

Original Research Article

<https://doi.org/10.20546/ijcmas.2020.907.397>

## Growth and Reproductive Performances of Vanaraja - A Dual Purpose Breed under Semi Intensive Rearing System

Dipankar Hazarika<sup>1</sup>, T. J. Ramesha<sup>2</sup>, O.R. Nataraju<sup>1\*</sup>, Moloy Sarmah Baruah<sup>1</sup>,  
N. Chethan<sup>2</sup> and B.T. Naveen Kumar<sup>2</sup>

<sup>1</sup>Krishi Vigyan Kendra, Lower Dibang Valley District, Arunachal Pradesh

<sup>2</sup>Krishi Vigyan Kendra, Dakshina Kannada, Karnataka, India

\*Corresponding author

### ABSTRACT

#### Keywords

Vanaraja, Semi intensive rearing system, Nutritious egg, Chicken and meat

#### Article Info

Accepted:  
22 June 2020  
Available Online:  
10 July 2020

The rapid growth of poultry sector in our country during the last 3 to 4 decades has been almost exclusively dependent on appearance of intensive or commercial type poultry enterprise, often located in urban or periurban areas. Rural and tribal areas have received little attention in this sector, creating a large gap in the availability of highly nutritious egg, chicken and meat between urbanites and malnourished rural / tribal people. Only the solution is backyard farming in rural and tribal areas. The backyard farming will certainly improve the economic status of a large majority of tribal rural" families from lower socio-economic strata in the rural / tribal areas. Backyard farming fulfills a wide range of functions - e.g. the provision of meat and eggs, food for special festivals, chicken for traditional ceremonies, pest control and petty cash-while requiring minimal external inputs, minimal human attention, and causing minimal disruption to the environment. Vanaraja does not perform very efficiently in terms of eggs and meat production. However, meat and eggs of Vanaraja are preferred by the local consumers. This hybrid is also readily accepted by the rural farmers owing to its similarity of the typical appearance of the local birds and characteristically very low operational cost but significant returns under the existing methods of rearing in the rural areas.

### Introduction

The rapid growth of poultry sector in our country during the last 3 to 4 decades has been almost exclusively dependent on appearance of intensive or commercial type poultry enterprise, often located in urban or periurban areas. Rural and tribal areas have received little attention in this sector, creating a large gap in the availability of highly nutritious egg, chicken and meat between urbanites and malnourished rural / tribal

people. Only the solution is backyard farming in rural and tribal areas.

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Vanaraja does not perform very efficiently in terms of eggs and meat production. However, meat and eggs of Vanaraja are preferred by the local consumers. This hybrid is also readily accepted by the rural farmers owing to its similarity of the typical appearance of the local birds and characteristically very low operational cost but significant returns under the existing methods of rearing in the rural areas.

### **Materials and Methods**

The present study was initiated by Krishi Vigyan Kendra, Lower Dibang Valley District, Arunachal Pradesh to assess the growth and egg production potential of Vanaraja bird maintained under semi-intensive rearing and free-range system. To perform this task, prime critical input requirement of fertile eggs was assured through procurement of the same from Poultry Unit, Khanapara Veterinary College (under AICRP on Poultry-Vanaraja), Guwahati, Assam. After providing technical information through intensive training programmes, a total of 200 fertile eggs were distributed at free of cost among 17 farmers covering 11 villages. These eggs were incubated by farmers under local broody hen (10 eggs/Hen).

A day old chicks were maintained under artificial brooding system for four weeks period and also chicks were vaccinated against Raniket and IBD as per the schedule. The birds were initially maintained on ad libitum feeding of concentrated feed/ supplementary feed up to 1 month and on kitchen and agri byproducts supplemented with Azolla, Maize, and Broken rice with free range scavenging system for rest of the rearing period. Field Visits were made to collect data on growth and egg production of birds at fortnight intervals up to 36 weeks.

### **Results and Discussion**

The field data record indicates that hatchability of eggs ranged from 70-90%. Weight of day old chick ranged from 40-45 gms. Average body weight of Male and Female was 2.5 and 1.8 kgs respectively at the age of 16 weeks. Matured weight of male and Female was 3.6 and 2.5 kgs respectively as age at first egg of pullets is 165 days, while dressing percentage was 62%. Average egg production up to 38 weeks period was 50 nos with average egg weight of 48gms. Organoleptic study conducted revealed that taste, texture, flavour and colour of improved breed was comparatively excellent to local birds as expressed by consumers (Kumar & Mahalati; 1994, Rangnekar 1999, Kumtakar 1999, Nanda & Panda, 2000, Mandal et.al 2006).

### **Details on Poultry ( Kamrupa and poultry (PB<sub>2</sub> x L x DR)**

Details of individual on- farm trials

State: Arunachal Pradesh

On farm Trial 3

Thematic area: Meat production

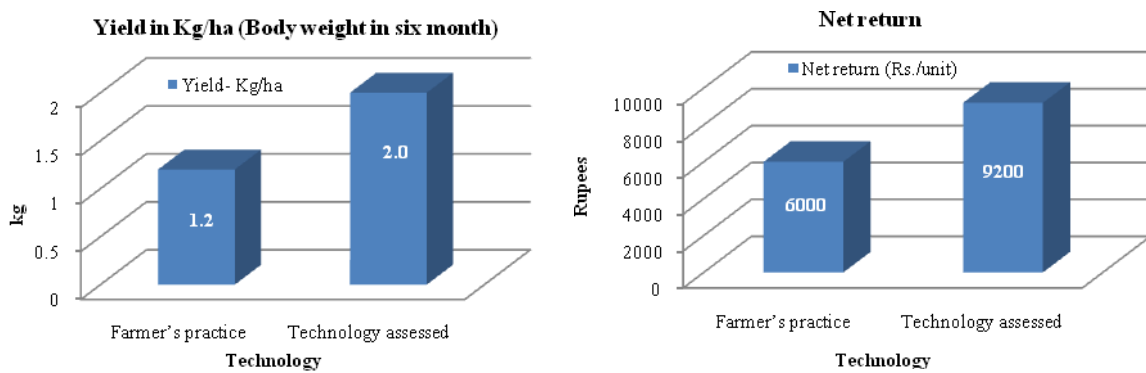
Title: Performance of new variety poultry (PB<sub>2</sub> x L x DR) in backyard farming

Description: Poor performance of local bird cannot meet the demand for meat and egg. Hence, KVK, Lower Dibang Valley district of Arunachal Pradesh conducted a trial on introducing improved variety poultry (PB<sub>2</sub> x L x DR) in backyard farming. The result shown a good result in terms of body weight gain, reduce mortality rate and B:C ratio of 2.6 :1

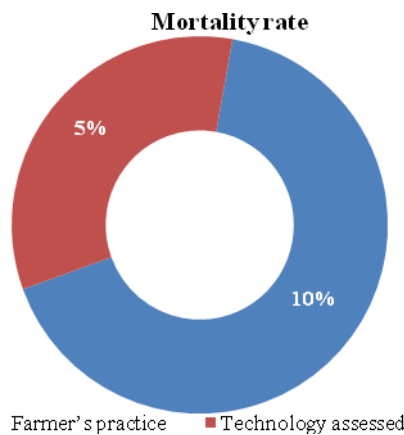
**Table.1**

Treatment	No. of trials	Yield Kg/ha (Body weight in six month)	Net return (Rs./unit) (25 bird per unit)	B:C Ratio	Mortality rate
Farmer's Practice	2	1.2 kg	6000	2:1	10%
Technology Assessed	3	2 kg	9200	2.6:1	5%

**Figure.1 & 2** Average yield and net returns obtained from the on farm trial 3 respectively



**Figure.3** Mortality rate reported in on farm trial 3



**Good quality photograph**

Details of individual on- farm trials

State: Arunachal Pradesh

On farm Trial 4

Thematic area: Breed introduction

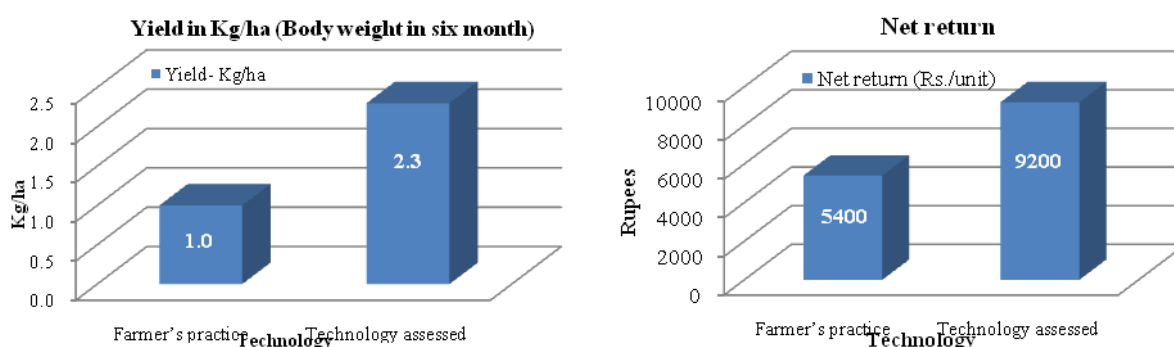
Title:Introduction of Kamrupa poultry in backyard farming

Description:, KVK, Lower Dibang Valley district of Arunachal Pradesh introduced Kamrupa poultry in backyard farming to observed its production potentialities. The result shown a good result in terms of body weight gain, reduce mortality rate and B:C ratio of 2.3:1

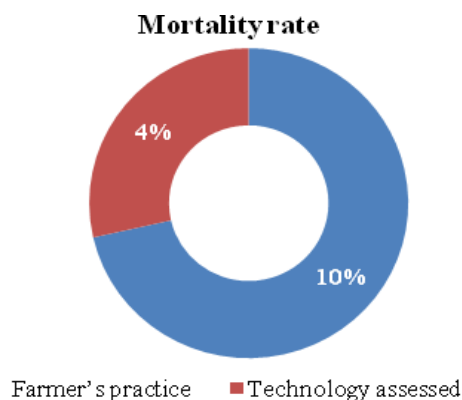
**Table.2**

Treatment	No. of trials	Yield Kg/ha (Body weight in six month)	Net return (Rs./unit) (25 bird per unit)	B:C Ratio	Mortality rate
Farmer's practice	2	1 kg	5400	1.8:1	10%
Technology assessed	4	2.3 kg	9200	2.3:1	4%

**Figure.4 & 5** Average yield and net returns obtained from the on farm trial 4 respectively



**Figure.6** Mortality rate reported in on farm trial 4



It is concluded that there is heavy demand for Meat and Eggs in the district, but the production is very poor due to maintenance of local poultry birds by majority of farmers. To bridge the gap between production and demand, Vanaraja, a dual purpose breed was introduced. This breed has exhibited good

growth and reproductive performance under Semi intensive rearing system with excellent consumer preference as compared to Local/Desi birds. Hence this breed can be considered as highly suitable for local agro-climatic conditions of district, where natural vegetation would be of excellent source.

## Acknowledgement

Authors are immensely thankful to Dr. Rafikul Islam, Poultry Division, College of Veterinary and Animal Sciences, Khanapara, Guwahati, Assam for supplying of hatchable eggs under AICRP scheme (Vanaraja) to perform this research based extension work at village level involving farming community.

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## How to cite this article:

Dipankar Hazarika, T.J. Ramesha, O.R. Nataraju, Moloy Sarmah Baruah, N. Chethan and Naveen Kumar, B.T. 2020. Growth and Reproductive Performances of Vanaraja - A Dual Purpose Breed under Semi Intensive Rearing System. *Int.J.Curr.Microbiol.App.Sci.* 9(07): 3394-3398. doi: <https://doi.org/10.20546/ijcmas.2020.907.397>