IMPROVING LIVELIHOOD THROUGH BACKYARD POULTRY (VANARAJA BIRDS) IN AGENCY AREA OF EAST GODAVARI DISTRICT

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Abstract - **Farmwomen were selected on the basis of their early experience in keeping local poultry along with Vanaraja chicken at backyard system for the purpose of the study. Items of cost included fixed cost e.g. land and building, equipments and variable costs e.g. cost of day-old chick, feed cost, vaccine cost, medicine cost, labour cost, depreciation on poultry shed and miscellaneous cost. Return items included egg, cocks and spent hens. The labour cost accounted for 50.48 percent of the total cost of production of Vanaraja chicken followed by feed cost (13.50 %), chick cost (12.80 %) and depreciation on poultry house (9.70 %) up to 18 months of age. The total cost of production up to 72 weeks of age was found to be higher in Vanaraja (Rs. 8940.00) than its local counterpart (Rs. 6130.00). The maximum amount of income was contributed by selling of eggs (40.00 %) followed by sale of cocks (34.36 %) and sale of spent hens (25.64 %) in case of local chicken. The benefit-cost (B:C) ratio in Vanaraja and local chicken were recorded as 3.10 and 2.10 respectively in the present study. From the study, it can be concluded that small scale Vanaraja rearing is a profitable venture for farmwomen.**

Key words: Poultry, Vanaraja birds, Backyard poultry

I INTRODUCTION:

Rural Poultry production is being recognized as important component of socio economic improvement among the weaker section of society; especially landless labour, small & marginal farm women's. Rural Poultry generates self employment, provides supplementary income with protein rich food at relatively low cost. Chicken share is quite sizable in total meat consumption as it is cheaper than Sheep & Goat meat. There are some enterprises existing in the present situation which gave some assured income viz. Backyard Poultry, Small Unit of Goat keeping etc. in the hands of farm women.

II BACK GROUND & PROBLEM

Socially we are having male dominating family system; obviously all income from agril produce is in hands of male farmer. It is observed that there is always shortage of money in the hands of rural farm women. However poor farm women's have maintained local strains with traditional management having low productivity & low level of income. As we are well aware that the tastes of Deshi Poultry were accepted widely, obviously it has more demand. But when we think about commercial point of view, problem of low weight gain & less egg per bird with high mortality in chicks is the major problem observed by KVK.

III METHODOLOGY

The study was conducted in different villages of agency area of East Godavari District, Andhra Pradesh during the period of 2011-2015 to evaluate the gross income, net income and BC Ratio for Vanaraja birds. KVK, Pandirimamidi has selected 'Vanaraja' breed as a need based intervention for tackling the problem with deshi breed & planned to conduct Front Line Demonstration on enhancing poultry keeping entrepreneurship by introducing Vanaraja breed. Eleven villages were selected and distributed 10 vanaraja birds and 10 local varieties for each family (10 members per village) and estimated the cost of cultivation, gross income and net income for both of the birds by using simple mean. This breed is a dual-purpose, aimed a rural communities where it can be reared in back yards on natural, scavenged food with minimal supplementation with low cost of feeding and management. It produces eggs and meat based on rearing and feeding practices. Important features of this breed are multi-color feather pattern, immunity to disease, perform with less nutrition, grow faster and produce more eggs, produce brown eggs like local hens. They can produce up to 110 eggs per year, and weigh 1.0 to 1.2 kilograms (2.2 to 2.6 lb) at age 6 to 6 ½ months which can serve nutritional security. Vaccination of native birds along with Vanaraja is recommended. These breeds are mainly suitable in Telangana and Andhra Pradesh. (Table 1)

Table 1: Characteristics of Vanaraja

Sno	Particulars	Vanaraja
1	Weight of chicks at day old (gm)	41 – 42
2	Eight week body weight (gm)	1300 – 1400
3	Feed efficiency (ratio)	1 : 2.4
4	Survivability at 8 weeks (%)	95 – 98
5	Age at sexual maturity (days)	166
6	Egg production up to 500 days (no.)	120 – 150
7	Egg weight (gm)	50 -55
8	Hatchability (%)	80-85 %

IV HORIZONTAL SPREAD OF THE TECHNOLOGY

KVK supplied 1100 vanaraja birds to 110 beneficiaries and maintained regular contacts with them to monitor the performance of the birds. Made it a point to vaccinate against Ranikhet disease was done on 7th day & booster dose on 23rd day age of the birds. Mean while various extension activities conducted viz. Video Show, Group Discussion, training for farm women & female extension functionary. Other extension activities like T.V. Show, radio talk & popular articles were conducted for creating awareness in rural masses. However the long time observations on reciprocation of technology show the different trend when compared to the pure breed. The progeny lost its genetic purity by crossing with local and reduced the egg production like 100, 50, 40 and 30. However the excess body weight may also be the reason to reduce egg production in next generation. It may be a constraint at farmers level towards horizontal spread and hence reintroduction of pure breed after 3 or 4 generations. (Table 3)

Table 2: Families covered under demonstration

S.no	Area	No. of families covered	No. of birds supplied	
			Vanaraja	Local
01	Marrivada	10	10*10=100	10*10=100
02	Bandapalli	10	10*10=100	10*10=100
03	Maddiraarhigudem	10	10*10=100	10*10=100
04	Polavaram	10	10*10=100	10*10=100
06	Gangavaram	10	10*10=100	10*10=100
07	Oosirijonnalu	10	10*10=100	10*10=100
08	Utlapalem	10	10*10=100	10*10=100
09	Pedabeerampalli	10	10*10=100	10*10=100
10	Goragommi	10	10*10=100	10*10=100
11	Dandangi	10	10*10=100	10*10=100
	TOTAL	**110**	**1100**	**1100**

Table 3: Observations over 2011to 2015

S.no	Year	Vertical spread of the technology	Mortality (10%)	Economic benefit per generation 500 days					
				Meat @ 400/bird (A)	Egg laying capacity per bird	Total eggs produced	Egg @ 3 /- (B)	Hatched For next generation	Total (A+B)
01	2011-12 (supplied)	50	45	45×400=18000	100	5000	4500×3=13500	500**	31500
02	2012-13 (multiplied)*	100	90	90×400=36000	50	5000	9000×3=27000	1000	63,000
03	2013-14(multiplied)*	250	225	225×400=90000	40	9000	8000×3=24000	1000	1,14,000
04	2014-15(multiplied)*	300	270	270×400=1,08,000	30	8100	8100×3=24300	Nil	1,32,300
05	2015-16 (New breeds)	100	90	Technology was adopted successfully and Trend is continuing on his own					
	TOTAL								**3,40,800**

*Eggs hatched by country bird and continued further generations

** used for hatching and got 100 birds for success full continuation after mortality likewise technology is spreading

Table 4: Estimated return from various components

Particulars	Local	Amount	Vanaraja	Amount
i. Income from sale of eggs (10 nos. of local and 10 nos. of Vanaraja hens)	Av. Annual egg production: 65 eggs/ hen, total egg production: 650 nos. @ Rs. 3/egg	1950.00	Av. Annual egg production: 80 eggs/ hen, total egg production: 800 nos. @ Rs. 3/egg	1950.00
ii. Sale of cocks (10 nos. of local and 10 nos. of vanaraja cocks)	Av. Weight: 1.82 Kg, Total weight: 18.2 Kg @ Rs. 200/ Kg	3640.00	Av. Weight: 2.50 Kg, Total weight: 25 Kg @ Rs. 200/ Kg	5000.00
iii. Sale of spent hens (10 nos. of local and 10 nos. of vanaraja hens)	@ Rs. 350/- per hen	3500.00	@ Rs. 400/- per hen	4000.00
Total gross income	-	**9090.00**	-	**11900.00**
Net income		**6130.00**		**8940.00**
Net income per bird		**613.0**		**894.0**
Benefit : cost ratio		**2.10**		**3.10**

** *Figures in parenthesis indicates per cent of total returns*

Table 5: Estimated cost of rearing of local and Vanaraja chicken

Particulars	Vanaraja/ Local	Amount
A. FIXED COST		
a. Land	Existing	
b. Poultry shed mode of locally available	--	--
c. Equipement	Not required	Nil
TOTAL FIXED COST		**400.00**
B. VARIABLE COST		
a) Cost of day old chick 10 nos	@ Rs. 20/- per chick	200.00
b) Cost of feed up to 28 days of age i. For local chick 6 kg of broken rice for 5 nos. chicks ii. For Vanaraja chick 1 kg of broiler starter feed per bird	@ Rs. 40/- per Kg of feed	400.00
c) Cost of vaccines	@ Rs. 2/ chick	20.0
d) Cost of medicines, feed supplements etc.	@ Rs. 11.5 per bird	115.00
e) Cost of labour @ 5 hrs. per day	@ Rs. 60/- man/ day	1800.00
f) Miscellaneous cost		35.00
Total cost of production		2960.00
Cost of production per bird		296.00

VI. RESULTS AND DISCUSSION

The fixed and variable costs for rearing a small unit of backyard poultry of 20 numbers of bird (10 numbers of vanaraja and 10 numbers of local) are present in Table. 1. The income from vanaraja chicken by selling of eggs was much higher (800) the local counter parts, which was due production of more number of eggs by vanaraja birds might be because of their better genetic make up. The total gross income in vanaraja chicken also Rs. 11900/- recorded and the local chicken under back yard rearing. Similarly the net income from vanaraja birds was also noticed by Rs. 8940/- compared to local chicken (Rs. 6130/-). The benefit cost ratio in vanaraja and local chicken were recorded as 3 and 2 respectively in the present study. The higher benefit cost ration in vanaraja was due to more egg production and attainment of better body weight in given period of time as compared to local chicken. Oladunni and A.I. Fatuase , Uddin et al., 2013 also reported much higher benefit cost ratio (5.57) in native poultry reared in the costal reasons of Bangladesh. However Das et al., 2014 reported much lower benefit cost ratio as 1.73 in rhode island chicken red chicken reared in back yard system of west Bengal.

VII. Conclusion

It is revealed that the benefit cost ratio of vanaraja chicken is better than our local chicken under backyard system of rearing, which indicates that small scale rearing is a profitable venture for farmwomen. Therefore subsistence poultry keeping could be encouraged in Assam as an effective means for income and employment generation particularly for women which will ultimately reduce the poverty and improve overall livelihood.

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