

## Night Shelter: A Protective Measure for Backyard Poultry from Predators

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Backyard poultry is an important source of income, livelihood, food and nutritional security and provide employment to rural and tribal people and also contribute significantly in national egg and chicken meat production. Housing is essential to protect the birds from the sun, wind, rain, extreme variation in temperature and predators. There are different housing systems depending on the type of rearing system of birds. In the Free-Range system of rearing, birds are set free to roam for scavenging without provision for night shelter and the stocking density of birds under this type of rearing is about 250-birds/ hectare of land. Under Semi-Intensive system, birds are reared halfway in houses and halfway on the range and stocking density is usually 750 birds per hectare of land. In Intensive system birds are confined entirely to houses and this system is considered as most efficient, convenient and economical as compared to other systems and used in commercial poultry production.



**Fig 1: Birds in open area (prone to predator)**

Extreme climatic conditions and predators are serious issue especially in villages poultry. Predators attacks the birds of all age groups and they may injure or kill the birds. A number of different predator species can cause damage and economic losses to the poultry farmers in the villages. Chicks and smaller birds are also more susceptible than adult birds.

Sometimes eggs of birds are also eaten by predators specially snakes. Sometimes predators are domestic dogs, cats and snakes, wild animals and wild birds. Mortality may be up to 100% in smaller flock. Many tribal farmers left poultry rearing due to this issue. In many instants wound is also created by predators on birds that may lead to death later. If wound is seen on bird proper medicine should be applied on affected part. During day time there are lesser predator attacks due to human activity but major attacks of predators are reported in night. Farmers should try to know how and why various predators attack poultry flocks, it can be helpful to take preventive measures. Sometime farmers put fencing around the area but it is not possible to every farmer because of space and financial issue. Generally, in village backyard poultry rearing is done by resource poor farmers. Some farmers are using wood made night shelter or sometime they cover birds with some basket at night. But these measures are not sustainable.



**Fig 2: Birds in fenced area**

ICAR-Directorate of Poultry Research, Hyderabad (Telangana) designed night shelter and distributed in farmers field for demonstration purpose under Front Line Demonstration (FLD) to motivate farmers for adoption of the intervention. The dimension of the night shelter was suitable for 10-12 birds (length, width & height: 4 x 3 x 2.5 feet and leg 1 feet). It was

made up of durable iron for longer life. There is iron roof elevated in center and 9 inches overhang on both the sides and all four sides are made of iron mesh with a gate in one side. It is painted to protect from rusting. It is very easy to clean and keep the surroundings hygienic. That may also help birds away from various diseases. There was significant impact of this night shelter observed in farmer's field.



**Fig 3: ICAR-DPR Night Shelter**

Poultry should be trained to move into a poultry house at night by feeding or watering them indoors at evening. Mortality due to predator's attack was reduced from  $3 \pm 0.81$  birds/household to 0.75 bird/ household (300% decrease) after one year of

intervention. Farmers were keeping birds in the shelter at night and kept free birds for scavenging during day time. Few farmers were also using this shelter to protect kids (goats' baby) during day time in this shelter. The value of survived birds was calculated to be ₹ 2656 per year for each household. Due to mortality reduction and other support average flock size in the household was increased by 174.7%. Outcome of these intervention was increased egg consumption from 3.08 eggs/ week to 8.6 eggs/ week (increased by 179.2%) and chicken meat consumption increased by 1 bird/ month to 3.3 birds/month/ household (increased by 230%). Cost of the night shelter is recovered only in 2-3 years by saving the birds from predators. Backyard poultry farmers can make this type of structure at their home with the help of local expert. They can also use other local material to fabricate this type of structure along with iron as per availability. This structure does not occupy more space so that farmers can keep night shelter anywhere in their premises and shift one place to another as per need. This shows that the night shelter intervention in village lead to significant improvement in the income and animal protein consumption. Farmers should be aware and motivated to use this type of shelter to protect the birds from predators.

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