



## Duck Farming: A Profitable Source of Income

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Duck farming in India is still done by small and marginal farmers and is characterized by being extensive, migratory, and seasonal. Due in part to the fact that duck egg and meat perfectly complement and add flavor to their fish-based culinary preparations, West Bengal and Kerala are historically the two states that consume the most duck egg and meat. Duck's binomial name is *Anas platyrhynchos*.

### Advantages of Duck farming

Compared to chickens in the backyard, ducks are more productive and lay 15 to 20 more eggs each year.

- Duck eggs are 10 to 15 grams larger than chicken eggs in size.
- Ducks have long, productive lives; they lay eggs in their second and third years of existence.
- Foraging by ducks serves as a supplement to their diet, which lowers the expense of feed.
- Duck farming can be done in marshy, swampy, damp, and dry areas that are not appropriate for raising chickens.
- Early morning egg gathering is made possible and time-saving by duck egg lay (3am to 8am).
- Paddy cultivation and duck farming work together in harmony, making it possible to combine them over the entire paddy farming region.
- Ducks may be easily trained and are highly intelligent animals.

### Housing management

- Ducks often don't need fancy dwellings. The home needs to be dry, rat-proof, and adequately ventilated.
- Because ducks like to be outside during the day, in the winter and during rainy seasons, the house should have easy access to the outdoor run when using a semi-intensive approach of rearing.
- The slope of the run should be away from the house to provide drainage.
- In the semi-intensive system house, a continuous water channel should be built at the far end, on the sides, and parallel to the pen in the grower and layer house. It should be 50 cm wide and 15-20 cm deep.

### Ducklings breeding (Ducklings are being bred 0-4 weeks)

- Batteries, a wire floor, or litter can all be used to raise ducklings. While meat-type ducklings only require 2-3 weeks of brooding, layer ducklings require 3-4 weeks.
- Generally speaking, the brooding period needs to be extended by 1-2 weeks during the colder months. For duckling, allow 90-100 square centimeters of hover space under the

brooder. 30 to 40 ducklings can be hatched under a 250 watt bulb. The first week is spent at a temperature of 32°C. Until it reaches 24°C during the fourth week, it drops by around 3°C each week.

- For the wire floor system of brooding, 0.5 square feet per duckling are advised, while for the deep litter system, 1.0 square feet per bird are advised up to three weeks of age.
- The depth of the water in the drinkers should be between 5.0 and 7.5 cm, just enough for drinking and not for dipping.
- Under an extensive system, no artificial heating is given, and a 3 cm or thicker layer of litter is advised to absorb any surplus moisture from the ducklings' droppings. Making "Closed tents" (Tent brooding) to offer the necessary warmth, however, helps to conserve the heat in the brooder shed. Only after they have been in the water for at least a week are the ducklings permitted to swim.

## Layer Duck Rearing Practices

### Layer (above 17 weeks of age)

- For an intense system, each bird needs a floor space of 4 square feet. In a semi-intensive system, each bird needs 3 square feet of floor space for a nighttime shelter and 10 to 12 square feet of outdoor run space.
- Each bird needs 7.5 cm of feeding area when receiving dry mash or pellets, and 10 cm when receiving wet mash. One nest box for every three ducks must be available for the collecting of clean, developing eggs. Each nest box must measure 30x30x45 cm.
- For optimal egg production, lighting should last between 14 and 16 hours.
- For Khaki, the first egg is laid at 120 days old, the 50% egg production mark is reached at 140 days, and the yearly egg output is 300 eggs.
- At 40 weeks of age, the egg weight, body weight, and daily feed intake are, respectively, 180-140 grams, 68 grams, and 120-140 grams.

### Feeding of ducks

- Ducks have good foraging skills. Ducks are permitted to feed on rice fields, ponds, lakes, and canals before and after harvest in a vast system of rearing. In this system, the primary sources of food for ducks include grains of fallen paddy, insects, snails, earthworms, small fish, fingerlings, tadpoles, and water plants like algae.
- Here, it's important to note the symbiotic relationship between paddy farming and duck farming. Paddy fields are excellent foraging areas for grazing ducks, and duck droppings are good sources of manure for paddy fields.
- They also condition the soil through their shoveling-like grazing and feeding actions.
- Duck farming is thus a seasonal industry, occurring throughout the monsoon-based paddy harvesting season. 100 ducks, on average, need a paddy field of 0.5 acres.
- They are fed cheap feed sources, such as paddy husk, and low-grade grains, such as broken rice, sorghum, etc. during the times when they are not laying eggs.
- However, under the intensive and semi-intensive systems of rearing, ducks may be fed with dry mash, moist mash, or pellets. In the countryside, duck farmers often practice only the extensive system of rearing with grazing.
- The most crucial aspect of feeding ducks is providing them with access to water, as they have trouble swallowing dry mash. Throughout the first eight weeks, ducks should always have access to food, but later on they can be fed twice a day, first in the morning and then in the late afternoon.

### Watering of ducks

Though ducks are water fowls and fond of water, in contrast to the prevailing myth among farmers, water for swimming is not essential at any stage of rearing.

However, water in drinkers or water channels provided in the house should be sufficiently deep enough to allow the immersion of their heads and not themselves. If they cannot do this, their eyes will get scaly and crusty and in some cases, blindness may follow. In addition, they also clean their bills periodically and wash them to keep it clean.

### Common diseases in ducks

- In general, ducks are subjected to relatively few diseases when compared to chicken, but they are serious in nature.
- Light sandy soil is ideal for duck farming, because it tends to keep less disease germs and drain well. Since certain infections of chickens may be transmitted to ducks such as salmonellosis, colibacillosis, it is desirable to keep duck farm away from commercial chicken farms.

#### ❖ Viral diseases

##### Duck virus enteritis (Duck Plague)

- It is an important contagious disease affecting adult birds, characterized by vascular damage with tissue haemorrhage and free blood in body cavities. The intestine and gizzard will be filled with blood.
- It usually occur in per acute form and the mortality varies from 5-100 percent. The major symptoms are droopiness, ruffled feathers, discharge from eyes and nostrils, swollen and sticky eyelids, greenish watery diarrhea. In males prolapse of penis and in females severe drop in egg production will be noticed.
- The lesions are vascular damage, severe haemorrhages in gastro intestinal tract, petichae in liver, pancreas, lungs, kidney, ovary.
- In layers massive haemorrhages in ovary some times fill the abdominal cavity.
- Parent stock and commercial stock shall be immunized with live attenuated vaccines to transfer maternal antibody to the chicks. Commercial layers also immunized with vaccines at 8 weeks of age.

##### Duck virus hepatitis

- It is a highly infectious disease of ducks primarily affecting ducklings of 2-3 weeks of age, characterized by severe hepatitis.
- The major symptoms are closed eyes, falling on their sides, severe convulsions and death. The primary lesions are enlarged liver with haemorrhages.
- The reddish discolouration and mottling appearance of the liver with enlarged spleen and kidney is observed. Breeding stock can be immunized at 6-7 months of age to protect the ducklings.

#### ❖ Bacterial diseases

##### Salmonellosis

- The main causative organism is *Salmonella typhimurium*, usually occurs during first few days of life, clinical manifestation will be exhibited during the start of lay or peak production. The major symptoms are swollen and edematous eyelids.
- The primary lesions are enlargement and mottling of liver, pericarditis and arthritis makes the bird difficult in standing. The sulpha and furazolidone are the drug of choice for salmonellosis and control is by removal of carrier birds.

##### Pasteurellosis (Duck cholera)

- It is an infectious disease caused by *Pasteurella multocida* around four weeks of age. The symptoms are raised body temperature, green colour diarrhea, complete paralysis of legs and sudden death. Prevention is by vaccination and treatment with suitable antibiotics.
- The prominent lesions are pericarditis and arthritis, petichae in myocardium. The distended pericardial sac will be filled with yellow flakes and caseous masses. Treatment with sulpha drugs will be beneficial and control with elimination of affected birds.

**❖ Fungal diseases****Aflatoxicosis**

- It is caused by aflatoxin produced by the fungus *Aspergillus flavus* and they are most potent carcinogen for ducks. Maize, Groundnut oil cake, soya bean oil cake, rice polish are the major feed ingredients for aflatoxin production on storage in wet conditions.
- Improper drying and humid weather favours the fungus growth. Ducks are very susceptible to aflatoxin content of the feed especially exotic ducks are more susceptible than indigenous ducks. The common aflatoxins are B<sub>1</sub>, B<sub>2</sub>, G<sub>1</sub>, G<sub>2</sub> and B<sub>1</sub> is the most potent toxin. The minimum toxic dose is 0.03 ppm in the feed.
- The major symptoms are poor growth, lameness, purple discolouration of feet and legs. Ducklings will develop ataxia, convulsion and death. There is no specific treatment for aflatoxin and the preventive measures are, avoid the wet and mouldy feed and feed stuffs and use of completely dried feed and addition of fungistats and toxic binders.

**Aspergillosis**

- It is caused by *Aspergillus fumigatus*. Inhalation and ingestion are main modes of infection.
- The symptoms are dyspnea, gasping and accelerated breathing and ocular discharge.
- The major lesions are yellowish grey material or whitish fluffy spots in lungs, trachea, and abdominal cavity.
- The prevention is by good management of litter and avoiding over crowding.

**Parasitic diseases**

- Ducks are resistant to internal parasites, however, ducks grazing stagnant and over crowded ponds may get infestation of fluke, tape and round worms.
- Regular deworming with broad spectrum anthelmintics at 3 months interval during growing and laying stage will control the problem.