

should largely depends on food available in free-range conditions. Care should be taken to restrict the weight of pullet (female) between 2.2 to 2.5 kg at 6 to 6.5 months of age. Excess body weight may reduce egg production. The broken/ shell less egg can be minimized by supplementing the calcium sources (lime powder, shell grit, stone grit etc.) @ 3-4 g / bird/ day during laying phase.



Housing:- Housing is required for night shelter and protection from rain. About 1.5 to 2.0 square feet floor space is required per bird. This can be made by use of locally available low cost material ie. stone, wire mash, bamboo, wood etc. Thatched roof made of dry leaves or asbestos sheet may be used. There should be an overhang of roofing material of about 3.5 to 4



feet to prevent splashing rain water inside the shelter. The house should be well ventilated and dry. Periodic cleaning and spraying is needed from health point of view. Locally available materials like rice husk, dry leaves, ground nut hulls etc can be used as bedding material. Weekly turning is essential for maintaining dryness of litter.

Health care:- The most important disease that affect birds under free-range farming is Ranikhet disease. Follow proper vaccination shedule Pratapdhan birds should be vaccinated against Ranikhet disease at 6 months interval, preferably one should be before the onset of summer. Vaccination of native birds along with Pratapdhan is recommended. Night shelter should have good ventilation, required light and protection from the predators. The material used for night shelter such as wood and bamboo offers a good hiding place for external parasites. Therefore, periodic cleaning of night shelter is essential. Since the chicks move in free-range, there is a possibility of parasitic infestation. The deworming at 2-3 months interval is required. Under free range conditions.

Table-2 Performance of Pratapdhan birds

Economic traits	Performance
Day old body weight (g)	35
Body weight at 8 wks of age (g)	681-718
Body weight at 20 weeks of age in male (g)	2309
Body weight at 20 weeks of age in female (g)	1734
Body weight at 40 weeks of age in male (g)	2491
Body weight at 40 weeks of age in female (g)	2230
Average age at first egg production (d)	125
Age at sexual maturity (d)	170
Average egg weight (g)	50
Annual egg production	161



Supply

Fertile eggs, day old chicks and six wks old chicks are available at All India Coordinated Research Project on Poultry Breeding, Poultry Farm, Department of Animal Production, Rajasthan College of Agriculture, Udaipur on payment basis.

PREPARED BY

Dr. S. P. Tailor
Project Incharge, AICRP

Dr. Siddhartha Mishra
Asstt. Professor

M. C. Mathur
Assoc. Professor

Prashant Jatolia

B. L. Dangi

Published by : Directorate of Research, MPUAT, Udaipur



Pratapdhan

Dual Purpose Coloured Bird
Future of Rural Poultry in Rajasthan



Owing to requirement of small space, low capital investment, quick return from outlay and well distributed return throughout the year make poultry farming remunerative in both rural and urban areas. Not only rearing of poultry provides an excellent opportunity for gainful employment to unemployed members of rural communities but also chicken meat consumption is a significant protein source which helps to meet out the nutritional needs of the rural population, as malnutrition is the major problem in the country.

The rural poultry production is still traditional in most rural and peri-urban areas of India particularly in some communities. Indian backyard population increase is only 16% in the last 30 years. Native chicken in rural and tribal areas constitute about 38% of countries' chicken population. However, due to low productivity (50-60 egg/year) they contribute only 21% to the total egg production, despite of the fact that their poultry eggs and meat fetch a much higher price than that from commercial poultry. Furthermore, the demand of indigenous chicken and their eggs is increasing nationwide, mainly for their taste, even though the eggs weight and body weight of native hens are much smaller than commercial birds and eggs. The National Institute of Nutrition has recommended per capita consumption of 180 eggs and 11 kg of meat for our country. At present, the per capita availability of meat is 1.6 kg and egg is 42. Average consumption in major and small cities is 170 and 40 eggs respectively. On the other hand, the average consumption of developed and undeveloped rural areas are only 20 and 5 eggs respectively.

As far as Rajasthan is concerned, the proportion of backyard poultry is more than 60% of the total poultry population of the state. Still majority of poultry birds are maintained under backyard/free range system in Rajasthan.

All India Coordinated Research Project on Poultry Breeding, Maharana Pratap University of Agriculture & Technology, Udaipur, has developed a Dual-purpose chicken variety i.e. Pratapdhan which morphologically resembles the native chicken but produces more eggs and is heavier in body weight. However, the body weight and egg production depends on rearing and feeding practices.

SALIENT FEATURES OF PRATAPDHAN

- Attractive multicolour feather pattern, as rural people like coloured birds from aesthetic point of view and better looking. Because of colour plumage birds have camouflagic characters to protect themselves from predators.
- Longer shank length which help in self protection from predators in backyard areas.
- Good adaptability in backyard/ free-range, it has good immune-competence as there is lack of availability of good quality food and drinking water, the birds have to roam into dirty surrounding in search of food. Further it has capacity to survive on low plane of nutrition (low and negligible input) and harsh climatic conditions.
- Produce brown shell egg.
- Has broody characteristic.

- Fast growth rate with average adult body weight at 20 week of age ranged from 1478 to 3020 g in males and 1283 to 2736 g in females.
- Higher egg production of 161, which is 274 % higher the local native (43 eggs).

REARING OF PRATAPDHAN

NURSERY MANAGEMENT

Brooding of chicks:- Brooding is the care and management of new born chicks for successful rearing without hen. Pratapdhan chick needs brooding care during initial 4-6 weeks of age. Artificial heat is provided by brooders made of wooden/metal/ locally available material. The brooding arrangement can be made either on floor or in cage as per available facilities. Brooder house, feeders, drinkers, hovers should be disinfected before arrival of chicks. In floor brooding spread 2-3 inch clean bedding material uniformly. Initially spread newspaper over litter for 2-3 days to prevent chick from eating litter till they learn eating feed because litter material may choke their throat causing death due to suffocation. Arrange feeders and drinkers alternatively. The movement of chicks can be restricted near the heat source with the help of chick guard.

Feeding:- Up to 6 weeks of age, balanced feed fortified with required minerals, vitamins, antimicrobial and anticoccidial should be fed ad-lib. It is important to ensure easy access of feed to all the birds and offer feed daily. Pratapdhan chicks need 2400 Kcal ME, 16 % protein, 0.77 % lysine, 0.36 % methionine, 0.35% available phosphorus and 0.7% calcium. The feed can be prepared using local feed ingredients.

Health care:- The Pratapdhan need protection against common diseases like Mareks, Ranikhet and IBD. The vaccination schedule is as follows.

Table-1 Vaccination schedule for Pratapdhan chicken

Age (day)	Name of vaccine	Strain	Dose	Route
1	Marek's Disease	HVT	0.20 ml	S/C injection
1	Ranikhet	Lasota	One drop	I/N or I/O
14	Infectious bursal disease	Gum-boro (living mild)	One drop	I/N or I/O
28	Ranikhet	Lasota	—	Drinking water
42	Fowl pox		0.2 ml	Intramuscular

FREE RANGE MANAGEMENT



At 8 weeks of age, birds will attain 681- 718g body weight (Table-2). These birds can now be reared under backyard free range conditions with 10-20 birds/ house depending on the area and Natural Feed Base available. The birds are let out for foraging during the day time while at night they are kept in night shelter. The male can be sold at any time after attaining the minimum market body weight. Female of Pratapdhan lay up to 161 eggs per year.



Feeding:- Pratapdhan under free range can easily pick up its food from the backyards once it learns to scavenge in the field. The need for additional feed supplementation depends on the free area available, intensity of vegetation, availability of waste grains, insects and grass seed etc. Generally, the birds under free range conditions can meet their protein requirement through scavenging. Therefore, feeding the birds with cereals (maize, wheat, Jowar, barley, broken rice) available is always beneficial to sustain the production. The nature of supplemental feed depends on the purpose of rearing. For meat purpose, feeding the birds with commercial broiler/ layer chick feed is suggested. If the purpose of rearing is egg production, the birds