

## Constraints facing Livestock Feed and Fodder Traders: Evidence from Gujarat in India

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### ABSTRACT

*Feed and fodder are considered to be one of the key pillars of the livestock sector. The concentrate feed business is found to be somewhat organized but the trading is highly unorganized for all- feed as well as green and dry fodder business. An exploratory study was conducted to find out the constraints faced by the traders and the retailers of the livestock feed and fodder. Study was conducted in Gujarat during 2017 and 50 traders from 10 talukas (2 talukas from five selected districts) were interviewed using pre-structured survey schedule. The findings revealed that the biggest constraint perceived by the traders is less remunerative business of feed and fodder followed by presence of many competitors in the trading and retailing.*

**Key words:** Livestock Feed, Fodder, Trading, Constraints, Garrett's Ranking

### INTRODUCTION

Livestock sector is an important contributor to the country's economy. It contributes around 4 percent towards GDP and 25 percent towards the Agricultural GDP of the country (NITI Aayog). The importance of Feed cannot be underestimated which is one of the key pillars of the livestock sector. It accounts for 65-70 percent of the total cost of production and maintenance of the livestock.

The livestock feed and fodder can be divided into two broad categories- roughages and concentrates. Roughages are further classified into green fodder and dry fodder.

Green fodder is cultivated and harvested for feeding the animals in the form of forage (cut green and fed fresh), silage (preserved under anaerobic condition) and hay (dehydrated green fodder). The estimates of fodder production in the country vary widely. Fodder production and its utilization depend on various factors like cropping pattern followed, climatic condition of the area as well as the socio-economic conditions of the household and type of livestock reared. The cattle and buffaloes are normally fed on the fodder available from cultivated areas, supplemented to a small extent by harvested grasses.

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The major sources of fodder supply are crop residues, cultivated fodder and fodder from common property resources (CPR) like forests, permanent pastures and grazing lands. At present, there is huge gap between demand and supply of animal feed and fodder. The country faces a net deficit of 35.6 percent green fodder, 10.95 percent dry crop residues and 44 percent concentrate feed ingredients<sup>2</sup>. The increased growth of livestock particularly that of genetically upgraded animals, has further aggravated the situation.

The problem of feed and fodder is regional in nature. It is more acute in arid and semi-arid environments where crop failure is frequent. States such as Punjab and Haryana have surplus rice and wheat straw. The green fodder availability in northern hilly area of India like Upper Gangetic Plains and Eastern Plateau and Western Himalayan region is more than the actual requirement of fodder for livestock. Dry fodder availability is also found to be more than requirement in the Middle Gangetic Plains, Upper Gangetic Plains, Eastern Himalayan, East Coast Plains and Hilly Zones<sup>3</sup>. The regional deficits are more important than the national deficit, especially for fodder, which is not economical to transport over long distances.

The sector is dominated by unorganized players. The market is highly unorganized and informal. Green fodders are sold locally whereas dry fodders are transported to a longer distance but within a state or nearby districts of adjoining states. Concentrates are made at home by mixing different grains and other ingredients as well as are available in the market. There are three sources for concentrates- home-mixers, dairy cooperatives and private sector manufacturers of compound cattle feed.

In this backdrop the study has been undertaken with an objective of identifying and ranking the constraints of the livestock feed and fodder traders and retailers in Gujarat.

### Review of Literature

Jha *et al.*<sup>4</sup> have examined the problems of traders and agribusiness corporates in the marketing of agricultural produce and have

tried to find out mechanisms to improve the market access and linkages of small and marginal farmers. A comparison of individual farmers and members of farmers' interest group has revealed that group or aggregation approach has enhanced the bargaining power of the producers. Use of private mobile phones has improved the access to market information and extension. Availability of better price information and understanding of markets have resulted in reduction of marketing costs and realization of better prices of their products.

The study conducted by Shah *et al.*<sup>5</sup> revealed that due to comparatively very low net returns, farmer have least preference for growing fodder crops. Further, fodder markets in Gujarat is highly unorganized and unregulated and fodder production is a low priority enterprise. Further, fodder being low value high volume produce is costly to transport and hence normally consumed locally. There exists a severe deficit of fodder and particularly of green fodder. The quality and quantity of feed and fodder fed to animal found much lower than it recommended by department of Animal Husbandry.

A study by Singh *et al.*<sup>6</sup> based on rapid appraisal has highlighted the market of fodder and the actors involved in the fodder trade in Bihar. The producer's share in end-users' price has been estimated for different fodder marketing chains. The constraints of fodder marketing and suggestions for their management have also been indicated by the authors. It was found that paddy straw and wheat bhusa are the major fodders that account for about 95 percent of the total marketed fodder in Bihar. Transportation is the major activity that accounts for about 36 percent in total cost addition.

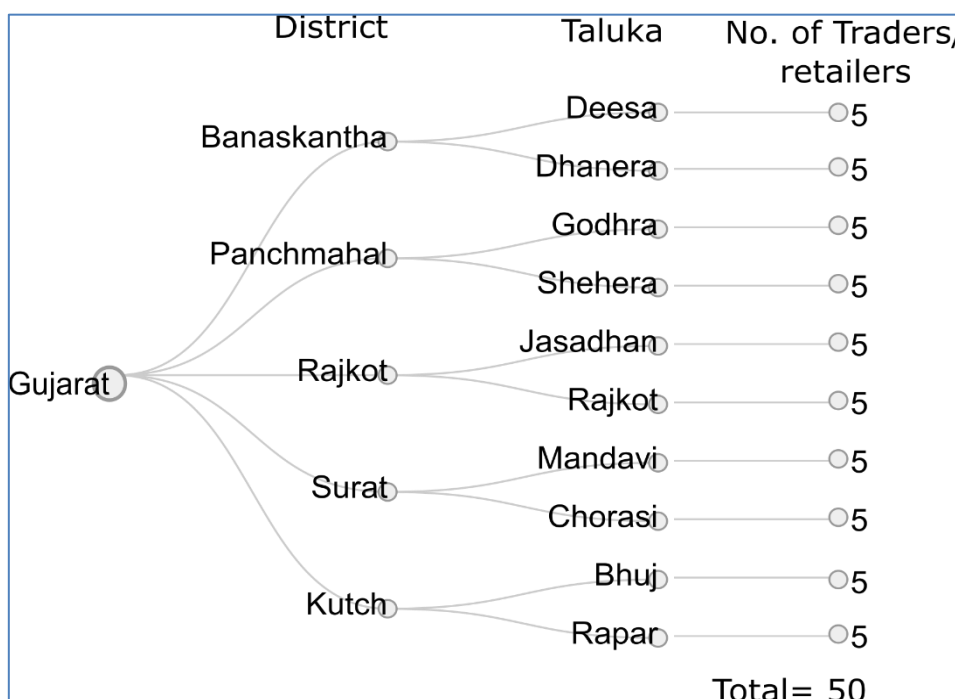
Singh *et al.*<sup>6</sup> in their study in Bihar reported that there is no dedicated market place for fodder market so, trading takes place along roadsides and without legal credentials. Fodder being a bulky item, makes its trading and handling difficult. Some traders use compressing machines to make fodder blocks. Development of technology for cost-effective

and nutritive feed requires urgent attention and here public sector R&D can play an effective role which can also be done in public-private partnership mode.

**MATERIAL AND METHODS**

The study was conducted during March-August 2017 for collecting data. Primary data were collected from livestock fodder traders. Multistage sampling method was followed for selecting the traders. In the first stage, five

districts were selected, one district with highest number of livestock in each region (Gujarat Ecology Commission has divided the state into five regions). In the second stage, two taluka having highest number of livestock from each selected district were selected. From each taluka, five livestock fodder traders were selected. Thus in all, 50 traders were interviewed using pre-structured survey schedule.



**Figure 1: Sampling Plan**

The **Garrett’s ranking technique** was used to study the constraints facing the traders. The per cent position of each rank is found out by Equation:

$$Percent\ position = \frac{100 (R_{ij} - 0.5)}{N_j}$$

Where,

$R_{ij}$  = Rank given for the  $i$ th items by the  $j$ th individual, and

$N_j$  = Number of items ranked by the  $j$ th individual.

**RESULTS AND DISCUSSION**

The livestock census is carried out every five years since it started in 1951. The state of Gujarat is contributing around 5 percent to national livestock population and has shown a growth of more than 11 percent in the last quinquennium. India is home to largest number of buffaloes in the world, stands second in terms of cattle and goat population,

third with respect to sheep population and sixth in camel population. Gujarat has more than 26 million livestock. Out of this buffalo has the maximum share with 38 percent. Buffalo is mainly kept for milk purpose. It is followed by cow. Though pigs, horses, donkey and camel are also contributing to the livestock population, but these are in thousands.

**Table 1: Trend in Livestock Population in Gujarat**

Livestock Census Year	Total Livestock (million)		% Share of Gujarat to All India	% Growth of livestock in Gujarat between two Census
	All India	Gujarat		
1951	292.79	11.98	4.09	-
1956	306.62	13.31	4.34	11.15
1961	336.43	13.45	4.00	1.07
1966	344.11	14.34	4.17	6.57
1972	353.34	15.10	4.27	5.30
1977	369.53	14.40	3.90	-4.58
1983	419.59	18.44	4.39	28.00
1987	445.29	17.34	3.89	-5.95
1993	470.83	19.67	4.18	13.43
1997	485.39	19.94	4.11	1.36
2003	485.00	21.67	4.47	8.69
2007	529.70	23.52	4.44	8.51
2012	511.22	26.29	5.14	11.78

(Source: Author's calculation using data from directorate of animal husbandry, Gujarat)

One of the key input for the livestock sector is the feed and fodder, which contributes more than 65 percent to the total cost of production. The value of output is considered to be a good indicator to assess the market value of a particular commodity during a particular year. The value of output from livestock sector in

Gujarat stood at ₹364 billion which is 6.5 percent of national value of output from livestock sector. The value of fodder in Gujarat is maintained at ₹21 billion except the year 2013-14 when the state witnessed inadequate rain in 2013.

**Table 2: Year Wise Value of Output of Fodder and Livestock Sector**

Year	Fodder (₹ billion)		Livestock Sector (₹ billion)		Gujarat Share in National Value		Ratio of VOP of Fodder to Livestock sector of Gujarat
	Gujarat	India	Gujarat	India	Fodder	Livestock	
2011-12	21	325	311	4,878	6.36	6.38	0.07
2012-13	21	324	324	5,081	6.38	6.38	0.06
2013-14	17	316	347	5,310	5.51	6.53	0.05
2014-15	21	318	364	5,620	6.50	6.48	0.06

(Source: mospi.nic.in)

Availability of green fodder is safeguarded by the farmers either by cultivating fodder at own farm or by purchasing from traders or fellow farmers. It is not always necessary that if a farmer is owning livestock is also cultivating fodder. There are various factors responsible for green fodder cultivation. Farmers owning land grow green fodder in a small plot along with other food crops. The livestock farmer

without land holding has to depend on outside sources completely. The animals are sent outside to pasture land for grazing as well. Land availability is one of the major factor determining fodder cultivation. Farmers try to cultivate green fodder even in a small plot to make sure the fodder is available for the livestock.

Green Fodder is mainly grown by the farmers in their field. Green maize, sorghum, pearl millet, lucerne and green grass are the predominant green fodders. Those who don't grow, buy from the village itself or from the nearby village. It was found that 25.5 percent farmers are purchasing green fodder either from the traders or from the fellow farmers. Dry fodder purchasing farmers constitute 53

percent of the total sample farmers. Many of the farmers in spite of cultivating fodder in their farm are purchasing from outside as well because of less production in the farm. Compound feed is bought by 78 percent of the farmers. The sheep and goat keepers are not purchasing. Even when the dairy animals turn dry, the farmers do not give concentrate in the ration.

**Table 3: Livestock Farmers Purchasing Feed and Fodder**

Feed and fodder	Percent Farmers
Green fodder	25.5
Dry fodder	53
Compound feed	78

An inquiry was made to find the constraints faced by the traders and the dealers who are into feed and fodder business. The constraints which are generally found in the agricultural input business were listed by reviewing the

available literatures as well as preliminary inquiry of the dealers. The list of constraints thus finalized was used to rank with the help of the traders and dealers. A total seven constraints were used for inquiry.

**Table 4: Percent Position and Garrett Values for Traders' Constraints**

Rank	Percent position $= (100 \times (\text{Rank} - 0.5)) / 7$	Garrett value
1	69.98	1
2	66.18	2
3	62.34	3
4	49.20	4
5	46.18	5
6	31.30	6
7	25.14	7

Table 5 reveals the constraint faced by the feed/fodder trader in Gujarat. Most of the traders were dissatisfied with the profit in the business. They opined that the feed business has minimum profit. Traders also feel that there are so many players in small fodder market. The entry in the business is very easy. Low demand is also felt by the traders as one of the constraint. Many livestock farmers are meeting their feed and fodder demand in-house without much depending on market. The

availability of compound feed in the dairy cooperative societies limits the demand of compound feed substantially.

Traders often complain about the quality of the feed materials the feedback of which they get from the farmers. Working capital for feed business is also required particularly for the concentrate feed, the traders were unhappy with the interest rate being charged by the banks. The processing charge charged annually for renewal is also not acceptable by the traders. Though labour

problem and storage issues were very scanty, these were ranked last.

**Table 5: Constraints Faced by the Feed/fodder Traders in Gujarat**

Constraints	Garrett Score	Rank
Less remunerative	69.98	1
High Competition	66.18	2
Less demand	62.34	3
Poor quality of supply	49.20	4
Credit from bank	46.18	5
Labour constraint	31.30	6
Storage problem	25.14	7

### CONCLUSION

Traders perceive less remuneration in the livestock feed and fodder trading as the biggest constraint followed by presence of many competitors in the business. Storage problem is ranked last.

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