

Quail Production:

A profitable business

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In the past decade, commercial quail production witnessed tremendous growth in our country and became viable alternate farming due to their delicious meat and rich nutritive value. During this period, a number of breeding-cum-commercial quail units were established dealing with the production of specialized meat and egg type strains to meet the needs of quail growers. This study tries to overcome the major constraints of quail farming by addressing the best management practices, and disease prevention strategies for quail farming.

Keywords: Commercial, Income, Litter, Quail

THE term quail production means, raising quails commercially (like other poultry birds) for profitable eggs and meat production. It is very profitable like other production ventures such as chicken, turkey, or duck production businesses. Almost all types of weather conditions are suitable for starting quail production. Quail production business requires small initial capital and labour. Quails can be raised along with other poultry birds for meat or eggs production.

Quail production as a supplement to chicken and duck production has the unique advantage of tapping the growing market demand for poultry products. The time has now come for creating alternative employment opportunities for

the educated people. The self-employment scheme is one probable answer and quail production seems to be a promising enterprise in this direction.

Characteristics of Quail

Quails are small-sized birds. An adult quail weighs between 150–200 grams and an egg weighs around 8–10 grams. Female quails start laying eggs within 6–7 weeks of age and continuously lay one egg daily. They lay about 300 eggs in their first year of life. Quails do not incubate their eggs. So we use an incubator or brooder chickens for hatching their eggs. Quails generally survive for 3–4 years. They usually lay eggs at afternoon. It takes about 17 days to hatch their eggs. Eggs of 9–11 grams weight with smooth and hard eggshells are perfect for hatching and producing chicks.

Benefits of Quail production

There are many benefits of modern-day quail production, for example-

- They can be raised easily in small areas or room at home because of their small size.
- Their cost of food and shelter is very low, and they don't require dedicated farmhouses.

- They have very low initial start-up cost, anyone can start a business with a small amount of capital.
- Quail chicks become mature in a very short time. Their growing process is fast (just 5–8 weeks).
- Furthermore, a single female bird produces 150–300 egg in a year.
- Also, its meat and eggs are very healthy and tasty.
- Compared to chicken, their bodyweight is proportionately higher and its meat has less fat than chicken meat.
- Hence, they are immune to the disease, also their survival rate is higher than that of chicken.

Beginning of Quail production

As quails have smaller-size, it's very easy to establish a quail farm. Making a proper quail production business plan before starting comprises of following :

Selection of Breeds : Most popular breeds of quails like CARI Brown, CARI Pearl, CARI Ujjawal and CARI Sweta are very suitable for profitable quail production.

Shelter for quail : Quails require less space as compared to other poultry birds. We can even raise some quails in our small back



CARI Pearl



Feeding Practices (CARI Sweta)



Preparation of eggs for incubation



Watering of chicks

gardens that are not suitable for raising chickens. Different methods of keeping quail are adopted by poultry farmers, some important housing systems are :

1. *Deep litter system*: In this system, 6 quail can be reared in a sq.ft. of floor space initially for upto 2 weeks. After 2 weeks, quails can be reared in cages. This will help them gain good body weight, as unnecessary wandering of animals is avoided.

2. *Cage system*: Quail can be raised in both litter and a cage system. But quail rearing in cage system is more suitable than raising them in deep litter system. In cage system, management is very easy and diseases or other problems are less.

Age	Cage size	No. of birds
First 2 weeks	3 × 2.5 × 1.5 ft.	100
3–6 weeks	4 × 2.5 × 1.5 ft.	50

Essential equipment for the farm : They include: brooder hover, heater or stove; plastic tick feed tray; food pots (it can easily be filled with foods and easily cleanable); water pots (easily cleanable, durable and cheaper in price); egg laying boxes; electric bulbs; defaults or balance for tacking weight measurements; buckets, a shovel, spade, bowls, a knife, basket, peal, tulle etc; egg laying house (nest boxes); bamboo, wood, corrugated, polythene or triple; thermometer, hypermeter and; battery or brooder.

Feeding management : For maintaining a successful and profitable quail production, one must feed birds with adequate, well

balanced and nutritious food. A chart of balanced feed for different ages of quails is shown below in Table 1 and major differences in parameters of quail and chicken eggs are represented in Table 2.

- The chick starters have to contain proper amount of protein. Quails require more protein than chickens or other poultry birds.
- Broiler chick starter should contain 23% protein, 1% calcium, 0.5% phosphorus and 0.5% methionine. Also layer quail starter should contain 24% protein, 0.85% calcium, 0.6% phosphorus and 0.5% methionine.
- After 6 weeks of age, we should begin feeding them a regular diet (grower mash) ensuring availability of 19% protein, 0.9%

calcium, 0.5% phosphorus and 0.4% methionine in the regular diet of broiler quail. And the regular diet of layer quail should contain 18% protein, 2.75% calcium, 0.65% phosphorus and 0.45% methionine.

- Feed material should be made of small particles.
- A 5 week old quail consumes about 600–700 gm of feed.
- Quails of 6 month old, consume about 35–42 gm of feed per day.
- Quail require about 475–625 gm feed for the production of 12 eggs.
- Along with providing high quality and nutritious food to quails, one must ensure availability of an adequate amount of clean and fresh water according to their demand.

Table 1. Balanced feed (easily available ingredients) for different ages of quails (%)

Feed Ingredient	Chick mash (0–3 weeks)	Grower mash (4–6 weeks)
Maize	27	31
Sorghum	15	14
Deoiled Rice Bran	8	8
Groundnut Cake	17	17
Sunflower Cake	12.5	12.5
Soya Meal	8	-
Fish Meal	10	10
Mineral Mixture	2.5	2.5
Shell Grit	-	5

General management of Quails

- At the age of 6 weeks usually female weigh about 175–200 g and the male weigh about 125–150 g.
- Female quails start laying eggs at 6–7 weeks of age and continue up to 23 weeks.
- The breast of the male quail is usually narrow and covered with equally distributed brown and white feathers. But the female quail has a broad breast covered with black dots.
- The female and male quails should be separated at the age of 28 days.
- 16–17 hours of light per day should be available to the egg laying quails.



Prepared feed ingredients for quail ration



Brooding of Chicks

Nest box : Quail nesting boxes are required for roosting and security purposes. Providing nesting boxes for quails gives them some extra needed comfort in laying eggs and makes them well behaved. Quail nesting boxes provide them a calm, quiet, secure and comfortable place for laying eggs.

Egg storing : They must be stored immediately after the collection of eggs. Reserve temperature and relative humidity are 12.8–15.5°C and 75–80% respectively.

Raising quail chicks : Quails never incubate their eggs. So, farmer can produce chicks by hatching their eggs through chickens or artificially through using incubators. Incubation period for quail egg is about 16–18 days. For maximum egg production, 16 hours of lighting period is required daily inside the quail house and newly born quail chicks should be kept in a brooder house. Chicks need artificial heat and temperature management system for 14–21 days from their birth.

Diseases of Quail

When vitamins and minerals are deficient in the female quail breeders, the chicks obtained from their fertile eggs are usually lean with weak legs. To prevent this, the breeder female should be provided with optimum minerals and vitamins in their feed. Generally, quails are more resistant to infectious diseases than chicken. Thus, no vaccination is required.

Coccidiosis: This is a common disease in quail and it is caused by protozoa that invade the intestine. Clinical signs of coccidiosis may include decreased feed and water consumption, loss of weight, huddling, droopiness, ruffled feathers, diarrhoea with a tinge of blood and mortality. If the quails get affected by this disease, serve them coaxial 20 by mixing with water (two grams per litre) for three days. Otherwise feed this according to the advice of a veterinarian.

Ulcerative Enteritis: An acute, highly contagious disease of chicken and quail caused by the bacterium *Clostridium colinum* and characterized by ulcers of the intestines and caecae. It can start suddenly and cause high mortality of up to 100% in quail and 10% in chicken. For its treatment mix one gram of streptomycin with one litre of water and serve it to the quails for three days. This will stop ulcerative enteritis disease.

Bedding material

The bed that is used in quail bird room to make the accommodation comfortable is called litter.

Creating litter for quails: In the beginning, spread 5 cm thick litter material on a clean floor. Then gradually add more litter material, and increase the thickness to 10 cm in 4–5 weeks. Although in the case of brooder foster chicks, 10 cm thick litter should be added before placing quails.

Table 2. Major differences in parameters of quail and chicken eggs

Parameter	Quail egg	Chicken egg
Egg weight (g)	8–10	55–58
Water (%)	73.80	74.00
Protein (%)	13.23	12.80
Fat (%)	10.83	11.80
Ash (%)	1.03	1.00
Cholesterol (mg)	7.31	20.00
Vitamin-A (mg)	300.0	100.0
Thiamin (mg)	0.10	0.06
Riboflavin (mg)	0.8	0.10

Materials used for litter: Rice husk, wood powder, paddy or wheat dry, straw, wool stove, nuts powder etc. are generally used.

Marketing of quails

Quail meat and eggs are very tasty and highly enriched with nutrient elements. So there is already an established market for quail products. As quail birds and their eggs are small in size, so it is cheap in price and thus, all types of people can purchase them. So, we don't have to worry much about marketing the quail products. Farmers can easily sell the eggs and meat in local market.

SUMMARY

Quail production has tremendous potential to play an important role for both as nutritional security as well as livelihood security for fulfilling the daily family nutrition demands and earning a living. Commercial quail production can be a great source of employment, and earning some extra income along with your current job or profession. Also, quail production could be an alternative to chicken farming. Hence, quail farming should be promoted in the country.

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