

Duckling Production

—A profitable enterprise for rural youth

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Duck farming with improved breeds is gaining popularity in rural areas of West Bengal, but availability of good quality duckling is still a hurdle. Assessing the demand for these ducklings, some rural youths have started duckling production through low-cost incubator which seems to be a promising enterprise for them. Duck eggs were hatched and ducklings were maintained at an age of 4 weeks. During that period, the ducklings were provided required brooding and vaccination to reduce the mortality in initial phase. The economic analysis of the entrepreneurship has shown that duckling production has promising potential for providing employment to the rural youth.

Keywords: Brooding, Duckling, Entrepreneurship, Rural youth

THE low-cost incubation and hatching of ducklings is showing a new way of employment generation for the rural youth of the Malda district, West Bengal. With the replacement of the desi duck, natural hatching of duck eggs is greatly reduced. It is a very well-known fact that a good layer is always a bad incubator of eggs. Therefore, to get quality duckling artificial incubation is a must. A few rural youths in coordination with Krishi Vigyan Kendra, Ratua, Department of Animal Resources Development, Govt. of West Bengal and also with the use of different ICT applications have gained knowledge and developed small-scale incubators for hatching of duck eggs. The production practices and economics of small-scale duckling production is discussed here for understanding of this entrepreneurship.

Procurement of hatchable duck eggs

It has been seen that

majority of the rural youth engaged in duckling production were not maintaining parental duck stock for laying of hatchable eggs. Collection of hatchable eggs were made from some nearby duck farms who were mainly producing duck eggs for hatching. The duck eggs were purchased at an amount of ₹ 13-14 per eggs. Eggs up to one week old were procured for hatching.

Storing of hatchable eggs

The eggs were generally not strictly maintained at recommended

temperature and relative humidity but hatching eggs were stored in a cool and dark room before setting it in incubator.

Incubation

Incubation period for duck egg is 28 days which is higher than chicken. Temperature and humidity were maintained as per the required standard for duck egg hatching. Eggs were manually turned at least 4 times a day during incubation. Eggs (1200) were put into the incubator, assuming at least 85-87% of hatching percentage. It was expected to get at least 1020–1050 day-old ducklings.

Brooding of duck

The brooding period (0-4 weeks) is very crucial for duckling and very high mortality may occur, if care and management is not done properly. About 10 sq m area for 1000 ducklings is essential or 100 sq cm area per duckling is adequate for brooding purpose. A temperature of 29-32°C is



Rural youth with incubator



Rural youth engaged in brooding and management

maintained during the first week. It is reduced by about 3°C per week till it reaches 24°C at the end of fourth week. During summer months when temperature is higher than the recommended level, air circulation was increased to reduce the temperature. In winter months, a 60-watt bulb at 1-1.5 m height from the ground level is quite sufficient to maintain the required temperature.

Feed is provided in the trays or sprinkled for encouraging the new born ducklings to pick up feed. *Ad libitum* feed is provided in trough type of feeders from day two. Suitable feeders for ducklings were given with growing age. During the time period of 4 weeks, about 15 q of duck starter is required but about 5 q of duck starter was purchased and rest were managed through feeding of locally available low-cost feed (i.e. rice husk and broken rice). Water in the drinkers were provided judiciously which was sufficient for them to drink and not dip themselves. All possible care and management was made to keep the duckling dry.

The ducklings were vaccinated against duck plague at an age of 2-3 weeks with duck plague vaccination available from Govt. sources through paravet workers or sometime purchase from the local market. About 1020-1050 ducklings were brooded in anticipation to get at least 1000 ducklings for marketing if the mortality can be managed at about 3-4% only.

Table 1. Economic analysis of hatching and brooding for duckling production

	Particulars	Amount (₹)
Gross expenditure (GE)	Eggs	16,800.00
	procurement cost (@ ₹ 14.00)	
	Incubation cost	2,200.00
	Vaccination cost	1,250.00
	Feeding and management	23,000.00
	Labour cost	0.00
	Misc. cost	1,500.00
	Total	47,750.00
Gross income (GI)	@ ₹ 65.00 duckling (4 weeks of age)	65,000.00
Net income (NI)	GI-GE	20,250.00
B:C ratio	GI/GE	1.45
Rate of return	NI/GE	0.45
Annual income	NI × 8 batches	1,62,000.00

Marketing of duckling

Marketing of duckling is a very important aspect for sustainability of the enterprise and like every enterprise there also lies the hurdle of marketing of ducklings at a good price. The ducklings were generally marketed after the brooding period is over. The market rate of duckling varies depending on the age of duckling. On an average duckling at the age of 4 weeks were sold in between ₹ 60-70 per birds.

Economics

The economic analysis based on hatching of 1200 duck eggs at a time

may lead to 1000 duckling production for marketing after the brooding period is over. The brooding and management of ducklings during early period of up to 4 weeks would reduce the mortality. The ducklings were sold only after brooding period to reduce mortality. If the hatchable eggs were timely available and the duckling could be marketed in time, then at least 8 batches of such duckling production and brooding of eggs could be done. Analysis of hatching and brooding per batches of 1000 ducklings is given in Table 1. The labour cost was nil as family labour was utilised in the enterprise. Therefore, it can be said that the enterprise may give an annual income of ₹ 1.62 lakh with a monthly income of more than ₹ 13500.

SUMMARY

Entrepreneurship development through duckling production with low-cost incubator is a promising enterprise that can be a good source of income for the unemployed rural youth. Economic analysis has shown that the enterprise has the potential to provide year-round employment to the rural youth with good remuneration if proper care and management during incubation and brooding of ducklings is done.

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