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TANUVAS Aseel: A source for better livelihood of rural farmers in Chengalpet and Kancheepuram districts, Tamil Nadu

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Abstract

Aseel is a breed of chicken known for its robust and powerful build, originating from the Indian subcontinent, particularly from the region that encompasses India and Pakistan. A dual-purpose native variety of Aseel with all the characteristic features of the breed was evolved for table purpose with continuous selection and breeding at TANUVAS, which is termed as TANUVAS Aseel. A study was undertaken with the objective to popularize TANUVAS Aseel rearing at backyard among rural youth for employment and income generation to enhance their livelihood status in Chengalpet and Kancheepuram district of Tamil Nadu by comparing its performance with the desi birds available in the study area. A total number of 125 day-old chicks of TANUVAS Aseel chicks were distributed to 5 numbers of farmers each with 25 numbers. The findings of the study revealed that the body weight in 8 weeks, livability, marketing weight, feed efficiency, age at egg production, egg production, gross cost, gross return and net return of the TANUVAS Aseel was far better than the performance of desi chickens. The farmer's income was increased as the marketing weight of the birds were increased. Hence awareness and capacity building programmes should be conducted among the rural youth on TANUVAS Aseel rearing at their backyard which in turn fetches them income and employment throughout the year to improve their livelihood status.

Keywords: FLD, TANUVAS Aseel, body weight, marketing weight, backyard rearing, feed efficiency

Introduction

Poultry is the most efficient converter of low value food into high nutritional value food for human consumption. Poultry can ensure economic and social rehabilitation of weaker sections of the society. Rural farmers can take up the free range and small scale semi commercial backyard poultry production advantageously utilizing improved birds like Gramapriya, Vanaraja etc. (Yadav *et al.*, 2017) ^[9] to fight evils viz. malnutrition, unemployment etc. Rural households can derive supplementary incomes to crop production to meet their increasing financial requirement by adopting sustainable poultry production. Rural youths and farmwomen can avail acceptable and viable technology without affecting the integrated nature of backyard poultry in the socio-economic and cultural habits of rural and hilly tribes for maximum outputs from minimum inputs.

Native chicken are well known for their adaptability to local agro-climatic condition, hardiness, ability to utilize locally available feed, requiring minimum care and management besides having a unique flavor and taste. The country chicken eggs and meat obtained from desi birds reared draws premium price due to high consumer preference even in the urban sector (Thomas *et al.*, 2023) ^[8]. In India, it is estimated that around 33 percentage of total poultry population is contributed by native chicken, the eastern and southern region of India contributes around 34.26 per cent and 32.74 per cent respectively to the total native population (Nair *et al.*, 2021) ^[3]. The old perception that indigenous birds are not an economically viable livelihood option, have now changed. The eggs and meat of birds reared in the family poultry production fetches premium price due to high consumer preference even in the urban sector where plenty of eggs and poultry meat from commercial units are available. In addition to the stable supply of high-quality animal food, the native chicken rearing will certainly improve the economic status of rural people and peasants in the lower social strata of the society.

As there was a great demand for the pure varieties of native chicken, Poultry Research Station, TANUVAS, Chennai, addressed the crisis by evolving a breeding programme for developing a superior variety of native chicken. Accordingly, a dual-purpose native variety of Aseel with all the characteristic features of the breed was evolved for table purpose with continuous selection

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and breeding at TANUVAS.

The main objective of FLD is to demonstrate newly released technologies and its management practices in the farmers field under farming situations and at different agro climatic region (Meena, 2011 and Narsimha Rao *et al.*, 2007) ^[4, 5].

Rural farmers are willing to take up backyard poultry farming with improved strains as an option for getting more output with less input. Hence, a front-line demonstration was carried out to popularize TANUVAS Aseel rearing at backyard among rural youth for employment and income generation to enhance their livelihood status in Chengalpet and Kancheepuram district of Tamil Nadu by comparing its performance with the *desi* birds available in the study area.

Methodology

The problems encountered in poultry farming were collected during farm and field visit to poultry farms, on-campus and off-campus training programmes and mass contact programmes conducted by KVK, Kattupakkam. Some of the major constraints identified were poor egg production in native birds, low income from backyard rearing, high broodiness and frequent disease incidences, lack of training and best farming practices in native chicken rearing, non-availability and high cost of native chicks, lack of veterinary aid and medicines and unremunerative price for native birds. Based on this data, a frontline demonstration was proposed by KVK, Kattupakkam to overcome few such constraints in poultry farming such as low body weight and production in *desi* birds by popularization of improved native poultry strains such as TANUVAS Aseel among rural farmers of Chengalpet and Kancheepuram districts of Tamil Nadu. The five villages Reddipalayam, Mulaginimeni, Kilambakkam, Keezh Kalvoi and Karanaikattur were selected based on purposive random sampling. A total of 125-day-old chicks of TANUVAS Aseel chicks were obtained from Poultry Research Station, Madhavaram, TANUVAS and distributed to the five numbers of farmers from each village (25 chicks per farmer). In addition to day old chicks, these farmers were provided with critical inputs such as 20 kg of Chicken Brooder mash, one number of Chicken feeder and waterer. The farmers were trained on Poultry rearing package of practices.

Brooding of day-old chicks was carried out up to two weeks of age using electric bulbs at a temperature of 95° F. In order to avoid piling and death of chicks, lighting was provided for 23 hours per day for a period of 2- 4 weeks to prevent piling of chicks over another and death. After brooding period, the chicks were reared in free ranging system just like that of local *desi* birds. Vaccination and deworming were advocated periodically in order to avoid mortality. The birds were inspected regularly for recording of body weight 8th, 12th and 16th week of age.

The brooding was carried out for a period of 14 days (2 weeks) using electric bulbs as sources of heat and illumination. While brooding, the chicks were provided with adequate number of waterer and feeder. Temperature was reduced by 5° F every week until 4 weeks of age. Standard management and healthcare practices were followed throughout the experimental period and chick starter ration were provided to the chicks up to 2 weeks of age. After proper brooding, the chicks were moved into freely and reared in backyard system like local *desi* chicken. Birds were periodically vaccinated against Ranikhet disease.

The data on body weight (in 8 weeks), livability, marketing weight (in 12 weeks), feed efficiency, age at egg production and egg production were recorded for both *desi* and TANUVAS Aseel birds and analysed using simple statistical tools.

Results and Discussion

The production performance of TANUVAS Aseel is presented in Table-1. Typically, poultry farmers rely on the average weight of birds at various ages based on the breed's growth rate. This can be a good reference point when estimating the weight of a bird. The body weight of a poultry bird refers to the total weight of the bird's body, including its bones, muscles, organs, feathers, and other tissues. It's a significant metric in poultry farming and management as it directly correlates with the bird's health, growth and productivity. Feed efficiency is another measure that calculates the efficiency of converting feed into the desired product (meat, eggs, etc.). Feed efficiency specifically considers the output product.

Table 1: Production performance of TANUVAS Aseel

S. No.	Details of farmers	Parameters						
		Body weight (in 8 weeks) (Grams)	Livability (%)	Marketing Weight (Kg)	Feed Efficiency	Age at Egg production (Days)	Egg Production (Nos./month)	BCR
1	Farmer-1	420	92	1.2	3.6	185	240	1.87
2	Farmer-2	450	88	1.1	3.8	190	180	1.56
3	Farmer-3	440	92	1.2	3.6	195	240	1.87
4	Farmer-4	450	96	1.0	3.6	190	209	1.72
5	Farmer-5	480	92	1.1	3.6	188	187	1.72
	Average	448	92	1.12	3.64	190	211	1.75

The recorded TANUVAS Aseel poultry parameters such as livability, marketing weight, feed efficiency, age at egg

production, egg production per month and other economic parameters were tabulated and given in Table-2.

Table 2: Comparison of economic Parameters of *desi* and TANUVAS Aseel

Parameters	<i>Desi</i> Birds	TANUVAS Aseel
Body weight in 8 weeks (gms)	352	448
Livability (%)	64	92
Marketing Weight (gms/Kg)	740	1.12
Feed Efficiency	3.96	3.64
Age at Egg production (Days)	209	190
Egg Production (Nos./month)	90	211
Gross cost (Rs.)	2434	3610
Gross return (Rs.)	2706	6336
Net return (Rs.)	272	2726
BCR	1.11	1.75

It was found from Table-2 that TANUVAS Aseel under backyard rearing had higher livability (92%). Their body weight at 8 weeks was found to be 448gms with improved marketing weight (1.12 kg) at 12 weeks of age. Similar gain in weight was documented by Pandey *et al.*, (2022) ^[6] among Aseel birds, Sreenivas *et al.*, (2012) ^[10] in white leghorn chicken and Rahim *et al.*, (2016) ^[11] in Rhode Island Red chicken. Feed efficiency was found to be 3.64 as compared to 3.96 in local desi bird rearing. The Aseel birds started to lay eggs at around 190 days and their average egg production per month was found to be 211 nos. as compared to local desi bird production of eggs at 209 days and 90 eggs per month respectively. Similar results were recorded by Thangadurai and Shanmugam (2019) ^[7]. The benefit cost ratio was found to be 1.75 which in turn revealed that TANUVAS Aseel bird rearing at backyard is a profitable venture to the farmers. An average amount of Rs.6336 per farmer was obtained by the Poultry farmers by selling eggs for three months. It was found that on an average, Aseel birds attained weight of around 1.12 kg at 12 weeks of age than desi birds weighing only 740 gms. Chitra (2021) ^[2] reported that TANUVAS Aseel chicken showed better reproductive and productive performance compared to desi chicken under backyard rearing. It was also observed that livability of Aseel birds was increased from 64% to 92% after advising the farmers on scientific Poultry farming practices. Aparna *et al.*, (2021) ^[1] observed less mortality rate in Rajasri birds in Guntur district, Andhra Pradesh. About 51% increase or improvement noticed among rural farmers on rearing TANUVAS Aseel at their backyards than desi birds rearing. Marketing of eggs being done at the farm gate, whatsapp and SMS to other needy farmers.

Conclusion

Backyard poultry rearing is profitable venture for rural farmers, farm women, SHGs, and small farmers and that it can be taken on commercial basis with suitable marketing tie up with retail outlets. The present study revealed that the body weight in 8 weeks, livability, marketing weight, feed efficiency, age at egg production (Days), egg Production (Nos./month), gross cost, gross return and net return of the TANUVAS Aseel was far better than the performance of *desi* chickens. The farmers were satisfied in raising these TANUVAS Aseel birds. Hence awareness should be created among the rural youth on TANUVAS Aseel rearing at their backyard which in turn will fetch them more income and employment throughout the year to improve their livelihood status. In addition, the backyard poultry farmers need to be imparted knowledge on feeding, health management and proper marketing strategies through capacity building programmes for converting backyard poultry farming as a profitable venture.

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References

1. Aparna R, Kumar MY, Vinoo R. Rajasri birds-A source of better livelihood for rural farmers in Guntur District. *Journal of Krishi Vigyan*. 2021;9(2):189-93.
2. Chitra P. Comparative Study of TANUVAS Aseel and Desi Chicken Rearing Under Backyard in Rural Areas of

Tiruppur District in Tamil Nadu, India. *IJAEB*. 2021;14(03):485-488.

3. Nair AS, Thirunavukkarasu M, Pandian AS, Senthilkumar G, Balan C. Growth Trends of Livestock and Poultry Population in India. *Indian Vet. J*. 2021;98(06):24-30.
4. Meena KC. An impact assessment of frontline demonstration (FLDs) on soybean growers. *Rajasthan Journal of Extension Education*. 2011;19:133-138.
5. Narsimha Rao S, Satish P, Samuel G. Productivity improvement in soybean (*Glycine max* L. Merrill) through technological interventions. *Journal of oilseeds Research*. 2007;24(2):271-273.
6. Pandey M, Kumar S, Chandrahas AK, Chaudhari CP, Kanadkhedkar HL, Meena R. Comparative study of growth and layer economic traits in Aseel and Kadaknath chicken breeds under intensive rearing system. *The Pharma Innovation Journal*. 2022;11(6):1553-7.
7. Thangadurai R, Shanmugam PS. Comparative performance of Tanuvas Aseel, Gramapriya and indigenous desi bird under backyard condition in Dharmapuri district. *Indian Veterinary Journal*. 2019;96(12):33-5.
8. Thomas LR, Sagadevan I, Kalaikannan R, Aruldass S. Comparative study of production and reproduction performance of TANUVAS Aseel and Kadaknath chicken under intensive system of rearing. *The Pharma Innovation Journal SP*. 2023;12(6):3475-3477.
9. Yadav AK, Singh J, Yadav SK. Characteristic features of indigenous poultry breeds of India: A review. *International Journal of Pure and Applied Bioscience*. 2017;5(1):884-892.
10. Srinivas N, Krause A, Kakade SM, Seeger MW. Information-theoretic regret bounds for gaussian process optimization in the bandit setting. *IEEE transactions on information theory*. 2012 Jan 24;58(5):3250-3265.
11. Rahim S, Javaid N, Ahmad A, Khan SA, Khan ZA, Alrajeh N, *et al.* Exploiting heuristic algorithms to efficiently utilize energy management controllers with renewable energy sources. *Energy and Buildings*. 2016 Oct 1;129:452-470.