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BACKYARD POULTRY FARMING IN ASSAM

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Abstract

The poultry industry in India has undergone significant transformations over the decades from traditional farming to intensive commercial farming. Despite rapid growth, the sector faces numerous challenges such as diseases, feed storage, and climate conditions, impacting productivity. Backyard poultry farming holds promise for egg and meat production and income generation, particularly among rural women in the North Eastern region. Improved poultry breeds like Kamrupa and Vanaraja, designed for backyard farming, have gained popularity for their adaptability and productivity. Kamrupa, specifically developed for Assam's conditions, exhibits favorable characteristics such as high survivability and efficient egg production. Embracing this practice can enhance food security and sustainable development while empowering rural communities in Assam.

Key words: Backyard poultry farming, Kamrupa, Livelihood, Rural communities, Vanaraja.

Introduction

Chicken is the predominant domesticated poultry bird in India, and while poultry farming was traditionally a backyard activity until 1960. Over the past three to four decades, the poultry industry in our country has experienced rapid expansion primarily through the emergence of intensive or commercial poultry enterprises. India's poultry sector, totaling 851.81 million birds (**Annual Report 2022-2023**), is rapidly expanding. Despite the notable growth of the poultry sector, it faces various challenges including diseases, feed storage issues, climate conditions, vaccine failures, and mycotoxicosis, all of which significantly impact its operations and productivity (**Kalita, et al., 2024**).

Majority of the population of Assam are non-vegetarian and hence there is a huge demand for the poultry eggs and meat. Assam has experienced notable advancements, shifting from traditional to intensive commercial poultry farming in the past decade. However, rural and tribal regions of the state have been largely overlooked in the poultry sector.

Backyard Poultry Farming

Backyard poultry farming has been a longstanding tradition in the North Eastern region of India, holding considerable potential for egg and meat production as well as income generation in the rural parts

of Assam (**Bharali et al., 2020).** Backyard Poultry farming is very common amongst the rural communities, particularly women in the North Eastern region of India, including Assam, for generations. Chicken meat and eggs obtained from Backyard Poultry farming fulfil the nutritional requirements and prevent the occurrence of malnutrition in the rural/tribal communities. It not only serves as a potential livelihood method to become financially independence amongst rural women in rural Assam but also thrives to meet the demand and supply of poultry eggs and meat in rural areas of India (**Bharali et al., 2020).** However, it often associated with hindrances like unorganized management, lacking structured systems and support mechanism along with availability of hatching eggs against the demand (**Anonymous, 2019-2024**).

Despite its relatively low productivity, backyard poultry makes a significant contribution to Indian egg production, accounting for approximately 30 to 40 percent **(Panda et al., 2008).** The backyard farming was given paramount importance since last decade and various institutes developed different synthetic chicken varieties for the last ten years. The Directorate of Poultry, a leading institute dedicated to research in poultry production of India, has developed chicken varieties specifically tailored for backyard farming. These poultry birds have garnered widespread acceptance among rural and tribal communities, transcending various sectors and religious affiliations across the country. Poultry birds like Vanaraja, Kamrupa, Giriraja, Gramapriya, , Kuroiler etc are suitable in Assam under Backyard Farming (**Anonymous, 2019-2024**). These chicken varieties are very popular in many parts of the country. These are being maintained by the women with household waste, green fodder, insects and supplementary feed.

Vanaraja

Vanaraja is one of the improved variety dual purpose birds developed by Project Directorate on Poultry (ICAR), Hyderabad suitable for backyard or range farming system **(Dey et al., 2019)** and income generating activity especially for the rural women **(Niranjan et al., 2008).**

Kamrupa

"Kamrupa" is developed under All India Coordinated Research Project on Poultry Breeding at Assam Agriculture University, Khanapara, Guwahati, Assam (**Kalita et al., 2016**). The Kamrupa poultry bird is developed by using Assam local ecotype (25%), Colored Broiler (25%) and Dalhem Red (50%) population. It has multi-colour on its body and mainly used for rural poultry production. This type possesses feathers of various colors, average body mass, and elongated legs, ideal for producing eggs efficiently. In a backyard setup, the body weight ranges from 500 to 650 grams at 8 weeks and from 1300 to 1500 grams at 20 weeks. Male birds typically weigh between 1800 and 2200 grams by the time they reach 40 weeks of age. Under a free-range system, female birds reach sexual maturity at an average age of approximately 185.37±4.61 days, with an annual egg production of 118 to 130 eggs, each weighing around 52 grams (**Kalita et al., 2016**). The colour of the egg laid by Kamrupa is brown and taste of meat is like desi bird. The survivability rate of Kamrupa is around 96% and dressing percentage is 65-70%. Maintaining healthcare standards has to be maintained under backyard poultry farming such as standard vaccination, deworming, and

appropriate supplementation. The feeding system typically relies on natural vegetation and kitchen waste, which serve as excellent sources of food within the backyard environment. Additionally, adult birds can receive a daily supplementation of 100 grams of concentrate feed to ensure their nutritional needs are met (**Bharali et al.,2020)**.

Under a semi-intensive system, the benefit-cost ratio (BCR) of Kamrupa was determined to be 4.2. This enhanced ratio can be credited to the superior productive and reproductive capabilities of the dual-purpose Kamrupa poultry breed in comparison to indigenous chicken breeds **(Ali et al., 2020)**.

Conclusion

Establishing backyard poultry farming represents a promising endeavour for rural communities throughout Assam, offering a vital opportunity to boost food security and promote sustainable development. Rural women of Assam can engage themselves in the low-cost rearing of backyard poultry birds such as Kamrupa, Vanaraja, and Giriraja etc to generate supplementary income in their household. Rearing a minimum of 20 to 30 of these birds can yield a favourable income with just a bit of extra attention and a comfortable shelter for night time protection. Under, semi-intensive system, the Kamrupa variety of poultry birds has immense potential to perform better under of rearing with scientific management. Backyard poultry birds thrive when they have access to foraging in natural vegetation, supplemented by agricultural and kitchen scraps for food, which significantly reduces or eliminates the need for additional expenses on their maintenance. In conclusion, adopting backyard poultry farming with specialized poultry breeds optimized for both egg and meat production in Assam's unique agro-climatic conditions has the potential to foster economic autonomy and social empowerment among rural women, youth, and self-help groups.

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