

Popular Article

Quail Production and Management

¹Tejaswini G U, ²Pankaj dhakarwal

¹M.V.Sc. scholar, Department of Veterinary Microbiology, Indian Veterinary Research Institute, Izatnagar, Bareilly,(U.P.),India

²Ph.D.scholar,Department of Veterinary Microbiology, Indian Veterinary Research Institute, Izatnagar, Bareilly,(U.P.), India
<https://doi.org/10.5281/zenodo.6991797>

Abstract

Quail is a small to moderate-sized game bird that is a member of the family of pheasants. India has two types of quail: the brown-colored Japanese quail (*CoturnixCoturnix Japonica*), which is grown for meat, and the black-breasted quail, which is found in the forest (*CoturnixCoromandelica*). There is no licensing system for farm-bred Japanese quail (*Coturnix japonica*), which was previously classified in Schedule IV of the Wildlife Act Protection Act (1972). The flesh is used to make pickled meat, tandoori quail, and ready-to-cook meat. Numerous recipes can be made with quail eggs. At 5 weeks, a quail can be marketed as a broiler (for meat). The 250 g adult Japanese quail can produce up to 250 eggs each year.

Introduction

The ongoing population expansion in developing countries is the primary factor driving the demand for greater sources of animal protein. The need for chicken products has been growing in this circumstance. The expansion of the poultry sector is crucial to supply the rising demand for poultry products without importing them. Quail provides animal protein in the form of meat and eggs and it is a source of income too. The use of quail dates back to 1974, when it was introduced from California to India for non-commercial purposes. Changes or adaptations are made to the Japanese quail. Some farms have received assistance for the country's production of Japanese quail stock under the "Assistance to State Poultry Farms" (ASPF) program of the Indian government. Improved germplasm and technical know-how were subsequently provided to a franchise for commercial exploitation across the nation since being firstly reared by CARI, Izzatnagar, as experimental poultry birds. Unfortunately, quail farming is still relatively unknown in rural areas. Understanding the potential for and limitations of commercial quail farming in India's socioeconomic setting is crucial.



Advantages Of Quail Farming

Require less capital and space in one square foot, 5–6 mature quails can be raised. The quail is a strong bird. Birds can be sold as young as five weeks old. At the age of six to seven weeks, it achieves adulthood and starts to lay eggs at around six to seven weeks old (280 eggs per bird each year). A short generation interval of 3–4 generations every year. Low feed consumption (550–600 gram/bird through the fifth week). Quail flesh is delicious and lower in fat than chicken. Low levels of cholesterol are present. It promotes the physical and mental development of kids. Compared to chicken eggs, quail eggs have a much higher nutritional value. Three to four times more nutrients are included in quail eggs than in chicken eggs.

They have 13 % more protein than chicken eggs, and they also have 140 % more vitamin B1 than chicken eggs. Quail eggs contain five times as much potassium and iron. Quail eggs contain ovomucoid protein, which aids in reducing allergy symptoms. Quail meat and eggs are healthy for pregnant women and breastfeeding women too. Quail varieties available are Grey spotted, Brown spotted, Grey Brown cross, White-breasted brown, White-breasted grey, Brown and Grey cross. Other Institutions' quail kinds include Nandanam quail, Cari - Uttam (broiler quail line), Cari - Ujjwal (white-breasted quail), and Cari - Pearl (white eggshell line).

Incubation And Hatching

Quail eggs require 17–18 days to hatch. Hatching eggs should be taken from breeder flocks that are older than 7 weeks. Eggs should be taken 10 days following the introduction of males to the mating pen for maximum fertility. In artificial incubation during the first 14 days of incubation, eggs are set in a setter. Eggs are moved from the setter to the hatcher on the 14th day, where they are held for the remaining three days of incubation. Before transferring the eggs to the hatcher, candling should be done on the 14th day to remove dead embryos, sterile eggs, and damaged eggs.

A quail egg weighs about 10gm and is around one-fifth the diameter of a chicken egg. The spots on the eggshells range in hue and show variation from white to brown. These eggs are much higher quality than chicken eggs nutritionally speaking, and they also have less cholesterol. In contrast to chicken eggs, there is a larger ratio of albumen to yolk, which is 39:61. Each week, the 500 quails may produce up to 1500 offspring.

Sexual Differentiation

The rich brown color of the breast feathers in the 5th week allows identifying male birds. The breast region of the females has speckled feathers but lacks this coloration. Female quails typically weigh more than male quails. When light pressure is given to the vent region of male quails, a white foam-like



discharge is released. The white-breasted and totally white male quails are sexually distinct from the females by having this characteristic.



Rearing

Deep litter system: Adult quail require 0.2 square feet of rearing space per floor type. Paddy husk and fine wood shavings are also suitable materials to use as litter.

Enclosure system: Each cage unit is split into six smaller cage units, each measuring 6 feet long by 1 foot broad. A 2 cm deep faeces tray is included with each cage. At least 50 cm should separate the base of the lowest tier from the ground. Quail males are inserted into the enclosures in a 1:3 ratio for breeding purposes. Long, slender feed troughs are placed in front of the enclosures; water troughs are placed behind them.

Battery system rearing: Every section is split into six smaller components, each measuring nearly 6 feet long by 1 foot broad. The enclosures can be stacked up to six levels high to maximise space. Four to five cages should be arranged in a row. The cage's bottom is secured with removable hardwood plates to make cleaning up bird droppings easier. Long, narrow feed troughs are in front of the enclosures. Water troughs are located behind the cages. Typically, commercial egg-laying colonies include 10 to 12 cages per colony of birds. For the breeding program, male quails are paired with three females in each cage.

Feeding

The feeding material should be composed of small particles. Quail that are 5 weeks old can consume 500 grams. At six months old, quail eat at least 30 to 35 grams of feed per day. The amount of feed needed to produce a dozen eggs is about 400 grams. The particle needs to be thoroughly ground.

Table 1. Nutrient requirements of Japanese quail

Nutrient*	Starter (0-3 weeks)	Grower (4-6weeks)	Layer/Breeder (7 weeks onwards)
ME(Kcal/Kg)	2750	2750	2650
Protein (%)	25-27	22-24	20-22
Calcium (%)	1.0	0.8	3.0
Phosphorous available (%)	0.45	0.45	0.45

*Vitamins and minerals as per BIS recommendation

Disease Control

Quails often exhibit higher levels of infectious disease resistance than chickens. Vaccinations and deworming are not necessary for quail during the raising phase. Both Ranikhet disease (RD) and ascariasis (a roundworm infection) are said to be resistant to them. In locations where RD is endemic, it is advised to deliver the Lasota/B1 vaccine through the water during the second week as a precaution. Coccidiosis, ulcerative enteritis, and aspergillosis are the most often observed illnesses in quails. In humid environments, a preventive dose of moderate coccidiostat is administered.

Conclusion

The distinctive sound that male quails usually produce is generally distressing to people. The male quails attack other quails and blind them when they are raised with the female quails. Mortality occurs in quail occasionally. These can come over by proper management as there is more demand for quail meat in the market. The potential for hotels, supermarkets, etc. is enormous. The Indian government is encouraging people to create quail farms and is working to help them with infrastructure. Quails are eager to be produced for commercial use, and the Central Avian Research Institute (CARI) in Izatnagar, Bareilly, Uttar Pradesh, has shown a desire to provide hatching eggs to potential Entrepreneurs.

