

**Kadakhnath chicken!! could be the new food
fad in Bangladesh through maintain
consumer health**



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Kadakhnath chicken!!! Could be the new food fad in Bangladesh through maintain consumer health



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ABSTRACT

The present study was conducted to characterize one important native chicken breed from India and compare its growth, egg production and welfare traits (specially meat quality & consumer health) with present commercial broiler in Narsingdi poultry hub; Bangladesh. There is a tremendous development in poultry industry in last few decades; but little attention has been paid for indigenous chicken, due to its poor producing ability.

Now-a-days health conscious consumer give emphasis in backyard poultry rather than commercial poultry. But backyard poultry is rare and expensive ; also contain high level of fat(less than commercial layer) and low protein .In this case, Kadakhnath chicken may be the substitute of backyard poultry which is low in fat(0.7%-1.5%) , rich in protein (25.6%) & can be rare commercially with minimum cost & high profit. This breed is highly resistant to disease and highly adaptable in the environment of our country. For experiment two farm of Shibpur, Narsingdi poultry hub started commercial farming and they are succeed in their vision.

Keywords : Kadakhnath chicken, meat quality, commercial indigenous poultry farm, consumer health, disease resist

CHAPTER-1

INTRODUCTION

Kadakhnath is a unique chicken breed for its outward & inward appearance as well its meat health benefits. Locally known as kali masi due to its black flesh(Agrifarming.in). Commonly found in Indian Madhya Pradesh state(specially in eastern part)and adjoining states of Gujarat and Rajasthan . Pure breeds mainly found in tribal region of Dhar & Jhabua districts of western Madhya Pradesh(S. Haunshei et. al).Suitable climate for this breed is semi- arid;temperature ranging from 12-42 degree centigrade. They thrive well in harsh climates and condition. It is well known for its black meat taste, better adaptability and vigorous appearance (Molar et. al.). Due to high melanin contents its all body part are black including internal organ. Its speciality for consumer health is low fat contents. It contains (0.7- 1.5)% fat whereas other poultry contain (12-26)% fat(Agrifarming.in). Varieties of kadakhnath are-

1. Jet black- hen & cockerel are black in color
2. Golden kadakhnath-having golden feathers on head & neck regions in both male & female bird
3. Pencilled kadakhnat-adults have white feathers in neck

Kadakhnath breed reached sexual maturity at early age & had higher 40 weak egg production (S. Haunshei et. al) .Although meat of this breed has an unattractive appearance ,it has a delicious flavor(Panda & Ma-hapatra, 1989). Meat is a rich source of protein & iron(Mohan et. al).Protein percentage is

25.47%.Due to having high medicinal values their meat cost about (600-800) Rs/kg. Egg are also highly nutritious and sold up to (40-50) Rs/egg.

Table-1

Nutritional value of Kadakhnath chicken compare to other chicken breeds (agriview.in)-

| <u>Properties</u> | <u>kadakhnath</u> | <u>other breed</u> |
|-------------------|-------------------|--------------------|
| Protein% | 25% | 18-20% |
| Fat% | 0.73-1.03% | 13-25% |
| Linoleic acid | 24% | 21% |
| Cholesterol | 184mg/100gm | 218mg/100gm |

Although the Kadakhnath breed has many unique characteristics, it has been neglected because of its poor production potential. Of late, there is renewed interest among consumers and farmers in native germplasm because of the unique hardiness of the breeds, their ability to thrive under adverse climatic conditions, and the desirable taste and flavor of eggs and meat. Hence, a significant demand exists for the Kadakhnath native chicken. As Mohan et al. (2008) recently pointed out, more investigations are required to establish baseline values for production parameters of the Kadakhnath breed and characterize their general performance. Therefore, Kadakhnath need to be systematically evaluated for their various growth and production traits. Hence, the present study was conducted to evaluate various growth and production trait.

CHAPTER -2

MATERIALS AND METHODS

2.1-Study area and duration

Studied data was collected from 2 Kadakhnath chicken hatchery and farm of Shibpur, Narsingdi poultry hub.

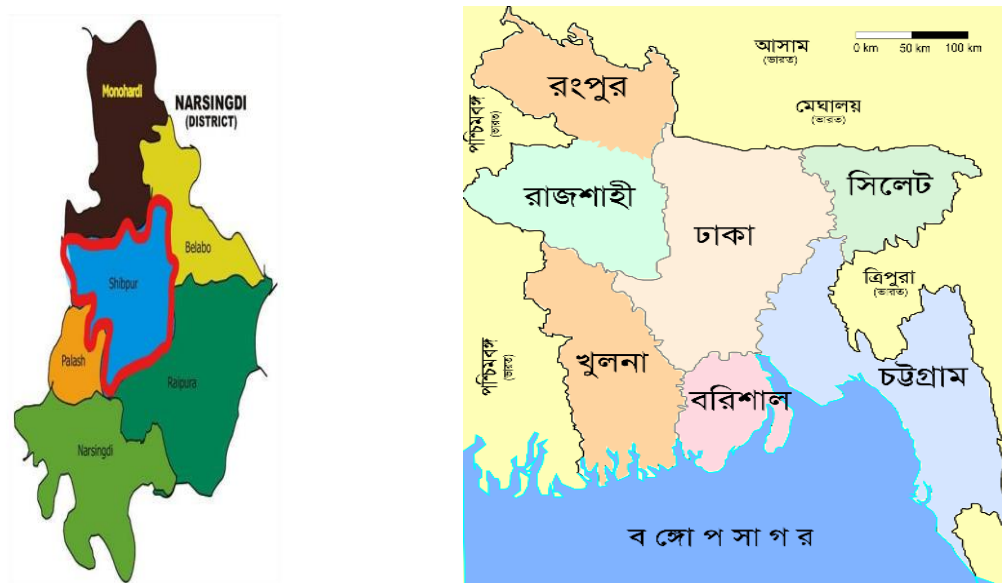


Figure-1: Map of Narsingdi & Bangladesh

2.2- Study population-

Studied data was collected from 500 experimental birds that represents approximate 500000 commercial birds.

2.3- Data collection-

Studied data was collected through close type questionnaire .

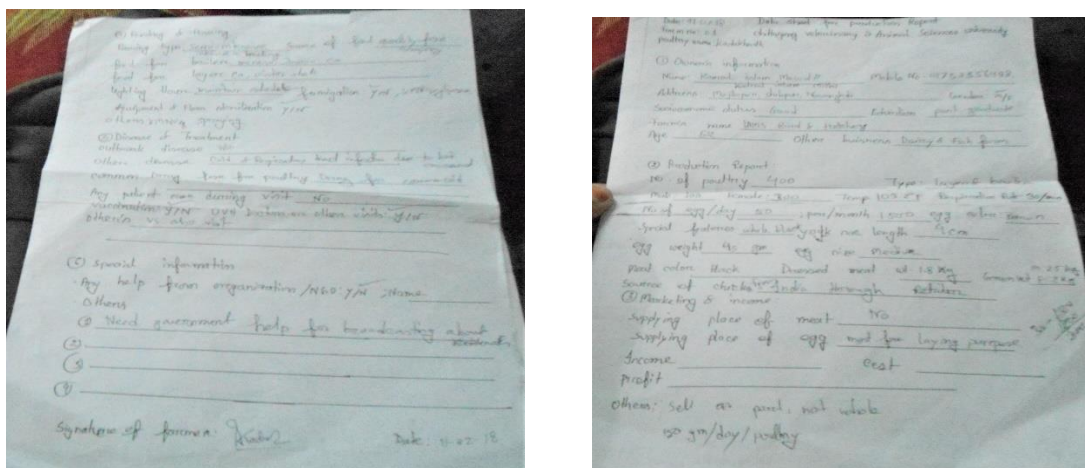


Figure-2: Questionnaire(close type)

2.4-How to start a commercial Kadakhnath chicken farm-

Collect best day old chick of Kadakhnath breed from
renown retail shop



Maintain proper chick brooding, lighting & feeding
as renown agricultural university information



Maintain proper housing & feeding, vaccination
schedule during grower stage



Establish a proper marketing channel

2.5-Feeding strategies of Kadakhnath breed:

Birds are provided broiler grower feed from Quality feed limited. Description of broiler grower feed are-

Packing size- 50 kg; Moisture(max)- 10%; Crude protein(min)-21%; Fat(min)-5.5%; Fiber(max)-3.5%; Lysine(min)-1.15%; Methionine(min)-0.49%; Cal(max)-1.2%;Pho(min)-0.75%; Energy(kcal/kg)- 3175



Figure-3: Feeding of birds in free range area surrounded by nets

2.6-Housing management of Kadakhnath breed

Birds are reared through semi-intensive method. Maintain temperature between (20-35) degree centigrade and humidity between (50-70)%. Rare in litter system house. Proper ventilation, light and disinfection system are maintained. Used rice husk wood shavings as litter materials. Height of house is

12 feet & floor made of concrete. In time of brooding light & temperature maintain properly. For 100 chicks provide 250W infrared lamps. In case of grower condition provide minimum 12 hours light .Egg are hatched through incubator machine. Maintain a temperature of 37.5 degree centigrade for about first 18 days with humidity (55-60)% & during hatching period or last 3 days about 36.9 degree centigrade with (65-75) % humidity .



Figure-4: Housing of Kadakhnath chicken

CHAPTER-3

RESULTS

3.1- Different parameters deviation of Kadakhnath breeds when raring in Bangladesh

Table-2

Different facts comparison between Kadakhnath breed original origin and in Bangladesh –

| <u>Particulars</u> | <u>Original origin</u> | <u>Bangladesh</u> |
|---------------------------------|------------------------|-------------------|
| Weight of day old chicks | (28-30) gm | (28-29)gm |
| Bird body color | Jet black | Jet black |
| Price for parent stock (chick) | (20-22) Rs | (70-80) Rs |
| Body weight in 8 weeks | (.8-.9) kg | (.7-.9)kg |

| | | |
|---|---------------------------------------|---------------------------------------|
| Survival rate | 95% | 95% |
| Period required to attain (1.5-2.5) kg body weight | (1-1.5) years | (1-1.2) years |
| Weight (male) | (2.3-2.5) kg | 2.5 kg |
| Weight (female) | (1.6-1.8) kg | 2 kg |
| Quality of meat | better than other Indigenous breed | better than other Indigenous |
| <u>Particulars</u> | <u>Original origin</u> | <u>Bangladesh</u> |
| Meat % without skin | 65% | 72% |
| Maintenance cost | low | low |
| Backyard farming | yes | yes |
| Age of first laying | (23-24) week | (20-25)week |
| Broodiness | less | little higher than original origin |
| Egg laying/month | (11-12) | (7-8) |
| Annual egg laying | 120 | (90-100) |
| Average egg weight | (40-45)gm | 45gm |
| Egg color | Brown | Brown |
| Annual feed required/year | 50 kg/ entire growth | (30-33)kg /entire growth |

3.2- Economics in kadakhnath chicken farming business in Bangladesh-

An overview of investment & revenues with actual revenues of two studied farm.
Cost & profit analysis of Kadakhnath chicken unit of 500 birds----

Cost of farming-

| | | |
|--|----------------|----------------|
| A. Capital cost | | Shed |
| construction(3 sheds (50*25)feet)= 2,00,000 taka | | Equipment cost |
| =50,000 taka | | |
| B. Recurring cost | | 500 |
| chicks of one week old @150/chick=75,000 taka | | Company |
| feed (annually 30 kg/ bird @50 taka/kg) | | |
| | =7,50,000 taka | |
| C. Other cost | | |
| Medicine & vaccination cost | =10,000 taka | labor |
| cost (2) *6000* 12month | =1,44,000 taka | |
| | | |
| Total cost= | 12,29,000 taka | |

Income from farming-

| | | |
|--|-------------------|-------|
| A. Income from birds sales(mortality-2%) | | |
| Sale of 400 birds after 1year@1500 taka/bird | | |
| | = 60000 taka | |
| B. Income from eggs | | After |
| hatching of 20,000 egg found 18,000 chick & sell | @ 150 taka/ chick | |
| =27,00,000 taka | | |
| Sell egg directly 16,000 @80/egg | =12,80,000 taka | |
| | | |
| Total income | =40,40,000 taka | |

Actual revenue/year=(total income-total cost)

=2811000 taka

Actual revenue/month= yearly revenue/12

=2,34,250 taka

*per month actual profit is around 2 lakhs & 30 thousands.

3.3– Feed conversion ratio(FCR ratio) of Kadakhnath breed:

One

bird eat 30 kg/year and gain 2.5 kg weight in one year

So, FCR ratio= $30/2.5$

=12

FCR value of kadakhnath breed is very high..

CHAPTER-4 DISCUSSIONS

4.1-Advantages of kadakhnath chicken farming-

- > Meat texture ,flavor and quality is very good
- >Byproducts are highly demandable
- >Good medicinal values
- >High price rate of meat and egg in market
- >Meat contains all kinds of essential amino acids & vitamins
- >Meat helps to increase blood cell & hemoglobin
- >Used in curing pulmonary problems.
- >FCR ratio of this breed is very high
- >Eggs used to treat headache, post-delivery problem, asthma, nephritis in tribal area.
- >Tribes used it against chronic disease.
- >Highly resistant to disease.
- >Can rare in backyard condition easily.

- >Meat contains more protein, less fat & cholesterol compared to other breed
- >Chicken weighs about 1.5 kg after (6-7) months.

4.2-Disease of Kadakhnath chicken:

Avoid overcrowding of chicks in brooder & among grower birds to avoid coccidiosis disease.

4.3- Marketing of Kadakhnath chicken farming business:

As a new business kadakhnath chicken farming demand best marketing strategies with good advertising. Through leaflets, banners in retail shops consciousness of local educated consumer can increase. Promote business through online media. Encourage other farmer & unemployed youth by sharing experience of new farming to expanse Kadakhnath farming.

4.4-Why Kadakhnath chicken & its product is expensive:

Due to its less production ability but high demand of its products because of its nutritional value.

4.5-Why Kadakhnath farming business:

Consumer health maintenance could be the main issue of this chicken farming. It is highly adaptable in our environment & high resistance to disease. Meat & eggs are highly nutritious & having high demand among consumer.

CHAPTER-5

PHOTO GALLERY



Figure-5: Brooding of chicks birds



Figure-6: Physical examination of birds



Figure-7: Different types of house incubator and incubating eggs



Figure-8: kadaknath mate with other breeds owner



Figure-9:With organic farm

CHAPTER-6

LIMITATION

Population are big but sample data are too small. Information collected on farmer's response, so information bias may occur. Questionnaire was close type ;so information may skipped. No special subsidies & loans to small scale farmers. Lack of proper financial & equipmental support from government. High consumer demand but lack of commercial farmers & inadequate breed.

CHAPTER-7

CONCLUSION

Kadakhnath chicken farming is profitable business & give job opportunity directly or indirectly to many people. It is a simple business for its low maintenance & quality byproducts. This farming can fulfill consumer health demand with good profit. It is estimated that two experimental farm profit around 2 lakhs per month after deduction of all recurring cost. So, we can say that kadakhnath chicken farming will be a profitable business in upcoming days.

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BIOGRAPHY

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