BACKYARD POULTRY REARING: A SUCCESSFUL MEANS FOR ENRICHMENT OF LIVELIHOOD FOR RURAL PEOPLE IN WEST GODAVARI DISTRICT OF ANDHRA PRADESH

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Abstract: In the present study, two poultry breeds namely Vanaraja and Giriraja were evaluated for its suitability under rural backyard poultry rearing system. The study was taken up during 2011 – 12 to 2013 – 14. From the study it was evident that the Vanaraja birds were performed well as dual purpose breed compared to local varieties. Hence, it may be concluded that Vanaraja birds serve better as a dual purpose and giriraja birds for meat purpose. The backyard poultry system with improved birds provides a solution to food security to the rural masses thus, paving a way for sustainable livestock production.

Keywords: Backyard, Birds, Broilers, Eggs, Livelihood, Meat, Poultry.

Introduction: The secondary agriculture plays a vital role in the economic development of the farming community of the district. In this sector mostly enterprises like poultry, dairy, goatary, mushroom and fishery in particular serve as an additional livelihood option for the rural community. The major livestock resources of the district are cattle, goat and poultry (chicken & duck) which act as an important source of additional income for the farm women. Backyard farming has over the years contributed to a great extent to the agrarian economy of different countries. In the same way, rural backyard poultry production plays a vital role in the rapidly growing economy. It provides livelihood security to the family in addition to securing the availability of food. It require hardly any infrastructure set-up and besides supplementary and steady generation, rural backyard poultry can improve food sufficiency, can also unleash human productivity, encourage women and unemployed youth, and bridge the gap between demand for production of eggs and meat. The role of backyard poultry farming in sustaining and enhancing poor peoples' livelihoods in developing countries is well recognized (Ahuja *et al,* 2008). Hence, Krishi Vigyan Kendra, Undi is promoting backyard poultry farming in semi intensive system with improved rural type birds. The study was carried out to know the economic impact of backyard poultry farming in West Godavari district of Andhra Pradesh in order to understand the role of backyard poultry farming in sustaining poor people's livelihoods, its contribution to income, household nutrition, and empowerment.

Materials and Methods: The present study was based on the front line demonstrations (FLD) conducted by KVK on promoting backyard poultry in West Godavari district. The respondents of the study were the farm women who were involved in backyard poultry rearing in operational villages. Primary data were collected from the participating communities and secondary data pertaining to the demonstrations were collected from the annual reports of KVK and Department of Animal Husbandry. The data were collected from 90 respondents of 5 villages comprising *viz* Adavikolanu village of Nidamarru Mandal, Turputalla of Narsapur Mandal, K P Palem and Mutyalapalli villages of Mogalturu mandal and Chilukuru of Undi Mandal of which are located in West Godavari district, Andhra Pradesh through a pre-tested structured interview schedule and were subjected to statistical analysis. The data for the study was analyzed in 2015 by considering the works from 2010-11 to 2012-13. The observations were recorded for other parameters *viz.* gross return, net return and B:C ratio.

Result and Discussion:

In operational villages of KVK, a total of 900 poultry birds were provided among 90 beneficiaries and household wise backyard poultry distribution, mortality from backyard poultry farming system. Under free-range birds can easily pick up its food the backyards once it learns to scavenge in the household surrounding. Under free-range conditions the necessity of supplementary feed/ feed ingredients mostly depends on the free area available in the backyards, intensity of vegetation and availability of waste grains, insects, grass seeds *etc.* Pathak and Nath (2013). Vanaraja is a dual-purpose chicken variety developed by the ICAR-Directorate of Poultry Research (formerly Project Directorate on Poultry) in Hyderabad, India. Vanaraja is aimed a rural communities where it can be reared in backyard on natural, scavenged food with minimal supplementation. 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. Vanaraja give their best performance when reared free range. They each 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. Vaccination of native birds along with Vanaraja is recommended. Excess body weight may reduce egg production.

Table 1. Interventions Undertaken by KVK

Year	Poultry Breed	Number of Beneficiaries	Number of Poultry Chicks Distributed	Age of Chicks at The Time of Distribution	Mortality (%)
2010-11	Vanaraja	30	300	30 d old	5
2011-12	Vanaraja	30	300	30 d old	8
2012-13	Giriraja	30	300	30 d old	5

Utmost care was taken during the backyard poultry farming by the farm women but there were reports of mortality due to attack by wild animals and diseases like Coccidiosis, Marek's disease. For the purpose of egg and meat production, different improved birds were reared in small numbers (20 – 26) under proper brooding and feed management up to 6 wk and later released in free range after 6 wk of age. It was observed that when the chicks distributed after 30d after proper brooding and vaccination, the mortality rate was less (Table 1). Low cost brooding materials like metal or wooden material, electric bulbs, guard for the purpose of brooding were not used by the beneficiaries and thus, scientific management with proper vaccination are very essential to reduce mortality.

In the present study, two poultry breeds namely Vanaraja and Giriraja were evaluated for its suitability under rural backyard poultry rearing system. It was noticed that all the breeds performed better than that of local chicken, however there were variation in performances between these two breeds. It was demonstrated that the breeds Vanaraja and Giriraja attained the highest body weight in 16 wk period compared to that of local, the egg production potential of these chicken variety was also good (Table 2). Hence, a farm family reared these birds for dual purpose, so that they can maintain three batches/ cycles of birds and earn more compared to other breeds. Khawaja *et al,*(2012) reported that RIR chickens performed better than Fayoumi and Desi chickens. It was found that the backyard poultry production system in West Godavari district was traditional and poorly remunerative.

Table 2. Economic analysis of the interventions

Year	Breed	Cost (Rs./ Bird)		Gross return (Rs./ Bird)		Net return (Rs./ Bird)		B: C Ratio	
		Demo	Local	Demo	Local	Demo	Local	Demo	Local
2010-11	Vanaraja	120	40	395	85	275	45	3.29	2.12
2011-12	Vanaraja	120	40	392	153	314	77	5.01	2.01
2012-13	Giriraja	150	40	471	261	338	128	3.54	1.93

Therefore, the present intervention of dual purpose improved breed under balanced feeding management laid more number of eggs and meat production in turn which improved the livelihood security among the tribal people. It can not only give employment to them but can also play an important role in women empowerment. The threats in backyard poultry farming include outbreak of diseases, predators, theft and shortage of feed and housing problems at night. The farmer also must be given training on rearing of backyard poultry to equip them with relevant skills to merge scientific methods in poultry management for improving their productivity. The age at which desi birds start laying eggs ranges from 181.17 - 182.25 days. Egg production up to 52nd week as well as average weight of day old chicks of Giriraja birds are significantly varied from Desi birds. The hen day production were significantly more ($P<0.05$) in Giriraja than the Desi birds during both early and peak laying periods This was in agreement with Bharambe and Garud (2012). The data on chick-egg ratio have shown that newly hatched chicks in the Giriraja birds had higher than chicks in the Desi birds. Chick weight was influenced by egg weight. This was in correlation with Faruqueet *et al.* (2013). Egg production and body weight of Giriraja birds were higher than the local chickens kept under farmer's condition as suggested by Fassillet *et al.*(2010),which indicates that cross breeding has potential for improving economically

important traits. The economic return from the poultry largely depends on characters like body weight, age at sexual maturity, egg production, egg weight and other egg qualitytraits.

Conclusion: It may be concluded that backyard poultry farming is an effective tool to strengthen the livelihood of resource poor farmers and landless labourers in rural area with low-cost initial investment. It provides eggs and meat for family consumption and additional income to the rural households. Vanaraja birds serve better as a dual purpose, and Giriraja birds performed well under backyard for meat purpose. Flocks vaccinated against Marek's, Newcastle disease and Gumboro disease should be practiced for better performance.

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