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# **GRAMAPRIYA: A BACKYARD POULTRY FOR EGG PRODUCTION**



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## GRAMAPRIYA: A BACKYARD POULTRY FOR EGG PRODUCTION

The traditional diet of majority of the rural people is moderate in energy and low in protein, because of more use of cereals and restricted use of costly food items like fish, meat and egg. The vegetable protein sources used by village households are deficient in critical and essential amino acids like lysine and methionine which in turn can cause protein malnutrition. Feeding diets deficient in easily available quality protein sources like chicken egg, meat and other products of chicken origin exposes them particularly pregnant women, feeding mother and growing children to many common diseases. Backyard poultry are those which can be reared in the rural village conditions with minimum input with less cost of production than those produced under intensive rearing conditions with high input cost. Night shelter is provided to these birds where supplemental feed and clean drinking water is provided. Backyard poultry farming can perform well in village conditions to improve the nutritional status and economic condition of rural poor. Eggs and birds can be used at home level, as well as it can be sold in premium price even in urban market where there is considerable demand for backyard produced egg and birds.

Gramapriya, due to its moderate body weight and high egg yielding capacity, is more preferred in the areas where egg consumption is more and predator menace is high. The male Gramapriya is best suited for preparation of Tandoori type chicken preparations. The females produce good number of eggs, under semi-intensive farm conditions in rural/tribal areas. The feather colour of coloured Gramapriya bird is mostly brown with occasional multiple color. Better immune competence gives the strength for the maximum survivability of this bird under rural backyard farming condition. Because of its moderate body weight, the bird can easily escape from predators, which is otherwise a major threat in backyard. Some of the characteristic promising features of Gramapriya are mentioned below.

### Promising features

- Attractive brown feather colour pattern
- Better egg production and egg weight
- Better adaptability to backyard/free range rearing
- Brown eggs preferred by the rural people
- Better survivability and suited to agro climatic condition of Goa

### Average body weight

Day old	– 36-42 gm
Six weeks	– 550 g

### Mortality

Mortality upto 10 weeks	– 7 per cent
Mortality upto 20 weeks	– 10 per cent
Mortality during laying	– 10 per cent

## Egg production

Colour – Brown

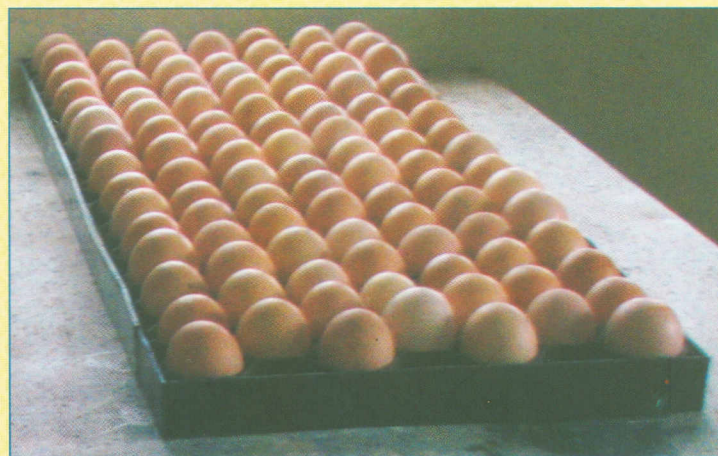
Average egg weight – 54-56 gm

Age at 50 per cent egg production – 34 weeks

Egg production upto 72 weeks – 180-200

## Brooding of chicks

Brooding is the care and management of new born chicks for successful rearing without hen. During initial stage of life, chicks can not regulate their body temperature. They need artificial heat to maintain their body temperature.



*Gramapriya hatching eggs*

The young chicks need brooding up to 4 weeks of age. The brooding arrangement can be made either on floor or in cages as per the available facility. There should be adequate ventilation in brooder house to maintain balance of oxygen and carbon dioxide. Brooder house should be thoroughly cleaned and disinfected with a disinfectant solution (Phenol/Cresol) before arrival of chicks. All equipments like feeders, drinkers, hovers/brooding cages should be thoroughly cleaned before



*Cage brooding of Gramapriya chicks*



*Distribution of chicks to farmers*

brooding is started. For floor brooding 2-3 inch thick layer of saw dust/rice husk/locally available litter material should be spread on the floor uniformly. Initially for 2-3 days news paper should be spread over the litter material to prevent chicks from eating litter till they learn eating feed because litter material may choke their throat causing death due to suffocation. Brooder can be made from wooden or steel structure or from locally available cheap materials such as flat bamboo baskets, wooden box or any other such structures. These structures should be fitted with electric bulbs as per heat requirement. A dimension of 4x 4 inches with 1.25 inch height flat basket brooders fitted with 4 nos. of 60 watt bulbs can accommodate 250 chicks. Around the brooders, guard made up of hard card boards or steel plate of 1.5 ft. height joined together must be used for 1-2 weeks to prevent chicks movement away from the heat source. Brooding can also be done in cages fitted with heat source with thermostat facility for control of temperature. Brooders should be warmed up 24 hours prior to the arrival of chicks. Optimum temperature of brooder house promotes good growth rate and reduces mortality in chicks. The starting temperature during brooding should be 95 °F in first week and should reduce 5 °F per week in successive weeks till 70 °F. Monitoring chicks behaviour in brooder is important to note whether they are comfortable or not. If temperature is higher than the requirement, chicks will stay away from the heat source and if it is lower than the requirement they will come closer to the heat source. Chicks guard may be prepared from tin, hard card board or any other such locally available materials. Healthy and physically good chicks should be selected for brooding.

## Housing

Housing is required for night shelter and protection from rain. This can be done by use of low cost material i.e. wiremesh or unused fishnet, bamboos and tarpoline sheet. With the help of bamboo and wire mesh outside covering can be done and roofing can be done with tarpoline sheet. Coconut leaves can substitute tarpoline/old asbestos sheet for roofing to reduce the cost of housing wherever available in plenty from own source. About 1.5-2.0 square feet floor space is required per bird.



*Night shelter for Gramapriya in farmers backyard*

The shelter should be 1.5 – 2.0 ft above the ground level for keeping the floor dry in rainy season. There should be an overhang of roofing material of about 3.5 – 4 feet from the edge of the roof to prevent spashing of rain water inside the shelter. The drinker should be kept in front and nest should be kept in the back corner. Locally available litter materials like rice husk, coir dust, groundnut hulls, sugarcane waste (broken into small pieces) and dry leaves can be used as bedding material. Weekly turning is essential for maintaining dryness of litter. To avoid dampness of litter in rainy season



*Gramapriya chicks in nursery feeding*



*Gramapriya adult male*

mix hydrated lime or super phosphate @ 1.0 kg / 10 square feet floor space. One poultry unit consisting of 10 adult birds produces about 250-300 kg of poultry manure per year. Poultry manure has nutrient value about 3 times more than cattle manure i.e 3 per cent nitrogen, 2 per cent phosphorous and 2 per cent potash. The well built up litter supplies animal protein factor (Vitamin – B12) and Riboflavin (Vitamin B2) which are beneficial for the health of birds.

### Feeding

Gramapriya chicks need balanced feed during initial 6 weeks of age under nursery rearing. As their nutrient requirements are low, alternate feed ingredients both for energy and protein can be incorporated in the diets without affecting their



*Gramapriya adult female*

performance. In nurseries, chicks are reared on standard layer chick ration. For grower birds in second phase, besides the feed material available from free range, kitchen wastes and other kinds of grain or bran can also be provided as supplementary feed. Gramapriya can pick up its food easily from the backyard once it learns to scavenge. The need for

additional supplementation depends on the free area available, intensity of vegetation, availability of waste grains, insects and grass seeds, etc. Male Gramapriya attain 1.2 kg at 12 weeks of age on broiler starter feed. Gramapriya pullets should be provided with supplemental calcium sources (i.e. lime stone powder, stone grit, marble chips or shell grit) mixed with feed



*Gramapriya laying hens in Farmer's Backyard*

or grain during laying phase @4-5 g/bird/day. This plan of feeding schedule has yielded successful results with high rate of survivability and good egg production. The eggs laid are tinted and have fairly good size. Balance ration for Gramapriya laying hens can be prepared as : Energy source-65-70 per cent, vegetable protein source-20-25 per cent, Animal protein source, 3-5 per cent, limestone-5-7 per cent, DCP-1-2 per cent, Common salt-0.5 per cent, Mineral mixture-0.5 per cent and Vitamin mixture-0.1 per cent. Energy sources include maize, bajra, ragi and wheat , Vegetable Protein sources are soybean meal, ground nut cake, sunflower oil cake, animal protein sources are fish meal, meat meal, silkworm pupae meal etc. Calcium and Phosphorous sources are shell grit, limestone, Di-calcium phosphate etc.



*Scientist interaction with farmer.*

## Management and Health Cover

Gramapriya chicks can be let free for scavenging in the backyard after 6 weeks. The male Gramapriya can be reared separately and marketed for meat purpose. The birds need to be habituated to return to the nest in the evening for night shelter. Night shelter should have good ventilation and should give protection from predators. Availability of plenty of clean and fresh water should be made throughout the life and birds must be vaccinated against Marek's and Ranikhet diseases. Since birds are reared in the backyard they are more prone to parasitic infestation. Therefore, periodic deworming at 3-4 month intervals is essential. These birds can be reared under semi-intensive system by housing the bird in a litter floor house, and letting loose for free range scavenging in open backyard. The birds need to be vaccinated to prevent some commonly occurring diseases as per the vaccination schedule mentioned below.

## Vaccination Schedule

Age, day	Vaccine	Dose	Route
1	Marek's disease	0.20 ml	Subcutaneous
7	Ranikhet Disease (Lasota)	one drop	Eye
18	Ranikhet Disease (Lasota)	one drop	Oral
28	Ranikhet Disease (R2B)	0.50 ml	Subcutaneous/ Intramuscular
42	Fowl Pox	0.20 ml	Intramuscular

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