

Backyard Poultry

Backyard poultry offers a simple and low-cost way to improve nutrition and income for rural and peri-urban households. Small flocks of chickens or ducks provide a steady source of protein-rich foods, such as eggs and meat, along with additional income from local sales. These birds are easy to maintain, requiring minimal investment. They feed on household scraps and insects and warrant a minimal maintenance cost with respect to care and treatment. With basic healthcare and the use of improved, hardy local breeds, backyard poultry can strengthen household food security and livelihoods.

A step-by-step guide to backyard rearing of poultry



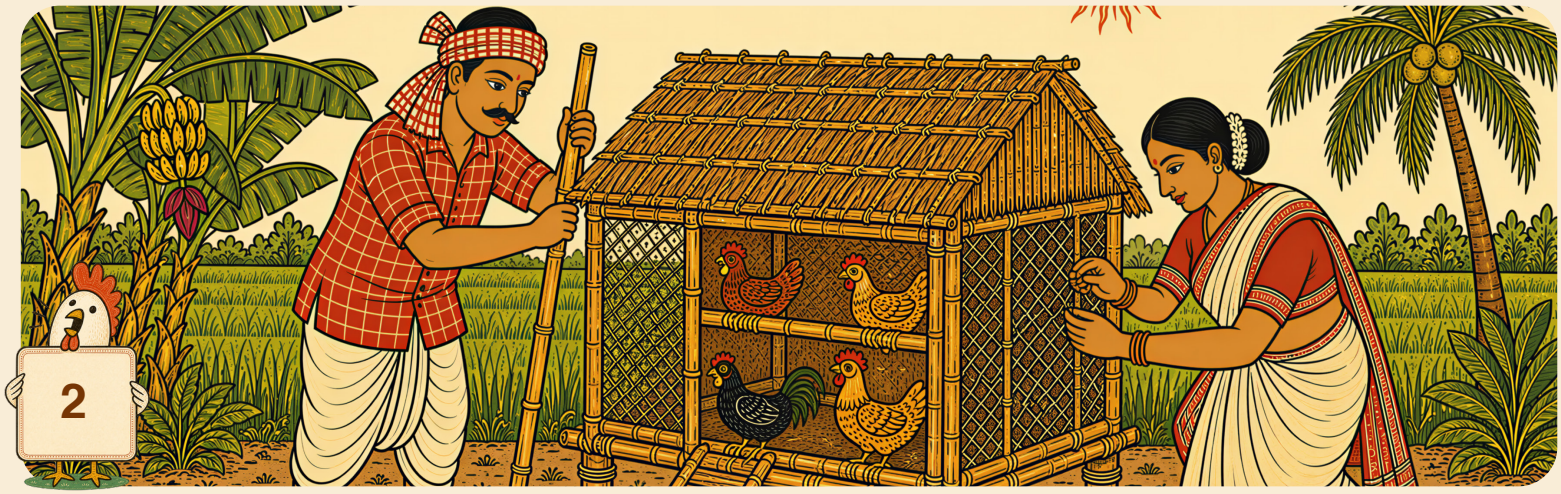
Breeds

Locally adapted chicken and duck breeds (5–25 in number) are ideal for backyard rearing.

Table 1: Common poultry breeds for backyard rearing in Odisha

Chicken breeds	Purpose
Hansli	Eggs
Dhinki	Eggs/meat
Vezaguda	Eggs/meat
Kalahandi fowl	Meat
Phulbani fowl	Eggs/meat
Dumasil	Meat
Gujuri	Eggs/meat

Duck breeds	Purpose
Moti Hansa	Meat
Orissa duck	Eggs and meat
Raj Hansa (geese)	Eggs and meat



Shelter

Prepare a simple, well-ventilated shelter made from locally available materials such as clay, bamboo, stone, wood, or wire mesh. About 1–2 square feet of space per bird is required, and the structure should be set at least 2 feet above the ground to protect the birds from dampness and predators. The shelter should be intact, rat-proof, durable, and easy to clean. Maintaining good airflow prevents moisture build-up and pest infestation (e.g., lice, fleas, and flies). Basic lighting helps protect birds at night from stray dogs, cats, predatory birds, and mongooses. During the day, birds can roam freely and return to the shelter by evening.



Nutrition

Although birds are raised under natural conditions, providing adequate nutrition through feed supports better growth and weight gain. In the early stages, chicks require adequate protein, minerals, and vitamins for proper growth and development. Feed is readily available from specialised agricultural and animal care retailers. Carefully mix the feed based on the age and requirements of the birds, with an average intake of about 100–120 g per bird per day. A balanced diet ensures healthy growth, better weight gain, and improved productivity.

Table 2: Feed formulation for backyard poultry

Feed component	Proportion	Examples of ingredients (in any combination)	Nutritional role
Cereals	50%	Sorghum, millet, maize, or broken rice	Rich source of energy
Bran	28%	Wheat or rice bran	Fibre, energy, and minerals
Oil cakes	20%	Linseed, groundnut, sunflower, or soybean cakes	A major source of protein
Additives	2%	Vitamins and mineral mixture	Enhances immunity, growth, and health



Healthcare

Disease prevention for backyard poultry largely depends on regular care and hygiene. Clean and dry shelters significantly reduce the risk of infection. Timely vaccinations play a key role in lowering mortality and protecting flock health. Birds that scavenge freely are more prone to parasites such as mites and intestinal worms; therefore, periodic deworming (ideally 1 week before vaccination) is a must. Early beak trimming can also help prevent injuries.

Table 3: Vaccination schedule for backyard poultry

Age	Vaccine	Strain	Dose	Route
Hatchery				
1st day	Marek's disease	Herpesvirus of turkey (HVT)	0.20 ml	Injection
Nursery				
7th day	Newcastle disease	LaSota	One drop	Eye
14th day	Infectious bursal disease	Georgia	One drop	Oral
21st day	Fowl pox	Fowl pox	0.20 ml	Injection
28th day	Newcastle disease	LaSota	One drop	Eye
Free field condition				
9th week	Newcastle disease*	R2B	0.50 ml	Injection
12th week	Fowl pox*	Fowl pox	0.20 ml	Injection

**These two vaccines should be repeated every 6 months and administered subcutaneously.*

Advantages of backyard poultry

Cost-effective and easy-to-implement practices.

Provides the household with food security along with a regular income through the sale of surplus eggs and live birds.

Creates circularity by utilising kitchen waste as feed for chickens; 15 chickens can produce approximately 1–2 kg of manure per day, which can then be applied to agricultural crops to enhance soil fertility.

Investment, support, and profitability

Poultry farming becomes significantly more profitable after the first year. Initial costs are higher (INR 336.54 per bird) but drop to INR 188.46 as farmers start self-breeding. While gross returns remain steady, net profit increases from INR 232.74 to INR 380.82 per bird. Consequently, return on investment (ROI) rises sharply from 69.16% to 202.07%, and the benefit–cost ratio (BCR) improves from 1:1.69 to 1:3.02. Government schemes and institutional support further help improve sustainability and profitability.

Category	Key points (chickens)	
Expenditure	Year 1	Year 2 onwards
	INR 336.54 per bird (44% chick, 54% feed and medicine, and 2% misc.)	INR 188.46 per bird (costs drop as chicks are self-bred)
Gross return	INR 569.28 per bird per year (comprising INR 153 from egg sales and INR 416 from meat sales)	
Net profit	INR 232.74 per bird	INR 380.82 per bird
ROI	69.16%	202.07%
BCR	1: 1.69	1: 3.02
Government schemes	National Livestock Mission (NLM), Rural Backyard Poultry Development Programme (RBPD), National Rural Livelihood Mission (NRLM), Livelihood Support to Farmers through Rural Backyard Poultry Rearing, State Poultry Development Programme, and Tribal Sub-Plan (TSP)	
Institutional support	Indian Council of Agricultural Research–Directorate of Poultry Research (ICAR–DPR), Hyderabad, for national training; Odisha University of Agriculture and Technology (OUAT) and local krishi vigyan kendras (KVKs) for training, breed improvement, and chick procurement; and Fisheries and Animal Resources Development Department (FARDD), Odisha, for state- and central-sponsored schemes	
Application portal	https://sugam.odisha.gov.in	



**AI tools were used to optimise images.*