

*Original Research***Perception of Livestock Farmers Towards Existing Livestock Service Delivery Systems in Jaipur District of Rajasthan, India****Manisha Singodia<sup>\*</sup>, Sanjay Kumar Rewani, Sunil Rajoria<sup>1</sup>, Virendra Singh<sup>1</sup> and Gara Ram Saini**

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**Abstract**

*An exploratory study was conducted in Jaipur district of Rajasthan to know the perception of livestock farmers towards existing livestock service delivery systems. Data were collected from 120 randomly selected livestock farmers through structured interview schedule. The study revealed that majority of the livestock farmers (70.00%) had favourable perception towards livestock service delivery systems followed by 15.83 per cent with less favourable and 14.17 per cent with more favourable perception. Age, annual gross income, experience in livestock farming and mass media exposure had positive and non-significant relationship with perception of livestock farmers towards livestock service delivery systems, while education, family size and land holding had negative and non-significant relationship. Herd size, extension contact and social participation had positive and significant relationship with perception of livestock farmers towards livestock service delivery systems.*

**Key words:** Extension Contact, Livestock Farming, Livestock Service Delivery Systems and Perception**How to cite:** Singodia, M., Rewani, S., Rajoria, S., Singh, V., & Saini, G. (2019). Perception of Livestock Farmers Towards Existing Livestock Service Delivery Systems in Jaipur District of Rajasthan, India. International Journal of Livestock Research, 9(8), 111-119. doi: 10.5455/ijlr.20190327091331**Introduction**

The delivery of livestock services is emerging as an important priority area due to increasing demand of livestock and its products for enhancing and optimizing livestock production. Quality in livestock services forms the basis of sustainable development of farmer. These services make an indispensable contribution to the physical, mental and social welfare of humans (Prabhakaran, 2000). Effective and efficient delivery of animal health and production services is considered as vital for gainful livestock development and hence, efficient delivery of livestock services has become a subject of rising concern to many national and

international organizations including FAO (Kleeman, 1999). There is a growing demand among producers and consumers for veterinary services to protect the health of animals and the safety of products of animal origin for both domestic and international markets.

Since independence in India, the livestock service delivery is under the control of public sector and the major agencies dealing with livestock extension service are Directorate of Extension (Ministry of Agriculture), Indian Council of Agricultural Research, National Dairy Development Board, Krishi Vigyan Kendra, State Agricultural and Veterinary Universities and State Department of Animal Husbandry. In addition, national and regional level extension services are also provided by private agencies, Dairy Cooperatives and NGOs (GOI, 2006).

The plethora of studies (Ravikumar *et al.*, 2007; Jagadeeshwary, 2003 and Rajashree, 2000) has indicated that State Department of Animal Husbandry and Veterinary Services are the main and primary provider of livestock services apart from other private and cooperative service providers. The government maintains a large public infrastructure on livestock services, but there are questions about the service utility and reach to the livestock producers (Planning Commission, 2007). A major challenge for delivery of livestock services in India is the provision of adequate services of an acceptable standard or quality. In this background, it was felt important to know the perception of livestock farmers towards existing livestock service delivery systems.

### Materials and Methods

The present study was conducted in purposively selected Jaipur district of Rajasthan. Out of 16 tehsils of Jaipur district, four tehsils *viz.* Phulera, Amber, Chomu and Jamwa Ramgarh were selected purposively on the basis of higher livestock population and presence of different livestock service delivery systems like dairy cooperative societies, public and private livestock service providers, private dairies, milk vendors, public veterinary health centers and other agencies. In the next stage of sampling, three villages were selected randomly from each selected tehsil making a total of 12 villages. Ten livestock farmers availing the services of different livestock service providers were selected randomly from each village. Thus, a total of 120 respondents were selected and interviewed personally. A structured schedule was developed which contain 20 statements including sixteen positive and four negative for measuring the perception of livestock farmers towards livestock service delivery systems. The responses were recorded on a five point continuum representing strongly agree, agree, undecided, disagree, and strongly disagree with scores of 5,4,3,2, and 1 for positive statements and vice-versa for negative statements, respectively. The maximum and minimum obtainable score was 100 and 20 respectively. After getting the total perception score of each respondent, they were classified into three groups as less favourable, favourable and more favourable on the basis of

mean and standard deviation. Correlation coefficient was used to study the relationship between independent variables and perception of livestock farmers towards livestock services delivery systems.

## Results and Discussion

### Personal Attributes of the Respondents

The study of personal attributes was carried with reference to age, education, category, religion, occupation, family size, family type, land holding, herd size, annual gross income, experience in livestock farming, extension contact, mass media exposure, social participation and economic motivation.

**Table 1:** Distribution of respondents according to their personal attributes (n=120)

S. No.	Personal Attributes	Frequency (f)	Per cent (%)
<b>1</b>	<b>Age</b>		
i	Young (Up to 30 years)	12	10
ii	Middle (31 to 50 years)	84	70
iii	Old (Above 50 years)	24	20
	<b>Mean ± S.D.</b>	<b>44.25 ±10.02</b>	
<b>2</b>	<b>Education</b>		
i	Illiterate	48	40
ii	Upto Primary level	15	12.5
iii	Upto Middle level	17	14.17
iv	Upto High school level	4	8.33
v	Upto Intermediate level	8	6.66
vi	Graduate & above	22	18.34
<b>3</b>	<b>Category</b>		
i	General	40	33.33
ii	Other Backward Caste	67	55.84
iii	Schedule Tribe	4	3.33
iv	Schedule Caste	9	7.5
<b>4</b>	<b>Religion</b>		
i	Hindu	120	100
<b>5</b>	<b>Primary Occupation</b>		
i	Agriculture	73	60.84
ii	Livestock rearing	17	14.16
iii	Agricultural labour	3	2.5
iv	Non-agricultural labour	6	5
v	Trade & commerce	12	10
vi	Others	9	7.5
<b>6</b>	<b>Secondary Occupation</b>		
i	Agriculture	12	10
ii	Livestock rearing	91	75.83
iii	Agricultural labour	9	7.5
iv	Non-agricultural labour	3	2.5
v	Trade & commerce	5	4.17
vi	Others	0	0
<b>7</b>	<b>Family Size</b>		
i	Small (Up to 5 members)	42	35
ii	Medium (6 to 9 members)	54	45
iii	Large (Above 9 members)	24	20

	<b>Mean ± S.D.</b>	<b>6.88±2.64</b>	
<b>8</b>	<b>Family Type</b>		
i	Nuclear	76	63.33
ii	Joint	44	36.67
<b>9</b>	<b>Land Holding</b>		
i	No land (Landless)	4	3.33
ii	Marginal (Upto1 hectare)	33	26.67
iii	Small (1.1 to 2.0 hectares)	67	55.83
iv	Medium (2.1 to 4.0 hectares)	9	7.5
v	Large (Above 4 hectares)	8	6.67
	<b>Mean ± S.D.</b>	<b>1.67±1.00</b>	
<b>10</b>	<b>Herd Size</b>		
i	Small (Upto 4)	7	5.83
ii	Medium (5 to 14)	100	83.33
iii	Large (Above 14)	13	10.84
	<b>Mean ± S.D.</b>	<b>9.65±4.30</b>	
<b>11</b>	<b>Annual Gross Income</b>		
i	Low (Upto 61279.98)	22	18.33
ii	Medium (61279.99 to 313003.40)	80	66.67
iii	High (Above 313003.40)	18	15
	<b>Mean ± S.D.</b>	<b>187141.70±125861.70</b>	
<b>12</b>	<b>Experience in Livestock Farming</b>		
i	Low (Upto 9.93)	23	19.17
ii	Medium (9.94 to 30.43)	76	63.33
iii	High (Above 30.43)	21	17.5
	<b>Mean ± S.D.</b>	<b>20.18±10.24</b>	
<b>13</b>	<b>Extension Contact</b>		
i	Low (Upto 5.13)	23	19.17
ii	Medium (5.14 to 11.73)	77	64.16
iii	High (Above 11.73)	20	16.67
	<b>Mean ± S.D.</b>	<b>8.43±3.30</b>	
<b>14</b>	<b>Mass Media Exposure</b>		
i	Low (Upto 2.78)	20	16.67
ii	Medium (2.79 to 6.76)	82	68.33
iii	High (Above 6.76)	18	15
	<b>Mean ± S.D.</b>	<b>4.77±1.98</b>	
<b>15</b>	<b>Social Participation</b>		
i	Low (Upto 1.47)	23	19.17
ii	Medium (1.48 to 2.62)	80	66.67
iii	High (Above 2.62)	17	14.16
	<b>Mean ± S.D.</b>	<b>2.05±0.57</b>	
<b>16</b>	<b>Economic Motivation</b>		
i	Low (Upto 10.44)	18	15
ii	Medium (10.45 to 14.56)	80	66.66
iii	High (Above 14.56)	22	18.34
	<b>Mean ± S.D.</b>	<b>12.50±2.06</b>	

It is evident from Table 1 that majority of the respondents (70.00%) belonged to middle age group followed by old (20.00%) and young (10.00%) age group with average age of 44.25 years. These observations are in conformity with the findings of Gautam *et al.* (2007); Halder (2008); Tiwari and Upadhyaya (2012); Kathiriya

*et al.* (2013) and Jhirwal *et al.* (2018) who reported that majority of the respondents were in the middle age group. As regards to education, majority of the respondents (40.00%) were illiterate followed by graduate & above (18.34%) and middle level (14.17%). This finding is in corroboration with that of Kathiriya *et al.* (2013). However, this finding is in contradiction with the results of Tiwari and Upadhya (2012). It was also found that majority of the respondents (55.84%) belonged to other backward caste followed by general caste (33.33%), schedule caste (7.50%) and schedule tribe (3.33%). This finding is in contradiction with that of Rewani and Tochwang (2014) who revealed that majority of the respondents belonged to schedule tribe category. As regards to category, all the respondents (100.00 %) belonged to Hindu religion and none of the respondents were from Muslim, Jain, Sikh or Christian community. With respect to occupation, a larger percentage of the respondents had agriculture as the primary occupation (60.84 %) and livestock rearing as their secondary occupation (75.83 %). Regarding family size, majority of respondents (45.00 %) had medium size families followed by small (35.00%) and large size families (20.00%) with average family size of 6.88 members. This finding is not in consonance with the earlier findings of Gautam *et al.* (2007). Table 1 further indicates that majority of the respondents (63.33 %) were living in nuclear family system followed by joint family (36.67 %). The reason for this may be due to modern thinking about freedom and privacy that may not be possible in joint families. This finding is not in line with that of Kathiriya *et al.* (2013) who reported that majority of the respondents were having joint family. As regards to land holding, majority of the respondents (55.83 %) were having small land holding followed by marginal (26.67%) with average land holding of 1.67 hectares. With respect to herd size, majority of the respondents (83.33%) had medium size of herd followed by large (10.84 %) and small (5.83%) herd size with average herd size of 9.65 animals. The majority of respondents (66.67 %) were in the medium income group followed by low (18.33%) and high (15.00 %) income groups with average annual gross income of 187141.70 INR per year. Results further of level of experience in livestock farming (63.33%), extension contact (64.16%), mass media exposure (68.33 %), social participation (66.67 %) and economic motivation (66.66 %).

### **Perception of Livestock Farmers towards Livestock Service Delivery Systems**

The perception of livestock farmers towards existing livestock service delivery systems has been analyzed in Table 2. A perusal of this table reveals that a great majority of livestock farmers were in agreement with positive statements about livestock service delivery systems like livestock service delivery systems have empowered the decision-making process (79.17%), giving opportunities for skill development (75.00%), helping to enhance livestock production (68.33%), providing services to livestock-related income-generating activities (65.00%), acquired a distinguishable increment in knowledge among farmers (62.50%), giving need-based services (52.50%), giving wide information on new advancements (50.00%) and conducting need-based training programmes (45.00%).

**Table 2:** Distribution of livestock farmers on the basis of their perception towards livestock service delivery systems (n=120)

S. No.	Perception	SA		A		UD		DA		SDA	
		f	%	f	%	f	%	f	%	f	%
1.	Livestock service delivery systems are giving wide information on new advancements	4	3.33	60	50	53	44.17	3	2.5	0	0
2.	Present livestock service delivery systems are giving services round the clock	4	3.33	22	18.34	4	3.33	86	71.66	4	3.34
3.	Service delivery systems are partial towards large farmers	0	0	5	4.17	28	23.33	68	56.67	19	15.83
4.	Service providers of the livestock service delivery systems are visiting livestock farms consistently	10	8.33	33	27.5	25	20.83	47	39.17	5	4.17
5.	The livestock service delivery systems have acquired a distinguishable increment in knowledge among farmers	5	4.17	75	62.5	6	5	24	20	10	8.33
6.	The livestock service delivery systems have empowered the decision-making process	13	10.83	95	79.17	10	8.33	2	1.67	0	0
7.	The livestock service delivery systems are giving need-based services	17	14.16	63	52.5	2	1.67	25	20.83	13	10.83
8.	The livestock service delivery systems are helping to enhance livestock production	19	15.83	82	68.33	11	9.17	5	4.17	3	2.5
9. *	The livestock service delivery systems are not distributing farm literature	3	2.5	13	10.83	14	11.67	56	46.67	34	28.33
10. *	The livestock service delivery systems are not giving market information	0	0	21	17.5	31	25.83	62	51.67	6	5
11.	The livestock service delivery systems are giving opportunities for skill development	27	22.5	90	75	2	1.67	1	0.83	0	0
12.	The livestock service delivery systems are conducting need-based training programmes	12	10	54	45	42	35	7	5.83	5	4.17
13.	The livestock service delivery systems are giving more importance to organized farmers group	0	0	10	8.33	90	75	20	16.67	0	0
14. *	The livestock service delivery systems are not carrying out follow up actions regularly	11	9.16	72	60	8	6.67	17	14.16	12	10
15.	The livestock service delivery systems are providing service to livestock-related income-generating activities	22	18.34	78	65	4	3.33	10	8.33	6	5
16.	The livestock service delivery systems are having staff in delivering the services	11	9.16	23	19.16	18	15	45	37.5	23	19.17
17.	The livestock service delivery systems vary with the number of livestock owned by a farmer	0	0	13	10.83	43	35.83	58	48.34	6	5
18. *	The livestock services given by the service delivery systems are not up to the grass root level	14	11.66	75	62.5	16	13.33	7	5.83	8	6.66
19.	The subsidies in purchasing animals are being given by livestock service delivery systems are satisfactory	11	9.17	21	17.5	11	9.17	66	55	11	9.16
20.	The services provided by service delivery systems can be productive to the livestock farmers only when they change into paid services	10	8.33	33	27.5	4	3.33	65	54.17	8	6.67

SA: Strongly agree; A: Agree; UD: Undecided; DA: Disagree and SDA: Strongly Disagree; \*Negative Statements

On the other hand, most of the livestock farmers were in disagreement with the positive statements like present livestock service delivery systems are giving services round the clock (71.66 %), partial towards large farmers (56.67 %), subsidies in purchasing animals are satisfactory (55.00 %), services can be productive to the livestock farmers only when they change into paid services (54.17 %), vary with the number of livestock owned by a farmer (48.33 %), service providers are visiting livestock farms

consistently (39.17 %) and having sufficient staff in delivering the services (37.50 %). Most of the livestock farmers were in agreement with the negative statements like livestock services are not up to the grass root level (62.50 %) and not carrying out follow up actions regularly (60.00 %). Whereas, most of the livestock farmers were in disagreement with the negative statements like livestock service delivery systems are not giving market information (51.67 %) and not distributing farm literature (46.67 %). Majority of the respondents had no opinion about the statement like livestock service delivery systems are giving more importance to organized farmers group (75.00 %). The results presented in Table 3 suggests that majority of the livestock farmers (70.00%) had favourable perception towards livestock service delivery systems followed by 15.83 per cent with less favourable and 14.17 per cent with more favourable perception. This result is in accordance with Deekshit *et al.* (2017) who observed that majority of the respondents had the medium level of perception on service delivery systems followed by low and high levels, respectively.

**Table 3:** Overall perception of livestock farmers towards livestock service delivery systems (n=120)

S. No.	Perception	f	%
1.	Less favourable (upto 57.62 score)	19	15.83
2.	Favourable (57.63 to 67.44 score)	84	70
3.	More favourable (Above 67.44 score)	17	14.17

### Relationship Between Selected Independent Variables and Perception of Livestock Farmers Towards Livestock Service Delivery Systems

The data presented in Table 4 indicates that age, annual gross income, experience in livestock farming and mass media exposure had positive and non-significant relationship with perception of livestock farmers towards livestock service delivery systems, while education, family size and land holding had negative and non-significant relationship. Herd size, extension contact and social participation had positive and significant relationship with perception of livestock farmers towards livestock service delivery systems.

**Table 4:** Pearson’s correlation for perception of livestock farmerstowards livestock service delivery systems with independent variables

S. No.	Independent Variables	Pearson’s Correlation Coefficient (r <sub>p</sub> )
1.	Age	0.015
2.	Education	-0.138
3.	Family size	-0.008
4.	Land holding	-0.003
5.	Herd size	0.299**
6.	Annual gross income	0.132
7.	Experience in livestock farming	0.143
8.	Extension contact	0.188*
9.	Mass media exposure	0.038
10.	Social participation	0.263**

\*\* Significant at 1 per cent level; \* Significant at 5 per cent level

Different age categories of farmers might have developed a non significant perception towards the livestock service delivery systems which may be due to the reason that the different services provided by them can be accessed by the farmers without age difference. Different respondents belonging to the different level of education status had different perspectives such as knowledge, information and services availability, which would have lead to the negative association between education and perception towards livestock service delivery systems. Negative association of family size and farmers' perception may be attributed to the fact that as the number of family members increases their responsibility for getting the various services decreases. Negative association of land holding with farmers' perception might be due to the reason that respondents with more land may neglect the herd animals for obtaining the services. As the herd size increases, the farmers' dependence on the service delivery systems also increases for various services leading to positive and significant relationship with farmers' perception towards them. Positive and significant association of extension contact and social participation with farmers' perception towards livestock service delivery systems might be because of the fact that when the farmers have more contact with these agents and participate more in various activities in the community, their awareness about the various services provided by them also increases. The income of the farmers increases due to the services provided by the livestock services delivery systems.

Hence, annual gross income had positive relationship with the farmers' perception. The positive relationship of mass media exposure and experience in livestock farming with farmers' perception might be because of the fact that increased experience and farmers' exposure towards the mass media increases their awareness level about the services being provided by various livestock services delivery systems.

### Conclusion

The study concluded that majority of livestock farmers had favorable perception towards various services of existing livestock service delivery systems. However, the existing livestock service delivery systems were unable to satisfy the respondents in the areas of providing services round the clock, satisfactory subsidies in purchasing of animals, visiting livestock farms consistently, sufficient staff in delivering the services, providing services up to the grass root level and carrying out follow up actions regularly. Hence, various service providers should improve their activities in these areas to satisfy the farmers.

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