



**P.V. NARSIMHA RAO TELANGANA VETERINARY UNIVERSITY  
POULTRY RESEARCH STATION  
PVNRTGVU, R'NAGAR: HYDERABAD-30**



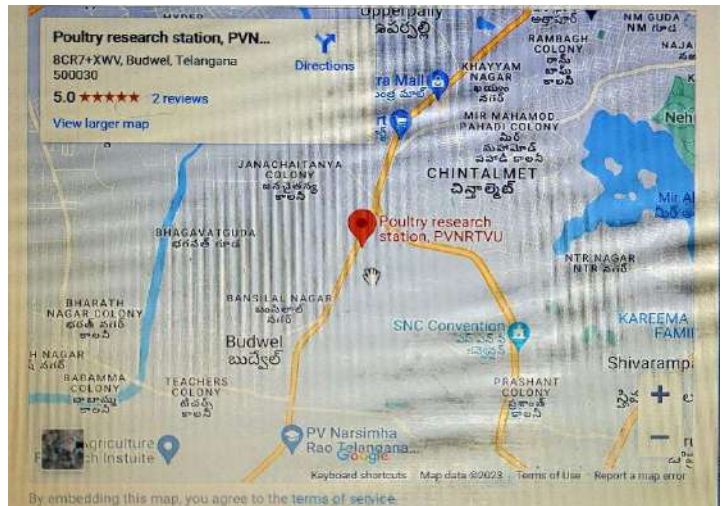
**Prof. S. Sai Reddy**

M.V.Sc., Ph.D.

**Officer in-Charge and Head,  
Poultry Research Station,  
Rajendranagar, Hyderabad**

Email: [rajasribackyard@gmail.com](mailto:rajasribackyard@gmail.com)

Ph no:9440323993



Location: <https://goo.gl/maps/LAxxb2yNupaozVM6A>

Poultry Research Station is located on the main campus of the University. Its focus is on the rural poultry with main objectives of developing suitable backyard poultry varieties and improving the existing varieties. It contemplates to conduct research in to various aspects of rural poultry such as breeding, nutrition, health, management, economic and marketing aspects.

This Station has a land area of 6.25 acres. An Office cum Laboratory building with 15,000 sft of covered area houses Administrative Office, Hatchery and Laboratory. There are 17 poultry houses with a total plinth area of 41,000 sft to house different age groups of poultry. Besides, there is a feed mixing plant along with a feed godown.

This Institute has already developed a coloured bird called **RAJASRI**, suitable to backyard farming. This bird, a synthetic variety involving White Leghorn, Desi, Dalhem Red and RIR is in to 10<sup>th</sup> generation. Rajasri thrives well under backyard conditions and under low input or scavenging system. This bird has been well accepted by the farming community. So far, more than 15 lakh birds have been supplied under various developmental programs funded by agencies like SERP, RKVY, TSP, DBT etc. and also directly on payment basis.

*Rajasri* is a dual purpose rural poultry variety which is suitable to rear under free range system which involves low inputs, can survive under low plane of nutrition. These birds are productive in terms of weight gain (males/cockerels) which can be used for meat consumption and the pullets are good layers having the genetic potential of laying upto 110 eggs under free range system and 165 eggs per annum under intensive system of rearing. High disease resistance/immune competence in *Rajasri* provides strength for better survivability under free-range conditions. Due to its moderate body weight, the bird can easily escape from predators. These birds has been successfully introduced into the rural areas by growing the chicks up to 5 weeks of age in nurseries and then leaving in farmer's backyard free-range farming.

#### **Promising features of *Rajasri***

- Attractive multicoloured plumage and resemble desi birds
- protect themselves from predators
- High disease resistance and survivability
- Survive under low plane of nutrition
- Age at first egg production – 20-22 weeks
- Produces brown shelled eggs (165 eggs/annum)
- Body weight at 20 weeks of age (Male: 1750 gms, Female: 1500 gms)

## 1. Nursery Management

- A small number of birds (10-20) can be reared for egg and meat purpose in areas where plenty of natural feed resources are available under free range conditions. Essentially, *Rajasri* day old chicks need to be reared under nursery management up to 4-5 weeks and let them loose in open under free range backyards after 5 weeks of age. Vaccination, health care and management practices during this period are similar to that of layer chicks of the same age.
- **Brooders:** Spread the clean litter material (groundnut husk/Paddy husk/saw dust) of 2-3 inches thickness uniformly in the house. Spread the newspaper on the litter. Arrange the feeders and drinkers alternatively. Heat source (electrical) of 2 watts/chick is adequate up to 4-6 weeks of age. At the higher environmental temperature the birds move away from the heat source. If it is too cold, the chicks move closer and pile up near the heat source. Uniform movement of chicks under the brooder suggestive of ideal temperature.
- **Feed:** Complete balanced feed containing all nutrients should be given while rearing the birds under nursery management. Feeders and drinkers should be arranged alternately in the brooder, for initial two days finely ground maize should be spread on newspaper in the brooder. It is important to ensure easy access of feed to all the chicks. In nursery rearing *Rajasri* chicks need 2550 kcal/ME, 18%protein, 0.85% lysine, 0.36%methionine, 0.35% available phosphorus and 0.7%calcium. Layer Grower feed or broiler feed available commercially can be fed during initial 6 weeks of age. The diet can be formulated using the locally available feed ingredients to meet the above nutrient specifications.
- **Health care:** Though *Rajasri* has better immune competence, they need protection against Ranikhet disease and fowl pox. Vaccination schedule is given in table 2.

## 2. Free range management

- At 6 weeks of age, birds will attain 450 - 550 g body weight these birds can be let out under backyard free-range conditions @ 10 to 20 birds/house hold depending on the area and natural feed base available. The birds are allowed for foraging during the daytime and kept in night shelter during night time. Clean drinking water is to be provided every day before the birds are let out from the night shelter. The males can be

sold at any time after attaining minimum body weight of 1.8-2.2 kg. Female birds of *Rajasri* on an average lay upto 110-120 eggs per year under free-range conditions.

- **Feeding:** Generally, *Rajasri* birds under free-range conditions can meet their protein requirement through scavenging. The birds can easily pick up its food from the backyards once it adopts to scavenging in the backyards. Therefore, feeding the birds which cereals (bajra, ragi, jowar, kora, broken rice, rice polish, rice bran etc.) available is always beneficial to sustain the production. These grains can be offered 10-20 g/bird every day in the evening. For meat purpose feeding the birds with commercial broiler chick feed is suggested. If the purpose of rearing is for egg production, the birds should largely depend on food available in free-range conditions. Care should be taken to control body weight of pullets (female) between 1.3-1.5 kg at maturity to get better production. Lower or excess body weight may reduce the total egg production. The broken/shell-less eggs can be minimised by supplementing the calcium sources (lime powder, shell grit, stone grit etc.) @3-4g/bird/day.

**Table 1: Making of feed with locally available feed ingredients**

|  |          |
|--|----------|
| Maize/Jowar/Broken rice/Ragi/Bajra etc           | 50 parts |
| Rice bran/Wheat bran/De-oiled rice bran etc      | 20 parts |
| Soyabean meal/Ground nut cake/Sunflower cake etc | 28 parts |
| Vitamin and mineral mixture                      | 2 parts  |

- **Health care:** The most important disease that effect birds under free-range farming is the Ranikhet disease. Night shelter should have good ventilation, required light and protection. The material used for night shelter such as wood and bamboo offer good hiding place for external parasites. Therefore, periodic cleaning of the night shelter is essential. Since the chicks move in free-range, there is a possibility of parasitic infestation. Deworming at 2-3 months interval is required. Under free-range condition adult *Rajasri* birds should be vaccinated against Ranikhet disease at six months interval, preferably one before the onset of summer. Vaccination of native birds in the vicinity along with *Rajasri* is recommended.

**Table 2. Vaccination Programme for Rajasri birds**

| Age                    | Name of the Vaccine | Dose    | Route        |
|------------------------|---------------------|---------|--------------|
| <b>In the Hatchery</b> |                     |         |              |
| 1 <sup>st</sup> day    | Marek's disease     | 0.20 ml | SC injection |

| <b>In the Nursery</b> |                                 |          |                 |
|-----------------------|---------------------------------|----------|-----------------|
| 5 <sup>th</sup> day   | Ranikhet (Newcastle) disease    | One drop | Eye             |
| 14 <sup>th</sup> day  | Infectious Bursal disease       | One drop | Oral/Eye        |
| 21 <sup>st</sup> day  | Infectious Bursal disease       | One drop | Oral/Eye        |
| 28 <sup>th</sup> day  | Ranikhet (Newcastle) disease    | One drop | Eye             |
| 35 <sup>th</sup> day  | Fowl pox                        | 0.2 ml   | IM/SC injection |
| <b>In the Field</b>   |                                 |          |                 |
| 56 <sup>th</sup> day  | Ranikhet disease (R2B strain) * | 0.50 ml  | IM injection    |
| 12 <sup>th</sup> week | Fowl pox *                      | 0.2 ml   | IM/SC injection |

\*Repeat these two vaccines at every 6 months interval

**Table 3. Performance of *Rajasri* birds**

| <b>Economic Trait</b>                   | <b>Farm</b>          | <b>Field</b>         |
|---|----------------------|----------------------|
| <b>Body weight</b>                      |                      |                      |
| 8 weeks, g                              | 450-500              | -                    |
| 20 weeks, kg                            | 1.7 - 1.8 (Males)    | 1.0 - 1.4 (Males)    |
|   | 1.4-1.5 (Females)    | 1.0 -1.2 (Females)   |
| 40 week, kg                             | 2.4 – 2.8 kg (Males) | 2.0 – 2.3 kg (Males) |
|   | 1.5 -1.8 (Females)   | 1.1 -1.4 (Females)   |
| Age at first egg, weeks                 | 20-22                | 190-200              |
| Egg production up to 72 weeks, Nos.     | 155-165              | 110-120*             |
| Egg weight, g 40 weeks                  | 52-55                | 43-46                |
| Ready to cook meat yield, %             | 66-68                | -                    |
| Fertility, %                            | 85-86                | -                    |
| Hatchability (Fertile eggs set), %      | 84-86                | -                    |
| Survivability up to 8 weeks, %          | 95-96                | -                    |
| Survivability up to 20 weeks, %         | 86-90                | -                    |
| Layer house survivability (21-40 weeks) | 91-94                | -                    |

\* Estimated

### **Supply:**

- **Fertile eggs:** Fertile eggs of Rajasri are available at Hatchery of this Research Station on payment basis. Eggs should be stored in cool place till they are set for hatching.
- **Day old chicks:** Day old chicks of Rajasri are available at Hatchery on advance payment. The supply will be made only on receipt of advance payment through cash or Demand Draft (DD) drawn in favour of Officer-in-Charge, Poultry Research Station, Rajendranagar payable at Hyderabad and should be sent to The Officer-in-Charge and Head, Poultry Research Station, Rajendranagar, Hyderabad-30 (TS). Payment can also be made through RTGS / NEFT with the following details: Bank Name: SBI, Rajendranagar Branch, Account Holder Name: **“Officer-in-Charge”**, **Account No:**

**37441031568, IFSC code: SBIN0020074.** Please provide your contact address, telephone number and e-mail ID for correspondence.

- **Contact for Booking and to know the Booking status:** Hatchery, Poultry Research Station Land line: **040- 24015316, Ph no: 9100956360** (On working days 9:00 AM to 4:00 PM). Email: [rajasribackyard@gmail.com](mailto:rajasribackyard@gmail.com).

**Faculty:**

**1. Prof. S. Sai Reddy**

M.V.Sc., Ph.D.

Officer in-Charge and Head,

Email: [rajasribackyard@gmail.com](mailto:rajasribackyard@gmail.com)

Ph no:9440323993

**2. Dr. Gurram Srinivas, Scientist**

Phone: 9491367458,

E-mail: [gurramsrinivas4@gmail.com](mailto:gurramsrinivas4@gmail.com)

**Research Projects completed:**

**1. Revolving Fund Project on Rural Poultry, Rs. 1.0 Lakh as Corpus Fund, 2008 to till date**

- To develop a layer bird with coloured plumage capable of laying 160-180 eggs up to 500 days with an average egg weight of 55 g at 40 wk age which is hardy and able to survive under harsh climatic conditions and backyard production system

**2. Sustainable Livelihoods of Rural SC/ST Population using Backyard Poultry as a Tool, Rs 10.54 lakhs, DBT, 2008 to 2010**

- To enhance livelihood of rural SC/ST population through backyard poultry rearing

**3. Induction of Backyard Poultry units in PoP families in Dairy and CMSA mandals by SERP – Supply chain management of Rajasri day old chicks and technical back stopping by University, Rs. 60 lakhs, 2011 to 2013.**

- To establish parent stock with about 3000 hens and 600 cocks
- To organize supply chain for producing 5 lakh chicks per annum
- To organize trainings to village level functionaries of SERP, Govt. of A.P.

**4. Promotion of Backyard Poultry using Rajasri variety for sustainable livelihood and Nutritional security of tribal population in Warangal district of AP, Rs. 32 Lakhs, 2013**

- To promote backyard farming using RAJASRI birds as eco friendly livelihoodoption in tribal areas of A.P.
- Capacity building of tribal youth in knowledge and skill components on poultry nursery.
- To promote market linkages for naturally produced poultry products

**5. Integration of Small Scale Layer Units with Nutritional Day Care Centres organized by ITDA for Providing Nutritional and Livelihood security to tribal Pre-school Children, Lactating and Pregnant women in Warangal District” Rs. 18 Lakhs, 2014-15, (ICAR- TSP)**

**6. Research on Backyard Poultry - Livelihood and nutritional security of BPL families under rural scenario (Strengthening of infrastructure and running costs), Rs. 10 Lakhs, 2014-15, RKVY.**

**7. Enhancing livelihoods of rural farmers by supplying backyard Rajasri variety chicks**

- From 2015 onwards 10, 26,629 day old chicks were supplied to farming community.

**8. Supply of Rajasri Grower birds (6 weeks)**

- Supply ofRajasri grower birds of 6 weeks age to farmers through various external agencies like DOR, KVKs and line departments to promote the rearing of this variety in farming community.
- From 2017 onwards 50,000 grower birds of Rajasri were supplied.

**9. Nutritional intervention action plan for primitive tribal group is a novel initiative taken by the Honorable governor of Telangana.** Under this programme, Poultry Research Station supplied 10,000 Rajasri 6 weeks old birds to six primitive tribal villages of Badradri Kothagudem, Nagar Kurnool and Adilabad districts. The villages and families were identified by Red Cross Society of India with whom help, we have supplied the birds in above said districts.





**Rajasri Day old chicks**



**One month old chicks**



**Two months old rajasri birds**



**Three months old rajasri birds**



**Female rajasri bird**



**Male Rajasri bird**





**Rajasri Parent stock**



**Brooding arrangement of Rajasri chicks**



**Distribution of Rajasri birds under Honourable governor's programme  
NAGAR KURNOOL DISTRICT Village: BHOURAPUR and APPAPUR**





**ADILABAD DISTRICT (Mangli Habitation and Burki Habitation)**







**BADRADRI KOTTHAGUDEM DISTRICT**





**Hatchery room**



**Hatch analysis**



**Distribution of Rajasri chicks and birds to farmers**

