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## **Constraints Faced by Broiler Poultry Farmers in Ajmer District of Rajasthan**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. Author GRS designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author VS managed the analyses of the study. Authors MS, SR and HB managed the literature searches.*

*All authors read and approved the final manuscript.*

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### **ABSTRACT**

The present study was carried out in purposively selected Ajmer district of Rajasthan to evaluate constraints faced by contract broiler poultry farmers, non-contract broiler poultry farmers and employees of integrating firms. Data were collected from 128 randomly selected respondents through structured interview schedule. The study revealed that non-availability of day old chick in time (45.00%), high mortality in birds (43.33%) and delay in lifting the produce (33.33%) were perceived as 'most serious constraints' by contract broiler poultry farmers. Market price fluctuation (66.67%), high mortality in birds due to diseases (55.00%) and high initial investment (51.67%) perceived as 'most serious constraints' by non-contract broiler poultry farmers and selling of frequent price fluctuations in international markets (75.00%) was perceived as 'most serious constraint' by employees of integrating firms.

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## 1. INTRODUCTION

Poultry sector is one of the fastest growing sectors of Indian agriculture today, with annual growth rates of 5.57 per cent and 11.44 per cent in egg and broiler production, respectively [1]. Broiler poultry production accounts for about 0.66 per cent of India's GDP and 7.72 per cent GDP from the livestock sector [1,2]. Among the animal source foods, which are a major source of proteins and micronutrients, poultry meat and eggs provide more proteins than swine, cow milk and lamb per unit of intake [3]. Thus, greater availability and affordability of poultry meat and eggs contribute to enhanced nutrition [4]. Poultry farming is playing an effective role in improving the economic status of the rural people by increasing their income besides providing nutritious food through meat and eggs [5].

Broiler production has been more vibrant than layer production within the poultry sector, with an annual growth rate of 11.44 per cent, production of 3.725 million tons and employment of 4.29 million people [6]. Contract farming is an agreement between farmers and/or marketing firms for the production and supply of agricultural products under forward agreements, frequently at predetermined prices [7]. Contract farming is a means to assist small growers in gaining market access and reducing price risk, and as such it has attracted attention from development agencies and governments in developing countries [8]. Contract farming helps the farmers in increasing their income and standard of living by reducing number of intermediaries, provides transportation and other facilities with fixed and predetermined prices. Despite too much growth in poultry sector farmers are also facing a lot of problems in broiler poultry farming, most of them are lack of organized marketing facility, higher cost of feeds and medicines, lack of availability of quality chicks, higher cost of chicks, higher mortality of broiler birds, lack of veterinary facilities, lack of bank loan facility and lack of knowledge on scientific broiler farming [9]. Broiler poultry face various hurdles in poultry which includes contract broiler poultry farmers, non-contract broiler poultry farmers and employees of integrating firms. The present study was carried out in purposively selected Ajmer district of Rajasthan to evaluate constraints faced by contract broiler poultry farmers, non-contract broiler poultry farmers and employees of integrating firms. A sample size of 128

respondents in which included 120 broiler poultry farmers and 8 employees of integrating firms were randomly selected for study. The data were collected through structured interview schedule. Hence, to study the problems faced by the broiler poultry farmers, this research work was taken up with the objective to delineate the various constraints faced by the poultry farmers.

## 2. MATERIALS AND METHODS

The present study was conducted in purposively selected Ajmer district of Rajasthan owing to well developed network of contract farming system in poultry farming. Four tehsils viz. Ajmer, Beawar, Nasirabad and Peesangan were selected randomly from Ajmer district. From each tehsil, 15 contract broiler poultry farmers and 15 non-contract broiler poultry farmers who were broiler poultry farmers having at least 500 commercial broiler birds under contract or non-contract system for more than two years was prepared with the help of State Poultry Training Institute, Ajmer (Rajasthan). Two employees of integrating firms were also selected randomly from each selected tehsils. Thus, total 128 respondents were selected for the study. The data was collected by using a structured interview schedule. The identified constraints were measured on a four point continuum viz. most serious constraint, serious constraint, less serious constraint and not a constraint respectively. Statistical tools like frequency and percentage were used to draw the inferences.

## 3. RESULTS AND DISCUSSION

### 3.1 Constraints Faced by Contract Broiler Poultry Farmers

The results are presented in Table 1 which is discussed below that non-availability of day old chick in time, high mortality in birds, delay in lifting the produce were perceived as 'most serious constraints' by 45.00, 43.33 and 33.33 per cent contract broiler poultry farmers, respectively while 'serious constraints' by 33.33, 33.33 and 31.67 per cent respondents, respectively. This finding is in line with Prasad et al. [10], Kalamkar [11], Gopala et al. [12] and Bhimraj et al. [13]. Charging for the electricity at the rate of commercial tariff, non-availability of day old chick in time, high mortality in birds and delay in payment were perceived as 'serious constraints' by 40.00, 33.33, 33.33 and 33.33 per cent contract broiler poultry farmers, respectively.

Among the 'less serious constraints' were charging for the electricity at the rate of commercial tariff (46.67%), low contract price (43.33%) and market price fluctuations (36.67%).

Inadequate space & lack of storage facilities (100.00%), partiality towards big farmers (100.00%), inadequate extension advisory services (98.33%), early lifting (96.67%), poor quality of medicines and feed (78.33%), difficulty in meeting quality requirements (76.67%), water scarcity (71.67%), lack of scientific knowledge (63.33%) and non-availability of skilled labourers (61.67%) as 'not a constraint' by contract broiler poultry farmers.

### 3.2 Constraints Faced by Non-contract Broiler Poultry Farmers

Table 2 indicates that market price fluctuation, high mortality in birds due to diseases and high

initial investment were perceived as 'most serious' constraints by 66.67, 55.00 and 51.67 per cent non-contract broiler poultry farmers, respectively while 'serious constraints' by 33.33, 33.33 and 35.00 per cent respondents, respectively. This finding is in line with Gopala et al. [12]. Returns not assured (50.00%), high cost of chicks (46.67%), high feed and medicines cost (46.67%) and adverse climate (43.33%) were perceived as 'serious constraints' by non-contract broiler poultry farmers. Among the 'less serious constraints' were non-availability of credit (41.67%), high rate of interest (43.33%), repayment problems (40.00%), charging for the electricity at the rate of commercial tariff (48.33%) and non-availability of veterinary services from public sector (40.00%), respectively. This finding is in line with Prasad et al. [10], Kalamkar [11], Gopala et al. [12] and Bhimraj et al. [13].

**Table 1. Constraints faced by contract broiler poultry farmers (n=60)**

S. No.	Constraints	MSC		SC		LSC		NC	
		f	%	f	%	f	%	f	%
i	Delay in payment	10	16.67	20	33.33	11	18.33	19	31.67
ii	Low contract price	4	6.67	15	25.00	26	43.33	15	25.00
iii	No compensation to losses	5	8.33	7	11.67	16	26.67	32	53.33
iv	Market price fluctuations	3	5.00	4	6.67	22	36.67	31	51.67
v	Poor quality chicks	4	6.67	8	13.33	16	26.67	32	53.33
vi	Low productivity	2	3.33	4	6.67	20	33.33	34	56.67
vii	Delay in lifting the produce	20	33.33	19	31.67	11	18.33	10	16.67
viii	Non-availability of day old chick in time	27	45.00	20	33.33	7	11.67	6	10.00
ix	High mortality in birds	26	43.33	20	33.33	13	21.67	1	1.67
x	Early lifting	0	0.00	0	0.00	2	3.33	58	96.67
xi	Charging for the electricity at the rate of commercial tariff	2	3.33	24	40.00	28	46.67	6	10.00
xii	Poor quality of medicines and feed	3	5.00	4	6.67	6	10.00	47	78.33
xiii	Inadequate extension advisory services	00	0.00	0	0.00	1	1.67	59	98.33
xiv	Non-availability of veterinary services from public sector	12	20.00	15	25.00	19	31.67	14	23.33
xv	Non-availability of skilled labourers	2	3.33	5	8.33	16	26.67	37	61.67
xvi	High feed and medicines cost	3	5.00	9	15.00	11	18.33	37	61.67
xvii	Delay in supply of inputs	3	5.00	7	11.67	14	23.33	36	60.00
xviii	Difficulty in meeting quality requirements	0	0.00	8	13.33	6	10.00	46	76.67
xix	Inadequate space & lack of storage facilities	0	0.00	0	0.00	0	0.00	60	100.00
xx	Partiality towards big farmers	0	0.00	0	0.00	0	0.00	60	100.00
xxi	Adverse climate	14	23.33	17	28.33	19	31.67	10	16.67
xxii	Lack of scientific knowledge	2	3.33	8	13.33	12	20.00	38	63.33
xxiii	Water scarcity	4	6.67	7	11.67	6	10.00	43	71.67

f - Frequency, % - Per cent, MSC- Most Serious Constraint, SC- Serious Constraint, LSC- Less Serious Constraint, NC- Not a Constraint

**Table 2. Constraints faced by non-contract broiler poultry farmers (n=60)**

S. No.	Constraints	MSC		SC		LSC		NC	
		f	%	f	%	f	%	f	%
i	High initial investment	31	51.67	21	35.00	8	13.33	0	0.00
ii	Returns not assured	19	31.67	30	50.00	11	18.33	0	0.00
iii	Non-availability of credit	5	8.33	15	25.00	25	41.67	15	25.00
iv	High rate of interest	1	1.67	14	23.33	26	43.33	19	31.67
v	Repayment problems	3	5.00	14	23.33	24	40.00	19	31.67
vi	Lack of market information	0	0.00	5	8.33	18	30.00	37	61.67
vii	Market price fluctuation	40	66.67	20	33.33	0	0.00	0	0.00
viii	Low productivity	0	0.00	0	0.00	25	41.67	35	58.33
ix	High cost of chicks	18	30.00	28	46.67	14	23.33	0	0.00
x	Problems in marketing of birds	0	0.00	2	3.33	14	23.33	44	73.33
xi	Poor quality chicks	1	1.67	2	3.33	11	18.33	46	76.67
xii	High mortality in birds due to diseases	33	55.00	20	33.33	7	11.67	0	0.00
xiii	Non-availability of chicks in time	0	0.00	1	1.67	16	26.67	43	71.67
xiv	High feed and medicines cost	25	41.67	28	46.67	7	11.67	0	0.00
xv	Poor quality of medicines and feed	0	0.00	0	0.00	17	28.33	43	71.67
xvi	High labor charges	0	0.00	1	1.67	6	10.00	53	88.33
xvii	Non-availability of skilled labourers	4	6.67	6	10.00	13	21.67	37	61.67
xviii	Charging for the electricity at the rate of commercial tariff	4	6.67	17	28.33	29	48.33	10	16.67
xix	Inadequate extension advisory services	0	0.00	6	10.00	23	38.33	31	51.67
xx	Non-availability of veterinary services from public sector	2	3.33	11	18.33	24	40.00	23	38.33
xxi	Adverse climate	4	6.67	26	43.33	24	40.00	6	10.00
xxii	Lack of scientific knowledge	0	0.00	1	1.67	15	25.00	44	73.33
xxiii	Poor bargaining power	0	0.00	0	0.00	2	3.33	58	96.67

**Table 3. Constraints perceived by employees of integrating firms (n=8)**

S. No.	Constraints	MSC		SC		LSC		NC	
		f	%	f	%	f	%	f	%
i	Lack of proper management by the company	0	0.00	0	0.00	0	0.00	8	100.00
ii	Difficulty in arranging quality inputs	0	0.00	0	0.00	0	0.00	8	100.00
iii	Input diversion	0	0.00	0	0.00	0	0.00	8	100.00
iv	Non-availability of extension staff	0	0.00	0	0.00	0	0.00	8	100.00
v	Poor service delivery by health specialists	0	0.00	0	0.00	0	0.00	8	100.00
vi	Frequent price fluctuations in international markets	6	75.00	2	25.00	0	0.00	0	0.00
vii	Violation of terms and conditions by farmers	0	0.00	0	0.00	0	0.00	8	100.00
viii	Selling of produce to other companies by farmers	0	0.00	0	0.00	0	0.00	8	100.00
ix	Farmers negligence in maintaining quality	0	0.00	0	0.00	0	0.00	8	100.00
x	Difficulty in maintaining communication with farmers	0	0.00	0	0.00	0	0.00	8	100.00
xi	Scarcity of transport vehicles during peak periods	0	0.00	0	0.00	0	0.00	8	100.00
xii	High rate of rent for hiring transport vehicles	0	0.00	0	0.00	0	0.00	8	100.00
xiii	Inability to provide proper transport facilities to farmers due to poor road network, strikes, etc.	0	0.00	0	0.00	0	0.00	8	100.00
xiv	Holding-up of transport vehicles by farmers	0	0.00	0	0.00	0	0.00	8	100.00

Poor bargaining power (96.67%), high labour charges (88.33%), poor quality chicks (76.67%), lack of scientific knowledge (73.33%), problems in marketing of birds (73.33%), poor quality of medicines and feed (71.67%), non-availability of chicks in time (71.67%), non-availability of skilled labourers (61.67%), lack of market information (61.67%), low productivity (58.33%) and inadequate extension advisory services (51.67%) were perceived as 'not a constraint' by non-contract broiler poultry farmers.

### 3.3 Constraints Perceived by Employees of Integrating Firms

The results with regards to constraints perceived by employees of integrating firms are presented in Table 3. Selling of frequent price fluctuations in international markets was perceived as 'most serious constraint' by 75.00 per cent employees. Lack of proper management by the company, difficulty in arranging quality inputs, input diversion, non-availability of extension staff, poor service delivery by health specialists, violation of terms and conditions by farmers,. Produce to other companies by farmers, farmer's negligence in maintaining quality, difficulty in maintaining communication with farmers, scarcity of transport vehicles during peak periods, high rate of rent for hiring transport vehicles, inability to provide proper transport facilities to farmers due to poor road network, strikes, etc. and holding-up of transport vehicles by farmers were perceived as 'not a constraint' by all the employees of integrating firms.

## 4. CONCLUSION

Poultry farming is playing an effective role in improving the economic status of the rural people by increasing their income besides providing nutritious food through meat and eggs. The study revealed that non-availability of day old chick in time, high mortality in birds, delay in lifting the produce, Market price fluctuation, high mortality in birds due to diseases, high initial investment were perceived as 'most serious constraints' by broiler poultry farmers. The study also revealed that selling of frequent price fluctuations in international markets was perceived as most serious constraint by employees of integrating firms.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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