



Pattern of Managerial Practices followed in Organised and Un-organised Poultry Production System in Rajouri District of Jammu & Kashmir State

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ABSTRACT

India is the fifth largest producer of eggs and ninth largest producer of poultry meat in the world. Poultry farming has become a remunerative business as there is huge demand of poultry product. In recent years, backyard poultry production has been extremely emphasised in sustaining and enhancing rural livelihoods. In this farming, birds are kept in low-input and low-output system and can easily be managed by women and children of the households. The present study was carried out in five blocks namely Nowshera, Sunderban, Rajouri, Darhal and Thanamandi of Rajouri district of J&K State. Twelve poultry farms each from organised and unorganised system of poultry production were selected randomly from selected blocks and thus form a sample of total of 120 respondents. The study showed that 95 percent of the respondents in organized system were practicing semi-intensive system of poultry farming where as only 3 percent were practicing intensive systems of poultry farming, 100 percent were rearing broiler and they provide separate houses, 100 percent of poultry owners in organized system kept birds in Pacca house, upto 0.5 square feet space per chick and 0.8-12 square feet space in case of broiler birds, 95 per cent of the respondents under organized system reported mortality due to outbreak of diseases. Majority 97 percent respondents of unorganized system reported mortality due to the attack of predators and outbreak of disease respectively.

Keywords: Managerial practices, Organised and Un-organised poultry production systems

Poultry sector in India has been growing at a much faster rate than other sectors of the Indian economy and accounts for 100 billion rupees to the Gross National Product (GNP). India is the fifth largest producer of eggs and ninth largest producer of poultry meat in the world, producing 34 billion eggs and about 600,000 tons of poultry meat in 1999. Despite such amazing growth in last two decades, annual per capita consumption of egg and poultry meat in India is disappointingly low with approximately 36 eggs and 0.7 kilograms of poultry meat in 2001 (Mehta, 2002). These levels are too low as compared to the world average of 147 eggs and 10.9 kilograms of poultry meat on a per other consumption necessities (Brahmananda, 1997) capita basis (FAOSTAT). Jammu and Kashmir annually consumes a whopping 51,000 tonnes of mutton worth ₹12.06 billion (over ₹ 1,200 crore), of which 21,000 tonnes is imported from outside. Chicks, broilers, layers and eggs

amounting to ₹ 1.2 billion are imported each year for local consumption. This is in addition to the local poultry production worth ₹ 1.8 billion that also goes into local consumption. The last decade has witnessed tremendous growth in the poultry sector in the state. Poultry farming has come up in a big way in Jammu, Kathua, Udhampur, Pulwama Srinagar and Budgam districts, with large number of educated unemployed youth taking up poultry farming as a sustainable means of earning their livelihood. There are at least thirteen thousand poultry units identified by the animal husbandry department. Besides, the numbers of farmers adopted the poultry as unorganized way i.e. kept poultry enterprise in backyard. In recent years, backyard poultry production has been extremely emphasised in sustaining and enhancing rural livelihoods. In this farming, birds are kept in low-input and low-output system and can easily be managed by women and

children of the households. The managerial practices of the backyard poultry are different from the organized system of poultry. Therefore, a study has been undertaken to ascertain the “Pattern of Managerial Practices followed in Organised and Un-organised Poultry Production System in Rajouri District of Jammu & Kashmir State”.

MATERIALS AND METHODS

The present study was carried out in Rajouri district of J&K state purposively because it is one among the leading poultry and has more number of organised broiler poultry farms as well as traditional back yard poultry production system. Out of 19 blocks of the district five blocks namely Nowshera, Sunderban, Rajouri, Darhal and Thanamandi were selected proportionally having presence of good number of poultry farmers. A compressive list of both organised and an unorganised (backyard) farm of selected blocks was prepared. From the list, 12 poultry farms each from both organised and unorganised system of poultry production were selected randomly from selected blocks and thus form a sample of total of 120 respondents. To ascertain the managerial parties followed schedule was prepared and administered to all respondents. The data so collected were tabulated and analysed through statistical tools.

RESULTS AND DISCUSSION

Managerial practices of organised and un-organised poultry production

The managerial practices of poultry production includes rearing system, night shelters, types of house, litter provided for bedding, space per bird, arrangement of chicks & birds, lighting system, feeding system etc.

Rearing system

The data in Table 1 showed that 95 percent of the respondents in organized system were practicing semi-intensive system of poultry farming where as only 3 percent were practicing intensive systems of poultry farming. In unorganized system all respondent were practicing backyard system of poultry production. This might be due to fact that in the organized system of poultry production the primary income from the poultry sector

while in unorganized system poultry treated as additional income i.e. secondary source of income.

Table 1: Classification of the respondents according to rearing system in farms

Rearing system	Organized (n=60)	Unorganized (n=60)
Extensive	0(0)	60 (100)
Intensive	3(5)	0(0)
Semi intensive	57(95)	0(0)

Night shelter

The night shelter is an important activity for the poultry enterprise. The data in Table 2 reflected that under organized system all the respondents i.e. 100 percent were rearing broiler and they provide separate houses. Majority of poultry owners rearing birds in unorganized system made necessary arrangements for night shelters of the bird to protect them from predators. 75 percent of poultry owner in unorganized system had different shelter for night enclosure under the same roof whereas only 8.3 per cent share the same room with the family.

Table 2: Classification of the respondents according to night shelter in farms

Night shelters	Organized (n=60)	Unorganized (n=60)
Separate house	60 (100)	0(0)
Shared own house	0(0)	5(8.33)
Any other	0(0)	45(75)

Type of house in unorganized system

The data in Table 3 showed that 70 percent of poultry owners in unorganized system kept the birds in *kacha* house prepared by locally available material like mud broken bricks, tiles, and wire net where as 21.67 percent and 8.33 percent respondents kept their birds in wooden and chapper house ,respectively. However, the 100 percent of poultry owners in organized system kept birds in Pacca house. This is might be due to fact that farmer make comparatively high investment for start the poultry enterprises as commercial activity in organized system whereas farmers used local available material and less investment in unorganized system of poultry.

Table 3: Classification of the respondents according to type of houses in farms

Type of house	Organised(n=60)	Unorganised (n=60)
Pacca House	100	0
Kacha house	0	70
Wooden house	0	21.67
Chapper house	0	8.33

Litter material provided

The Table 4 reveals that in organized system all the respondent provided litter material where as none of the respondents in unorganized system of poultry production provided litter material but they were providing torn and used gunny bags 65 per cent and rest 35 per cent used combination of straw and dry leaves as the bedding material. In case of organized system of poultry production different types of litter material were used. Among them 83.3% use saw dust and 16.7% rice husk as the as the litter material.

Table 4: Classification of the respondents according to type of litter material used in farms

Sl. No.	Litter materials / bedding materials	Organized (n=60)	Unorganized (n=60)
1	Saw dust	50(83.3)	0
2	Groundnut shells	0(0)	0(0)
3	Paddy husk	0(0)	16.7
4	Rice husk	10(16.7)	0(0)
5	Gunny bags	0(0)	(65)
6	Straw +dry leaves	0	(35)

Space provided per bird

The data in Table 5 showed that all the respondents of organized system were providing upto 0.5 square feet space per chick and 0.8-12 square feet space in case of broiler birds. In unorganized system, the birds receive housing only in the form of night shelter and they are allowed to scavenge by themselves in the surrounding during the day time. The space provided by the poultry owners according to the flock size and some time houses were made in different tier. Metallic, plastic or earthen feederers and waterers are provided by the few respondents.

Table 5: Space provided per bird

Sl. No.	Types	Organised system
1	Chicks	0.5 square feet
2	Broiler	0.8-12 square feet

Height from ground level

The Table 6 reveals that the 87.7 percent of respondents in organized system had the poultry house 1 to 2 feet and rests 12.3 percent have 2 to 3 feet from the ground level whereas in unorganized system poultry houses were made at different height from the ground level.

Table 6: Classification of the respondents according to height from ground level

Height from ground level	Organised (n=60)
1 - 2 feet	87.7
2-3 feet	12.3

Arrangement made for chicks and birds

The data in Table 7 shows that 100 percent of the poultry farmers in the organized system had electricity connection in their poultry farms. For brooding purpose all the respondents had electric hover and *bukhari* (locally made heating system based on coal/wood). About 95 percent poultry farmers had made optimum temperature for their chicks and birds. All the poultry farms had chick guard. 75 per cent poultry farmers had optimum and adequate equipments at their poultry farms. 80 per cent farms were located at less crowded place whereas 90.4 per cent farms were well connected to the road.

Table 7: Classification of the respondents according to arrangement made for chicks and birds

Arrangement	Organised (n=60)
Electricity supply	60(100)
Chick guard	60(100)
Hover (Electric)+ <i>Bukhari</i>	60(100)
Optimum and adequate equipments	45(75)
Optimum temperature	57(95)
Road connection	54.24(90.4)
Less crowded place	48(80)

Artificial light provided to birds

The present study reveals that in organized system 80.2 percent respondents gave 6 hr artificial light and 19.8 percent respondents provide more than 6 hrs of artificial light. Whereas, no attention were given to lighting in unorganized system.

Table 8: Classification of the respondents according to artificial light provided to bird

Duration	Organised (n=60)
6 hrs	48.12(80.2)
More than 6 hrs	11.88(19.8)

Arrangement at required interval

The data in table 9 showed that all the respondents in the organized system changed litter, clean and disinfect the equipments at the certain interval. All respondents done room disinfection and white wash after some time interval respectively whereas, no such activity were undertaken in unorganized system.

Table 9: Classification of the respondents according to arrangement at required interval

Sl. No.	Variables	Yes	No
1	Litter changed	60(100)	0(0)
2	Poultry house disinfected	60(100)	0(0)
3	Cleaning and disinfection of poultry equipment	60(100)	0(0)
4	White wash inside poultry house	60(100)	0(0)

Feeding and watering material

On perusal of table 10 it was found that all the organized poultry farmer were using plastic feederers and waterer where as none of the farms were using either metallic or earthen pots for feeding and watering purposes. On the other hand in unorganized system water was provided in unused utensils/bowl/earthen pots kept in courtyard or birds were allot to drink water from open drains while for feeding purpose no utensil were used, grains were thrown in the courtyard for the birds to pick up.

Table 10: Classification of the respondents according to feeding and watering material used

Material	Organised (n=60)
Feeder	
Plastic	60(100)
Metallic	0(00)
Earthen pots	0(00)
Waterer	
Plastic	60(100)
Metallic	0(00)
Earthen pots	0(00)

Feeding management

Frequency of feeding

Table 11(a) shows that a mixed type frequency of feeding pattern was observed in organized system of the study area. 56.67 percent of the respondents fed twice and rest 43.33 percent of respondents feed their birds 3 to 4 times depending on the requirements. Where as in unorganized system the birds are released in the morning and left the birds for scavenging in the surrounding of the house, gardens, field etc. from where they fulfill their requirement of feed. All the respondents provide water to birds but its frequency varied from season to season. During summer, they supplied water to birds 3 to 4 times per day while in winter it was providing only 1 to 2 times per day.

Table 11(a): Classification of the respondents according to frequency of providing feed

Frequency of feeding	Organised (n=60)
Twice	34(56.67)
3-4 time	26(43.33)
Total	100

The result of study is conformity with the result of Sohane (1993) and Oladduni and Fatuase (2014).

Quantity of feed /bird/day

All the respondent of the organized system feed their birds according to their market age. Table 11(b) reveals that 60 percent of respondent feed 90 to 110 gm feed per day whereas 25 percent and 15 percent respondent fed 110

to 130 gm and 70 to 90 gm respectively. In unorganized system the birds generally fed ad-lib from scavenging.

Table 11(b): Classification of the respondents according to quantity of feed /bird/day

Quantity (grams)	Organized (n=60)	Unorganized (n=60)
70 to 90	9(15)	(00)
90 to 110	36(60)	(00)
110 to 130	15(25)	(00)
ad-lib	(00)	60(100)

Feed supplement

All of the respondents of organized system provide feed supplements whereas under unorganized system the birds were released in the morning for scavenging and given a hand full of grains during the day time. Few respondents also offered feed before night shelter. The scavenging material were various type like kitchen waste, seeds, vegetables, green grass, insects, earthworms etc.

Source of drinking water

Table 12 reveals that 91.7 per cent respondents of organized system used water from tap water and only 8.30 per cent respondents used from natural sources such as spring waters (*Chashme Wahae*).

Table 12: Classification of the respondents according to Sources of drinking water used in farms

Sources of drinking water	Organized (n=60)
Natural source	5(8.3)
Tap water	55(91.7)
Stagnant water	0(0)
Open drain	0(0)

Time of feeding

The study shows that 92 percent of respondents in unorganized system poultry farmers offer supplementary feeds in the evening followed by 5 percent and 3 percent respondents offer in the evening and afternoon respectively.

Table 13: Classification of the respondents according to time of feeding

Time of feeding	Unorganized (n=60)
Morning	3 (5)
Afternoon	1.8(3)
Evening	55.2(92)
Night	0(0)
Total	60(100)

Source of chick

The Study shows that 60 percent and 40 percent respondents of organized system purchased their chick from govt. and local input dealer respectively. About 90.2 per cent unorganized poultry farmers used natural hatching at home and equal percentage of 4.9 per cent respondents purchased the chicks from either from feriwala or local input dealer.

Table 14: Classification of the respondents according to source of chick

Source of chick	Organized (n=60)	Unorganized (n=60)
Govt Agency	36(60)	0(0)
Local input dealer respectively	24(40)	2.94(4.9)
Hatching at home	0(0)	54.12(90.2)
Feriwala	0(0)	2,94(4.9)

Source of fertile hatching eggs

In present study it was found that 95 percent of the respondents in unorganized system either hatched eggs from their own birds and rest 5 percent took them from other backyards poultry farmers (neighbours).

Table 15: Classification of the respondents according to source of fertile hatching eggs

Source	Unorganised (n=60)
Own birds	57(95)
Other poultry owners (neighbours)	3(5)

Hatchability of the eggs in unorganized sector

It can be observed from table 16 that 79 percent respondents of unorganized system reported that the hatchability



between (70 to 80%) whereas 10% and 15% respondent claim less than 65 per cent and more than 80 percent hatchability respectively. The result of study is conformity with the Mandal and Gautam (2003).

Table 16: Classification of the respondents according to hatchability of the eggs in unorganized sector

Hatchability of the eggs	Unorganised (n=60)
50-70	6(10)
70-80	47.4(79)
80-90	9(15)

Health management

Treatment of birds

The result shows that majority 66.77 per cent of respondents treat the birds by veterinary doctors. About 21 percent treated the birds by paravets local and 11 percent respondents treated the birds by local experts/Hakeem. In unorganized system major 40 percent of respondents treated the birds by self-treatment followed by paravets (27%), local experts/ Hakeem (15%) and veterinary doctor (3%). About 7 per cent respondents in unorganized system did not treat their birds.

Table 17(a): Classification of the respondents according to treatment of birds

Treatment of birds	Organized (n=60)	Unorganized (n=60)
Veterinary doctors	40.02(66.77)	1.8(3)
Paravets	12.6(21)	16.2(27)
Local experts/ Hakeem	6.6(11)	9(15)
Self-treatment	0	24(40)
No treatment	0	4.2(7)

Medicine used

All the respondent of the organized system used allopathic medicine for the treatment. In unorganized system 55 per cent of respondents used allopathic medicine for the treatment of birds while 33 percent used homemade medicines, rest 3 percent ayurvedic medicine and 2 percent homeopathy. Around 7 percent don't use any medicine.

Table 17(b): Classification of the respondents according to medicine used

Medicine used	Organized (n=60)	Unorganized (n=60)
Allopathic medicine	60(100)	33(55)
Ayurvedic medicine	0(0)	1.8(3)
Homeopathy	0(0)	1.2(2)
Home made	0(0)	19.8(33)
No medicine	0(0)	4.2(7)

Vaccination

All the respondent of organized system vaccinated their birds whereas none of the respondents in unorganized system did any vaccination of their birds.

Type of vaccination

Results shows that all the respondents of organized system vaccinated their birds against Newcastle disease, Marek's disease and Infectious Bursal disease

Table 17(d): Classification of the respondents according to type of vaccination

Type of vaccination	Organized (n=60)	
	Yes	No
Newcastle disease	60(100)	0(00)
Marek's disease	60(100)	0(00)
Infectious Bursal disease	60(100)	0(00)

Source of vaccine

Majority of respondents (80%) purchase the vaccine input from the local dealers whereas (15%) and (5%) of the respondents got the vaccine from the market and govt. supply respectively.

Table 17(e): Classification of the respondents according to source of vaccine

Source of vaccine	Organized (n=60)
Local input dealers	48(80)
From market	9(15)
Govt. Supply	3(5)

Cause of mortality of birds

All the respondents claimed that major cause of mortality is due to diseases. 95 per cent of the respondents under organized system reported mortality due to outbreak of diseases and 5 per cent respondents reported mortality due to chilling, huddling etc. Majority 97 percent respondents of unorganized system and 3 per cent respondent of organized system reported mortality due to the attack of predators and outbreak of disease respectively.

Table 17(f): Classification of the respondents according to cause of mortality of birds

Cause	Organized (n=60)	Unorganized (n=60)
Disease	57(95)	1.8(3)
Chilling	3(5)	0(00)
Attack of predators	0(00)	58.2(97)

Disease encountered

Table 17(g) reveals that majority of respondents of the organized system (80%) each reported that Coccidiosis and IBD. About 30% reported Respiratory diseases in their farms. In unorganized system around 23 percent respiratory problems, 12 percent Fowl pox, 20 percent Coccidiosis, 17 percent IBD and 12 percent Ranikhet diseases were reported.

Table 17(g): Classification of the respondents according to disease encountered to birds

Sl. No.	Disease encountered	Organized (n=60)	Unorganized (n=60)
1	Respiratory disease	18(30)	13.8(23)
2	IBD	48(80)	10.2(17)
3	Coccidiosis	48(80)	6(20)
4	Fowl pox	0(00)	7.2(12)
5	Ranikhet	7.2(12)	7.2(12)

The result of study is in conformity with Sharma *et al.* (2013)

CONCLUSION

The study revealed that 95 percent of the respondents in organized system were practicing semi-intensive system

of poultry farming, 100 percent provide separate houses for rearing broiler, 83.3% use saw dust and 16.7% rice husk as the as the litter material, upto 0.5 square feet space per chick and 0.8-12 square feet space in case of broiler birds, 87.7 percent had the poultry house 1 to 2 feet above from ground level, 100 percent had electricity connection in their poultry farms, 95 percent poultry farmers had made optimum temperature for their chicks and birds, 56.67 percent of the respondents fed twice and rest 43.33 percent of respondents feed their birds 3 to 4 times depending on the requirements, 60 percent of respondent feed 90 to 110 gm feed per day, 66.77 per cent of respondents treat the birds by veterinary doctors Where as in unorganised system of Poultry 75 percent of poultry owner in unorganized system had different shelter for night enclosure under the same roof, 70 percent kept the birds in *kacha* house prepared by locally available material like mud broken bricks, tiles, and wire net, water was provided in unused utensils/bowl /earthen pots kept in courtyard or birds were allot to drink water from open drains while for feeding purpose no utensil were used, grains were thrown in the courtyard for the birds to pick up and birds were released in the morning for scavenging and given a hand full of grains during the day time.

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