



# 'Giriraja' - a disease resistant coloured breed for rural conditions

G. Devegowda, B. Umakantha & Krishnamurthy

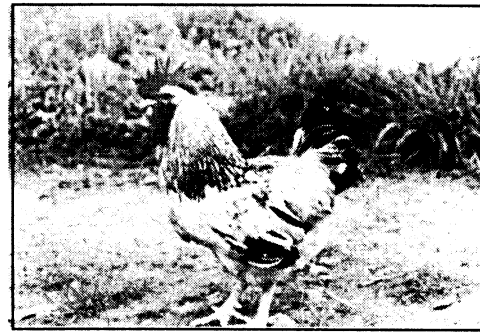
*Modern poultry farming means the use of commercial broilers or layer breeds. Although these birds have been selected for high performance, they have difficulties in showing their traits when kept in backyard conditions. In this case, there is a demand for coloured dual-purpose birds, which are disease resistant, and high yielding, like the Indian Giriraja bird.*

**S**cientific poultry farming in India was established in the later part of the sixties. Availability of improved breeds, feeding and management resulted in an acceleration of egg and meat production during the seventies. As a result of this intensive poultry farming, birds became more susceptible to metabolic disorders (Ascites, Fatty liver syndrome, leg weakness etc.) and diseases like Infectious Bursal Disease, Marek's disease etc. Fast growing hybrids may not be ideal for rural conditions, where disease diagnosis facilities and technical advice is not available. Furthermore, villagers like to have a bird, which resembles local birds in plumage colour.

G. Devegowda,  
B. Umakantha and D.  
Krishnamurthy

Department of Poultry Science,  
University of Agricultural  
Sciences, Hebbal, Bangalore.

Therefore, poultry scientists at the Department of



Poultry Science, University of Agricultural Sciences, Bangalore, India have made a significant contribution by develop-

ing a synthetic coloured dual-purpose (meat and egg) variety "GIRIRAJA".

Symbolically expressed, Giriraja means "king of the jungle fowl". It is a strain bred to resemble local fowls and evolved by blending different breeds/strains. Sturdy and resistant, it can easily acclimatize to any region and weather.

#### Disease resistance:

Giriraja yields high quality and quantity of meat. It can survive like any other native stock. Except the routine Newcastle (Ranikhet), no further vaccination is required. It is resistant to Marek's and Fowl pox diseases, and relatively more resistant to infectious bursal disease than commercial broilers. Basically, Giriraja does not demand either sophisticated or modernized rearing.

#### Better Performance:

How stately in size, attractive in appearance is Giriraja? At a modest estimate, it is three times over and above the local birds with regard to growth and egg production. Surely, here is a golden opportunity for the tribal segments of





the population to cash-in on Giriraja, and thereby improves their standard of living. The ancestral wild



Red Jungle Fowl (*Gallus gallus*), despite its wide genetic contributions in the development of modern fowls, is however, poor in egg

production and size. Nevertheless, it is still the mainstay of fowls among the tribals because of its virtues of plumage patterns, fighting qualities for sport and high quality meat. Keeping the later attributes of the jungle fowl in mind, Giriraja has been developed with added qualities of higher production (meat and egg) and better efficiency of feed conversion. It is fascinating to see these new fowls with beautifully different plumage patterns, such as barred, penciled, spangled, pied, laced and mottled designs on a red, white or black body coat.

#### Genetic Development:

It has been a formidable task for the scientists to imitate a replica of the jungle fowl by exploiting genetic resources from various breeds with regard to the plumage assembly for purposes of the overall performance for economic traits. To achieve this, breeding tests conducted for identifying genes for recessive white, sex-linked silver and gold, Columbian restriction, sex-linked barring, autosomal red, buff and restricted black have proved highly rewarding.

The development of the new fowl was initiated in 1980 by reciprocal crossing of the two commonly

used broiler parent breeds with differing plumage colours, after two generations of selection for body weight and egg production in the single crosses, the females were crossed to another elite broiler breed with genes for sex-linked gold. The three-way crosses thus developed were maintained by further subjecting them to selection for improvement of body weight and also egg production. The flock thus named Giriraja has these salient features:

1. A mixture of both single and pea combed birds as is commonly seen in native fowls.
2. Segregating for some feather patterns (some breeding true to type) namely Columbian restriction, barring, mottling, spangling and lacing, pied, red and black speckled on white coat, completely black and partly patterned within feathers—all characteristics represented in native fowls.
3. Improved growth, feed efficiency, egg production, egg size, hatchability and better resistance to environmental stresses in field's conditions.
4. Breeds well in captivity, unlike native birds and do so even under semi-range and range systems.

All the above features make Giriraja, ideal for rearing among the tribals/ nomads. Indeed, this is a "Miracle Fowl"! What a boon to the poverty stricken tribal masses!

#### Conclusion:

- ◆ Resembles local birds in colour, attractive in appearance.
- ◆ Sturdy and resistant to diseases.
- ◆ Body weight and egg production are three times more than that of local birds.
- ◆ Adapts well to scavenging conditions.
- ◆ Developed for small-scale farmers and tribals.

