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Research Article

CONSTRAINTS FACED BY DIFFERENT STAKEHOLDERS IN DAIRY SECTOR OF ANDHRA PRADESH

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Abstract: The present study was undertaken to explore the constraints faced by the cooperative and private dairy farmers. The constraints were prioritized using rank-based quotient (RBQ) technique. Based on the assessment, the results disclosed that the major constraint faced by the cooperative dairy industries was high competition with other industries. Maintaining the dairy industry was the most considerable constraint faced by the private dairy sector. Less remunerative price given by the dairies was the major impediment faced by the cooperative dairy farmers and inadequate availability of feed and fodder was the extensive problem confronted with private dairy farmers. Wholesalers and retailers considered that maintenance costs were the major impediment noticed. Finally, the availability of various products was the major constraint faced by the consumers.

Keywords: *Dairy farmers, Constraints, Cooperative Dairy Industry, Private Dairy Industry and Rank Based Quotient (RBQ)*

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Introduction

India continued to be the highest milk producing nation in the world, with milk production 187.7 million tonnes in 2018-19 as against 176.3 million tonnes in 2017-18 with an increase by 6.5 percent [1]. Dairying plays a pivotal role in agricultural sector and contributes more to the socio-economic development of rural livelihood. The existence of operation flood enables the modernization of the dairy sector where the country makes to exploit the global market opportunities. Along with the cooperatives, private dairy industries were also increasing in number and becomes an integral part of creating opportunities for the dairy farmers.

The capacity created by the private dairies for the last 20 years is comparatively more than the capacity set up by the cooperatives in over 30 years [2]. Despite of being a highest producer country and having immense expansion of cooperative and private dairies over the decades, milk producers were confronting to numerous problems that makes their livelihood troublesome. It is paramount importance to have a clear understanding about the constraints faced by the dairy sector.

Materials and Methods

Andhra Pradesh was purposively selected for the research study which occupied the fourth rank in milk production of 15.04 million tonnes next to Uttar Pradesh (30.51 million tonnes), Rajasthan (23.66 million tonnes) and Madhya Pradesh (15.91 million tonnes) [3]. Three districts namely Krishna, Guntur and Kurnool with estimated milk production of 1550.28, 1445.30 and 1120.20 ('000 metric tonnes), respectively were selected on the basis of highest milk production.

A total of six dairy industries with a count of three cooperative and three private dairies were selected. Dairy farmers who were selling their milk to these dairy industries were selected randomly with a total of 180 sample members and 30 from each dairy.

A total of 30 wholesalers as well 30 retailers were selected, 5 from each dairy industry. Consumers who were preferring to a particular brand of dairies were selected randomly. From each preferred dairy industry five consumers were picked up with a total of 30 in number. Data with regard to constraints were collected tabulated based on the ranks given by them. The tabulated data was quantified by adopting rank-based quotient (RBQ) technique. The RBQ formula given as follows [4].

$$RBQ = \sum_{i=1}^{n} \frac{f_i(n+1-i)*100}{N*n}$$

Where,
fi = Frequency of respondents for the i^{th} rank of the constraint
N = Total number of respondents
n = Number of ranks

Results and Discussion

The intensity of the enlisted constraints faced by the cooperative and private dairy farmers were computed based on the ranks using RBQ technique and presented below the following tables.

Table-1 *Constraints faced by Cooperative dairy industries (n=3)*

SN	Constraint	RBQ Value	Rank
1	Variation in quality and quantity of milk	66.67	VI
2	High competition	95.83	I
3	Maintenance costs	87.50	II
4	Availability of infrastructure facilities	45.83	VIII
5	Technical guidance to labour	70.83	V
6	Delay in payment	62.50	VII
7	Deficit service of technical inputs	75.00	IV
8	Farmer's dissatisfaction	79.17	III

The constraints faced by the cooperative dairy industry were discussed [Table-1]. The extensive constraint faced by the cooperative dairy was high competition among other dairy industries which ranks first with RBQ value of 95.83 as private dairies also started with increase in their number and attracting farmers. After the high competition, maintenance costs (RBQ value of 87.50) of dairy industry was the second major constraint. It was followed by farmer's dissatisfaction having 79.17 RBQ value which means that the dairy farmers were not satisfied with the incentives provided by the dairy industry. The fourth ranked constraint was deficit service of technical inputs regarding the timely inefficient work being provided by the staff. Technical guidance to labour (RBQ value of 70.83) was the next impediment followed by variation in quality and quantity of milk which means that farmers according to their interest changing their supply of milk to the industry. Due to unavailability of funds, there will be delay in payments to the farmers and the payment was also delayed by the stakeholders. The least impediment faced by the dairy industry was availability of infrastructure facilities for its maintenance with RBQ value of 45.83. Similar results were observed with Vykhaneswari, 2016 [5] where maintenance costs were regarded as the predominant constraint encountered with cooperative dairy industry i.e., Ongole dairy. Other constraints reported were technical guidance to labour, infrastructural facilities and late payment which ranked differently.

Table-2 *Constraints faced by Private dairy industries (n=3)*

SN	Constraint	RBQ Value	Rank
1	Variation in quality and quantity of milk	66.67	V
2	High competition	91.67	II
3	Maintenance costs	95.83	I
4	Availability of infrastructure facilities	87.50	III
5	Technical guidance to labour	70.83	IV
6	Delay in payment	45.83	VII
7	Deficit service of technical inputs	37.50	VIII
8	Farmer's dissatisfaction	62.50	VI

The challenges that were confronted with private dairy industry were given in the [Table-2]. Maintenance costs of the entire dairy industry was dominant constraint which ranks first with RBQ value of 95.83 faced by the private dairy industries. After to that, high competition among other dairy industries was ranked as second major constraint with RBQ value of 91.67. It was followed by availability of infrastructure facilities with less reliability (RBQ value of 87.50) which ranks third. There was a requirement of skilled labour in order to maintain the infrastructure that was available in the industry which become a problem as technical guidance to labour having RBQ value of 70.83. The fifth constraint was variation in quality and quantity of milk as the farmers were changing their preferences. The sixth bottleneck faced was farmer's dissatisfaction towards their incentives provided. Delay in providing and getting payments and deficit service of technical inputs were the least important impediments encountered by the private dairy industries with RBQ values of 45.83 and 37.50, respectively.

Table-3 *Constraints faced by Cooperative dairy farmers (n=90)*

SN	Constraint	RBQ Value	Rank
1	Inadequate availability of feed and fodder	94.75	II
2	High incidence of diseases	85.25	VII
3	High cost of medicines	85.35	VI
4	Repeat breeding in dairy animals	76.16	IX
5	Inadequate availability of land & labour	87.98	V
6	Low average milk yield	88.18	IV
7	Less remunerative prices	98.08	I
8	High cost of feed and fodder	89.29	III
9	Inadequate knowledge about balanced ration	84.85	VIII
10	Difficulty to access veterinary services	53.03	XI
11	Lack of training facilities	74.14	X

Constraints faced by the dairy farmer respondents who were trading with cooperative dairy industries were given in [Table-3]. Less remunerative prices with RBQ value of 98.08 was the major constraint as the farmers were not getting the reasonable price for their produce sold to the industries. Inadequate availability of feed and fodder and high cost of feed and fodder were the second and third major constraints faced by the dairy farmers with RBQ values of 94.75 and 89.29, respectively. The fourth impediment was the low average milk yield (88.18) given by the animals due to less feed and more prone to diseases. For maintaining the dairy animals, there was insufficient availability of land and labour which considered as the fifth major constraint by the respondent farmers. Other constraints faced by the cooperative dairy farmers were high cost of medicines, high incidence of diseases, inadequate knowledge about balanced ration which ranks 6th, 7th and 8th with RBQ values of 85.35, 85.25 and 84.85, respectively. Repeat breeding means that the animals were failed to conceive for at least two successive inseminations was also the impediment faced by the dairy farmers. The least important constraints encountered were lack of training facilities and difficulty to access veterinary services provided by the cooperative dairy industries. Similar results were observed in case of Varaprasad et al. (2013) [6] where low price paid, high cost and non-availability of feed ingredients were the preeminent problems come across with the dairy farmers. Narendrareddy et al., (2003) [7] and Bhatele (2016) [8] reported that non remunerative prices for milk was the major problem reported by the dairy farmers. Rathod et al., (2011) [9] and Shaikh et al., (2013) [10] observed that non availability of fodder round the year was the predominant constraint encountered by the dairy farmers. High cost of feed and fodder as the major constraint reported by Reddy (2010) [11], Singh et al. (2012) [12] and Panchbhai et al. (2017) [13].

Table-4 *Constraints faced by Private dairy farmers (n=90)*

SN	Constraint	RBQ Value	Rank
1	Inadequate availability of feed and fodder	96.97	I
2	High incidence of diseases	83.94	VII
3	High cost of medicines	82.02	VIII
4	Repeat breeding in dairy animals	87.27	VI
5	Inadequate availability of land & labour	75.66	XI
6	Low average milk yield	81.92	IX
7	Less remunerative prices	76.06	X
8	High cost of feed and fodder	95.66	II
9	Inadequate knowledge about balanced ration	89.19	IV
10	Difficulty to access veterinary services	88.08	V
11	Lack of training facilities	95.05	III

The above [Table-4] shows about the constraints encountered with private dairy farmers. The predominant constraint faced was inadequate availability of feed and fodder for the animals which ranks first followed by high cost of feed and fodder. The third important constraint faced was private dairy industries will not provide any training facilities to the dairy farmers. The next impediment was the farmers not having adequate knowledge about the balanced ration in order to maintain the diet of dairy animals. The respondents were facing a difficulty to access veterinary services as the fifth constraint to get the medical advice for the cattle. It was followed by repeat breeding in dairy animals, high incidence of diseases and high cost of medicines as sixth, seventh and eight constraints, respectively. Finally, the least important impediments which ranks nineth, tenth and eleventh were low average milk yield by the animals, giving less remunerative prices by the private dairy industries and inadequate availability of land and labour for maintaining the dairy animals.

Similar result was observed with Mahalakshmi et al. (2016) [14] in their study found that 100 percent of the respondents claimed that non-availability of the green fodder round the year was considered as the major constraint. Vykhaneswari et al. (2017) [5] encountered that unavailability of green fodder throughout the year and high cost of cattle feed were the major constraints faced by non-cooperative members. Khoveio et al. (2012) [15] found that low availability & high price of concentrate and lack of availability of green fodder were the major constraints faced by both cooperative and non-cooperative members.

Table-5 *Constraints faced by Wholesalers and Retailers*

SN	Constraint	RBQ Value	Rank	RBQ Value	Rank
		Wholesalers (n=30)		Retailers (n=30)	
1	More formalities	73.33	III	60.89	IV
2	Maintenance costs	93.89	I	89.44	I
3	Late payment	47.78	VII	41.67	VII
4	Availability of infrastructure facilities	64.29	V	53.64	VI
5	Transportation costs	70.56	IV	86.67	II
6	Delay in marketing	52.78	VI	57.22	V
7	Availability of labour	88.33	II	72.78	III

The constraints faced by the stakeholders like wholesalers and retailers were addressed, tabulated and analyzed with the aid of RBQ technique where the results were mentioned in [Table-5].

Maintenance costs was the major impediment faced by the wholesalers with RBQ value of 93.89 followed by less availability of labour for the maintenance having 88.33 RBQ value. More formalities to be followed for the collection of produce from the dairy industries for registration was the third most important constraint. For collection and marketing of produce, transportation costs were high considered to be another important impediment with rank four (70.56). The least important constraints were availability of infrastructure facilities followed by delay in marketing and late payment given by other stakeholders with fifth, sixth and seventh rank of RBQ values 64.29, 52.78 and 47.78 respectively.

As similar to wholesalers, maintenance costs were the predominant constraint faced by the retailers which ranked first with RBQ value of 89.44. The second major constraint was transportation costs with RBQ value of 86.67. Insufficient availability of labour which ranks third with RBQ value of 72.78 was another impediment encountered with retailers. The fourth constraint was more formalities to be followed for getting registration with RBQ value of 60.89. The least considerable constraints were delay in marketing of produce, availability of infrastructure facilities and late payment by other stakeholders having RBQ values of 57.22, 53.64 and 41.67 with fifth, sixth and seventh ranks, respectively.

Table-6 *Constraints faced by Consumers*

SN	Constraint	RBQ Value	Rank
1	Variation in quality of product	54.76	V
2	Reasonable Price	77.14	III
3	Product availability	90.48	I
4	Distance to the outlet	82.86	II
5	Poor packing	50.48	VI
6	Improper door delivery	69.52	IV
7	Flexibility of paying payments	45.71	VII

The ultimate destination where the products finally reached from production to consumption were consumers. The constraints faced by the consumers were given in [Table-6]. The major constraint faced was product availability i.e., required products were not available at all the time which ranks first with RBQ value of 90.48. Distance to the outlet for purchasing the products was the second major constraint having RBQ value of 82.26. Consumers felt that the price was not reasonable with RBQ value of 77.14 which considered to be another major impediment that ranks third followed by improper door delivery with fourth rank (RBQ value of 69.52). The least important constraints faced by the consumers were variation in quality of product, poor packing and flexibility of paying payments which ranks fifth, sixth and seventh, respectively.

Conclusion

Therefore, both cooperative and private dairies need to be more beneficial in order to make the dairy sector more capable to overcome the impediments faced. Cooperative and private dairy industries have to make more feasibility in order to attract more of wholesalers and retailers. The first and foremost element that need to be concentrated in case of dairy farmers was to make the availability of feed and fodder throughout the year on subsidy. Cooperative sector has to extend the services provided and ensure that the services should influence the management practices of the dairy farmers. This sector has to increase the price paid to the farmers on par with the private dairies. Instead of being a profit-oriented enterprise, private dairy industries also have to initiate the services that will help the dairy farmers.

Application of research: Constraints faced in the dairy sector were noticed and dairy industries has to take necessary actions in order to build up the livelihoods of dairy farmers.

Research Category: Dairy sector

Abbreviations: RBQ- Rank Based Quotient

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