



E-ISSN: 2278-4136
P-ISSN: 2349-8234
JPP 2017; 6(4): 1696-1698
Received: 02-05-2017
Accepted: 04-06-2017

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Back yard poultry to combat protein deficiency and increase income of rural families in Khammam district Telangana state

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Abstract

The present study was taken to assess the performance of rajasri bird in comparison with desi variety for combating protein deficiency and increase socio economic status of rural families. The study reveal that rajasri birds are more efficient than desi birds for increased protein intake and increased income.

Keywords: Back yard poultry, Desi birds, Rajasri birds, egg consumption, protein content, protein deficiency, income generation

Introduction

Poultry is one of the subsidiaries in agriculture sector as additional income generator. The backyard poultry production is an age old practice in rural India. Backyard poultry production comprises rearing of indigenous birds with poor production performances. The potentiality of indigenous birds in terms of egg production is only 70 to 80 eggs/ bird/ year and meat production is also very less. However, the backyard poultry production can be easily boost up with improved breed of poultry and can promise a better production of meat and egg. Among traditional farmers, backyard poultry is a handy enterprise with low-cost initial investment, but high economic return along with guarantee for improving protein deficiency among the poor. There is evidence that investments in small-scale poultry farming generate handsome returns and contribute to poverty reduction and increased food security in regions where a large share of the population keeps some poultry birds (Jensen and Dolberg, 2003; Mack, *et al.*, 2005; Pica-Ciamarra and Otte, 2010) [2, 3, 5]. However, the Poultry Research Station (PRS) of Sri P.V. Narasimha Rao Telangana State University for Veterinary, Animal and Fishery Sciences, (SPVNRTSUVAS), Rajendranagar, Hyderabad, has developed a promising backyard poultry variety, 'Rajasri' for the rural farming community. The new variety is quite suitable for backyard poultry farming as it is hardy, attractive with multi-colored plumage, capable of self propagation, have good body conformation with capacity to escape from predators, a good scavenger and less susceptible to diseases.

Objective

- To study General attributes of Desi bird and Rajasri
- To assess the usage of eggs for various purpose
- To study the protein intake of families consuming desi bird eggs and Rajasri bird egg

Methodology

Study has been conducted in the five locations of adopted villages of krishi vigyan Kendra, wyra Khammam district. The characteristics of desi and rajasri birds were compared. The income generated from desi birds and rajasri birds were studied and protein intake of families rearing these two kind were assessed.

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Results and discussion

Table 1: General attributes of Desi bird and Rajasri

S. No	Characteristics	Desi birds	Raja Sri birds
1.	Kg Weight gain	5 months	4 months
2.	On set off first egg laying	5 months	5 months
3.	No of eggs per annum (Per 1 bird)	40-60	160-170
4.	Income from eggs per annum (Per 1 bird)	Rs 200-300/-	Rs 800-850/-
5.	No of eggs per annum (Per 20 birds)	800-1200	3200-3400
6.	Income from eggs per annum (Per 20 bird)	Rs 4000-6000/-	Rs 16000-17000/-

Table 1 provides information about general characteristics of desi bird and Rajasri bird. The study reveals that desi birds gain weight in 5 months while rajasri birds in 4 months. For both varieties the onset of first egg laying is 5 months. The number of eggs laid by desi bird per annum is 40-60 but

rajasri lays 160-170 eggs per annum. The income from eggs per desi bird per annum is Rs 200-300 while Rajasri bird fetches income of Rs 800- 850. That means per 20 birds rajasri birds yield Rs 16000-17000 while 20 desi birds can yield only Rs 4000-6000.

Table 2: Eggs used per various purpose

S. No	Type of bird	Eggs used for Family consumption purpose per annum	Eggs used for multiplication purpose per annum	Eggs used for sale purpose per annum	Damage of eggs during hatching
1.	Desi birds (per 1 bird)	10	10	10	10
2.	Desi birds (per 20 bird)	250	150	300	100
3.	Raja sri (per 1 bird)	60	40	35	25
4.	Raja sri (per 20 bird)	1500	700	800	200

The table 2 presents the usage of eggs for different purposes. The desi birds eggs used for family consumption is 10 eggs per bird per annum that means for 20 birds the family consumption of eggs is 250 per annum. In case of Rajasri bird family consumption of eggs per bird per annum is 60 while for 20 birds the egg consumption is 1500 per annum. The eggs used for multiplication purpose is 10 eggs per annum for one desi bird, while in its 40 eggs in case of rajasri bird per annum per bird. That shows for every 20 desi birds 150 eggs per annum are used for multiplication purpose and in rajasri birds for every 20 birds 700 eggs are used for multiplication

per annum. The eggs used for sale per annum per bird is 10 for desi bird while the number of eggs used for sale purpose for rajasri birds is 35. That means for 20 desi bird, 300 eggs are used for sale purpose. The number of eggs of Rajasri sold per bird per annum is 35, which total to 800 eggs for 20 rajasri birds. Damage of eggs during hatching is 10 perbird per annum for desi birds, while it is 25 eggs per bird per annum in rajasri. That means for 20 desi birds 100 eggs are damaged per annum while 200 for 20 rajasri birds 200 eggs are damaged during hatching per annum.

Table 3: Protein intake of family from 20 birds eggs

S. No	Type of bird	No of eggs family consumed per annum	Annual protein intake (from eggs in gm)
1.	Desi birds	250	1,662 gm
2.	Rajasri	1500	9,975 gm

The protein intake of families with desi and rajasri birds is presented in table 3. From this it is inferred that number of eggs family consumed per annum is 250 for desi birds while

families with rajasri birds consumed 1500 eggs. The annual protein intake from the eggs is 1,662gms for desi birds while the protein intake was 9,975gms for rajasri birds.

Table 4: Recommended protein intake met through egg consumption

S. No	Type of bird	Individual consumption of eggs per annum	Recommended protein intake per annum per individual (kg) (55g/d – NIN)	Protein from both birds	% of protein from both birds out of recommended protein intake from annum	Income from sailed eggs per annum (Rs.)
1.	Protein met through Raja Sri egg consumption	365	20.75 kg	2.42 kg	11.7%	4000-00
2.	Protein met through Desi egg consumption	250	20.75 kg	1.66 kg	8%	1500-00

For families with rajasri birds consumed 365 egg per annum per individual. The protein intake from both rajasri bird eggs is 2.42kgs per annum which is 11.7% of recommended

protein intake. The income generated from selling of eggs per rajasri bird per annum is Rs 4000.

The individual consumption of eggs of desi birds is 250 per

annum. The protein intake is 1.6kgs from desi bird eggs per annum accounting to 8% of recommended protein intake. The annual income a family gets from one desi bird is Rs 1500.

Conclusion

Rural family's protein intake is very less. The diet consumed is more of the energy giving food. The socio economic status of these families also constraints from spending money on protein food. Most of the families in rural areas are agriculture dependent and they also have allied like backyard poultry. Many studies also showed that protein intake of the families doesn't meet the recommended dietary allowances. The present study was taken up to study the differences between Desi and Rajasri birds for protein intake and income generation of rural families. The study reveals that rajasri birds lay more eggs than the desi birds, hence the consumption of eggs was more in rajasri poultry families than desi bird families. The protein intake of individuals in families with rajasri birds was more as per protein intake recommendations of the NIN. The income generation from selling rajasri eggs was more than desi birds. Hence the study concludes that rajasri eggs can be more beneficial as they have dual purpose of combating protein deficiency and poverty as it is a source of income.

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