.71	21.45

It can be noticed from the table that the livestock keeper's share is relatively low (at about 70% of the buyer's rupee) when sold in the distant market such as Delhi. The gross margin is higher (30%) resulting in lower market efficiency of 2.32. Similarly, during the festive occasions such as *Bakra Eid*, Mumbai is the most preferred destination by the traders. In this channel, from the livestock keeper's point of view, even though he/she received a relatively better price as compared to regular days (refer Table 14), the goat keeper receives a much lower share (about 52% in the buyer's rupee). The gross market margin is also very much on the higher side (almost 48%) resulting in low market efficiency of 1.09.

The same situation is observed in the case of sheep. The sheep herder's share is slightly higher (82% of buyer's rupee). The gross margin is slightly low as compared to goats resulting in slight improvement in the market efficiency.

The other market channel wherein the butcher directly purchases the animals from the livestock keeper, without any role of the trader, the animal keeper's share is almost 96% of the ultimate buyer's rupee (in this case the butcher). The market efficiency is relatively very high at 21.45.

Emerging markets

Large companies such as "Metro", are getting involved in packaged meat that is sold in high end mall in big cities such as Bangalore, Mumbai and Chennai. From Ajmer, about 1-1.5 tonnes meat is exported every week to distant markets such as Bangalore and Mumbai. Nearly 15-20 local butchers supply carcasses to the supplier of Metro. In our present case, the supplier is a Chennai based trader who operated many such branches. Now, this supplier, on behalf of "Metro", has appointed an Ajmer based 'quality controller', who ensures cleanliness and quality of meat supplied. For Bangalore and Mumbai markets, 7-10 kg weight is preferred and for Chennai, 4-6kg is preferred. Anything in excess of these is rejected by the quality controller. The meat is packed in crates / boxes of 50 kg with adequate ice. These are then transported out of Ajmer by the railways.

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CHAPTER-4

Conclusions

This section draws inferences from observations, findings and analysis presented in the preceding chapters of this report. The conclusions are structured to highlight aspects such as production, marketing and Ajmer *mandi* set up and practices in place out there.

Production aspects

In general, the average cost of maintaining the goats is much higher than that of sheep. The flock size of sheep maintained by the livestock keepers is usually bigger than the herd size of goats.

At the production level, availability of fodder and feed are most important factors for the livestock keepers. These two account for almost 87% and 82% of total production costs for goats and sheep respectively. Hiring of fodder trees, especially in the case of goats is a common feature in the region.

Majority of the animals sold by the livestock keepers were of less than six months of age. Availability of fodder resources and feed play a decisive role in the timing of disposal of the animals. One of the important reasons indicated by the goat keepers for selling of animals which are less than six months has been to overcome fodder shortage experienced by them particularly during the drought/ stress periods. Similar conclusions were drawn from a study undertaken by Central Research Institute for Dryland Agriculture (CRIDA) (Shalander et al.).

Such types of trends in marketing need to be checked and arrested since these small kids have a potential to grow up to the age of nine months. This can be managed either by higher feed efficient levels and creating more avenues for feed and fodder or, alternatively, by creating markets for the young kids in feed surplus areas where they can also fetch a better price on weight to weight basis.

Marketing aspects

At the village level, the marketing of goats and sheep is dominated by local primary traders. The trader purchases the animals at the doorstep of the households. The livestock keepers have almost no role beyond their village. The trade is based on mutual trust between the livestock keeper and the local trader. The unorganized nature of market gives some scope for development of a nexus between the small traders, agents and sub-agents. Absence of strong institutions (that can lend support to animal keepers to address issues and problems of such a nexus) allows the traders, at times, to dictate terms to the animal owners.

Important market channels

The market channels that are open and available to the goat keepers are mainly through the local traders. The local traders (as discussed in the preceding chapter) operate at various levels whereby they have links not only with the Ajmer *mandi* and concerned agents but also with either/or secondary level traders including commission agents (dalals), who operate in distant markets mainly both within the state of Rajasthan and in markets (located outside Rajasthan) in places such as Delhi, Mumbai, Surat and Hyderabad.

In addition, to an extent, the local butchers also purchase the animals from the livestock keepers. Though the butchers sell the meat in the local market, nevertheless, during the peak demand period (winter season in particular and festive occasions such as *Bakra Eid*) they also engage themselves in the trade of live animals.

Since the local butchers most often are directly linked with the goat keepers with no other intermediaries, this is one channel wherein some of the profits can be passed on to the animal owners as compared to all other channels.

At the level of livestock keeper

In the present market structure, the animal keepers do not have options to choose any other alternative market channels. They can only choose from among the traders who visit their village. From the focus group discussion and during interaction with the sample households, it became evident that there is no institution or body of livestock keepers that can help and guide them in market related matters. However, they were receptive to our idea of collective action through formation of people's institution at local level.

At the level of local trader

The trader performs the important functions of assembling the animals and the entire process of transporting the animals to various markets (mandis). The trader has access to local knowledge about the households and availability of good quality animals. He times his visits in such a manner so as to maximize his returns. The trader also has good forward linkages at various mandis.

But once at the market, the transactions of the local trader are based on trust. The local trader is not in a position to negotiate or bargain and has to accept the price that is offered by the Dalals in the market. The high transportation cost prohibits the trader from taking the animals back to his village. The local traders also find it expensive to hold back the animals at the mandi.

Also, the present holding spaces are owned by the Dalals at the mandi. Unless the local traders before reaching the mandi have access to market information, the situation will remain the same.

Price spread

The price spread analysis indicates that the market efficiency is highest in the livestock keeper – butcher channel. It is important to note that the livestock keeper stands to gain the maximum under this direct channel (refer to table 14). The other important channels benefiting the livestock keepers are through the Delhi mandi and the local primary trader at Ajmer mandi (see table 14).

In the Livestock keeper – Local trader – Distant trader channel, the market efficiency is low, especially during special occasion such as *Bakra Eid*. It indicates that the high prices received during the peak demand are not reaching the livestock keepers. As such, it is not implied that removal of the trader would be a solution to improve market efficiency. On the contrary, one should also consider the important functions performed by the trader in transporting the animals to the distant markets. At present the trader is bridging the gap between the demand and supply of the animals in the distant metros.

There is potential for improved returns to the livestock keeper as well as the primary trader through proper access to market information pertaining to distant markets. If the various miscellaneous costs are brought down and more transparency is maintained in the marketing system, there is scope in improving the market efficiency.

Role of Ajmer mandi

The Ajmer mandi has relatively higher market efficiency as compared to other distant markets. At present, however, Ajmer mandi is controlled by a few big traders. An association of commission agents (Dalals) manages the day to day affairs of the mandi. The infrastructure facilities at the mandi are minimal. The space and shelters in the mandi are limited. The few existing shelters are

owned by some of the big Dalals. The Dalals own the few enclosures in the mandi where the animals are kept before they are transported to the distant market.

The transactions are not done in a transparent and fair manner. The weight of the animals is estimated by holding the spine between the thumb and the index finger and, subsequently, by lifting the hind part of the animal. The price negotiation is done through sign codes and often spoken in the ear of the buyer. The animals are grouped according to average weight and age. Usually a single lot consists of 6-10 animals comprising of both healthy and weak animals.



Plate 9 : Grouping of animals.

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CHAPTER-5

Suggestions – Way forward

In this section, the suggestions made are based on analysis of primary data generated from the field and outcome of the various focus group discussions with different stakeholders. In order to improve the present marketing systems and to maximize the returns that accrue to the livestock keepers, the authors would like to propose the following:

Policy issues

In the context of livestock development, the State Government of Rajasthan has declared a 'policy document' that covers many aspects and dimensions including gains and benefits to the livestock keepers (Department of Animal Husbandry, GoR). However, this policy document is skewed more towards large ruminants as compared to small ruminants that are and form a key livelihood component of economically and socially weaker sections. Among others, except for a broad general statement of "*developing local markets for live animals especially sheep and goats with facilities such as shelter, drinking water, veterinary facilities, sanitation and security arrangements*" under the section livestock product marketing (Section 7.5.3), no specific plan for addressing the issues of goat/sheep marketing has been envisioned. Interestingly, the policy document highlights contribution of meat from the livestock to the state GDP on one hand; nevertheless, it is silent over 'marketing of meat' from the livestock on the other. Surprisingly, from the standpoint of small ruminant livestock keepers, in this policy document there is not a single word written or mentioned giving any indication or hint to suggest ways and means of what, where and how marketing of meat produce could be better addressed and/or could receive any help or support from the State.

As such, the Government of Rajasthan (GoR) should come forward and formulate policy document that would address the concerns and issues faced by the various stakeholders engaged in meat market trade and commerce. Among others, some of the key elements of the policy should include:

In the context of fodder resources

Recurring drought and fodder scarcity during the summer months is forcing the livestock keepers to dispose of their animals prematurely. Whether one should call this "distress sale" or "coping mechanism" to avoid risk is difficult to qualify. The argument involved here is from whose standpoint are we making such qualifying statement. A livestock keeper may consider it as a "coping mechanism" to tide over fodder scarcity, while the researchers may call it "distress sale".

Open and free grazing does have its social costs in terms of reduced quality of common lands. Collective decision making among the livestock keepers and controlled grazing through appropriate social regulations can be a solution. Any such social regulations if backed by policies that address the usufruct rights of the local community on government owned lands will not only help in sustainable maintenance of commons but will also ensure fodder security.

Most often, the watershed development programmes and the forest department take a blanket view that goats are harmful to the afforestation programmes undertaken by them. Restricting entry of animals into the area is the common approach. During the periods of fodder scarcity, in a given year, by allowing the livestock keepers to lop and take home specific quantities of fodder would encourage even the poor goat keepers to be part of these programmes. An inclusive approach is better than exclusion, wherein a sense of ownership prevails and the animal keeper judiciously and carefully avoids indiscriminate lopping land thus arresting degradation of the resources.

Awareness about the related nutritional aspects of fodder value trees, shrubs and grasses will also encourage livestock keepers to approach the feed and fodder aspects more scientifically.

In the context of pricing of animals

Whenever a declaration of drought is made, the livestock keepers' interests need to be safeguarded by ensuring fodder supply during the stress periods in order to avoid distress sales and also offer a fair market price. As such, a minimum support price should be ensured to livestock keepers by the state.

In the context of decentralized slaughter houses

The State should promote and strengthen establishment of small-scale decentralized slaughter houses. These can be set up in potential townships on the basis of demand and supply of animals from the neighboring villages. It would be advisable to specify guidelines and norms for such slaughter houses in order to maintain certain health and hygiene standards so that the surrounding neighborhood is free from contamination and pollution. Also, the existing norms and guidelines for 'certification' process and procedures need to be revisited and should be revamped to ensure quality of meat sold to the ultimate consumer.

Institutional aspects

A livestock keepers' association can be formed at the village level or among a cluster of villages. This would result in both direct and indirect benefits from collective action. Such an association would help in better management of animals in terms of access to veterinary services; assured fodder supply and better negotiating power to the livestock keepers while selling the animals.

In addition, such an association of livestock keepers' would also help in availing insurance coverage. At present, insurance companies do not extend coverage to small ruminants, mainly due to lack of trust. By encouraging the animal owners to organize themselves, risk from loss due to natural calamities can as well be reduced.

This requires developing a set of guiding principles to be observed and followed by all members of the interest groups. Effective and efficient groups can be formed if all members agree to function democratically and decision-making is more by consensus and that participative processes are demonstrated and practiced at all levels.

Marketing aspects

While on the subject of market aspects, suggestions included in this section are from the stand point of three key actors, namely, the livestock keeper, local traders and the butchers.

Collective marketing

The livestock keepers, individually, do not find it cost effective to transport their 2-3 animals that one would like to sell in the market. In such case, collective marketing of animals would reduce the transportation costs per animal and be more efficient. In this, the livestock keepers' association could also play a role to facilitate collection of animals. Most often, a local trader performs role of assembling and transportation of animals to the mandi. These functions account for major part of the local trader's cost of marketing. But the same is indirectly charged to the livestock keeper. The collective action at the livestock keeper's level will not only reduce the individual cost burden experienced by the animal owner but will also fetch better return to him since the indirect costs being levied by the trader is reduced.

While comparing the various market options, Ajmer mandi was found to be relatively more efficient as compared to all other distant markets. Instead of going through the local trader market channel, Ajmer mandi offers an alternative for the livestock keepers to directly sell their animals at the mandi. For this to be successful, the livestock keepers need to be sufficiently oriented and motivated towards collective action by forming a livestock keepers' association.

For trader also, this reduces the cost of assembling individual animals from the different livestock keepers as they can purchase animals at one place.

As seen from the analysis, the direct channel (livestock keeper – butcher channel) is the most efficient. There is potential to tap such direct markets by setting up small decentralized slaughter houses in the nearest townships that could absorb the expected increase in local supply (through the collective action) to certain extent and complement the local butchers in meeting the local demand. The new slaughter houses preferably should be equipped with modern machinery, and should adhere to maintaining certain norms pertaining to health and hygiene within the precincts.

Promotion of such decentralized slaughter houses would also open up avenues for the local traders. Simultaneously, it would lead to healthy competition between the traders operating at different levels and this in turn would benefit the livestock keeper in terms of better returns.

Access to market information

A news bulletin on a periodic basis can be published indicating, among others, prices at various markets (mandis). This bulletin will help both the livestock keepers as well as the local traders to make informed decisions while selling their animals. For example, at the animal keeper's level, the owner can either sell the animal to the local trader or holdback the animal from passing it to the trader. While at the trader level, he can decide whether to bring the animals to the market on the given day and/or hold them back either in his own back yard or in the animal owner's home.

Such a bulletin can be published on seasonality basis or monthly basis. Based on how it is received, frequency can always be increased.

Ideally, smooth flow of information between the various actors in the value chain starting from the producers to the final consumers would increase the efficiency of the system. Knowledge of the consumer preferences and benefits of any value addition would greatly enhance the profitability of the system (entire chain). The case of Metro described in earlier chapter is one example of this.

Also, transparency and access to information about the rules and regulations regarding transport of animals, taxes at various points on the way, fees at the distant mandi and available facilities at the mandi yard would greatly encourage and allow the producers and small traders to benefit during the peak demand period.

Introduction of weighing scales

This will help in improving accuracy while measuring the weight of the animal. This will bring uniformity in the transactions at both the household and trader level. Weighing scales should be used both at the household level and also at the mandi level. The households are ensured of fair price when the animals are sold individually. The local traders also stand to benefit when they sell the animals in lots (group of animals combining both strong and weak animals) at the mandi. The weighing of animals will help in arriving at an average weight and, subsequently, suitable price can be negotiated and agreed upon based on this kind of information.

Infrastructural facilities at Ajmer Mandi

The Ajmer bakra mandi operates in an informal market system. The role of state government is minimal. Indeed, the role of local self government institutions like the Municipal Corporation of Ajmer is limited to allotment of land for establishing the mandi and collecting charges for certifying the animals for slaughter. There has been no change in transaction practices since the establishment of the mandi. There is no proper organized management of the mandi activities. The day to day management is the responsibility of the Commission agents association that is controlled by the selected few large Dalals operating in the Mandi. The infrastructure in the Mandi is bare minimum.

Given this scenario, the following are basic amenities/ facilities that need to be established and managed:

Shelters

The mandi needs more number of shelters. To begin with tin shed roofing could be put up in order to provide shade to larger number of animals being brought to the mandi. This greatly helps in improving the condition of the animals and also provides adequate relief from the hot sun to the

local traders who gather at the mandi. The animals especially during the summer months will be less stressed and will appear healthy, which in turn will fetch better price for the trader.

Feed and fodder facilities

Provision of feed and fodder supply within the mandi precincts at reasonable prices will allow the local primary traders to hold on to the animals for more number of days and thus in turn increases their bargaining power.

Water facilities

The existing water facilities are at bare minimum level. There is scope for further enhancement in order to cope with the large number of animals and traders who converge at the market place.

Introduce weighing scales

It is in the interest of all concerned that modern digital weighing scales are installed as permanent fixtures at the mandi site. This will help reduce the time invested by the traders in guessing the weight of animals in a lot and also improve the accuracy benefiting all stakeholders.

Market information

Among others, notice boards displaying the prevailing prices at the Ajmer mandi itself and also various other distant mandis will help the different stakeholders to make informed decisions serving their respective interests. In addition, this would also help bring transparency in the various transactions at the mandi.

Epilogue

Owing to certain constraints and limitations including scope and duration of the study, some aspects could not be covered in much detail. Should somebody like to initiate a 'pilot project' based on some of the suggestions and way forward, it would be worthwhile and appropriate if they also take up some further studies and look at some of the following:

- In the context of a complete value chain, a detailed analysis of demand (from the standpoint of the end consumer) for goat and sheep meat in different markets.
- Examine consumer preferences (e.g. type of animals, age of animals and any other specific characteristics) in a specific geographic area that may provide insights into existence of any new market opportunities or niche markets.
- Examine changes in demand for goat versus sheep (for example, an average price rise of sheep meat in the past decade or so).
- Examine market scenarios separately for sheep, specifically in sheep dominant areas/ regions of Rajasthan.
- Examine input and service delivery systems for small ruminants.

While concluding this documentation, it would not be out of context to place on record that the suggestions and way forward presented and discussed in the final chapter of this report would greatly help in improving the prevailing conditions of the meat market trade and commerce. It would be in the interest of all stakeholders to come together and take these suggestions forward while maintaining participatory processes at all stages of marketing.

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