

# Ecochicks Poultry Limited

[www.ecochickspoultry.com](http://www.ecochickspoultry.com)

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## Guide to quail farming



## Introduction

Quails are arguably the most lucrative type of poultry keeping. The birds have hundreds of benefits and advantages and it is believed that there are even more benefits of its products that are not yet known by human beings.

Just to mention a few of the advantages, see the list below:

1. Requires minimum floor space.
2. Need Low Investment.
3. Quails are comparatively sturdy birds.
4. It can be marketed at an early age. ( I,e: five weeks)
5. Early sexual maturity starts laying eggs in about six- seven weeks of age.
6. High rate of egg laying 280 to 295 eggs per year.
7. Quail meat is tastier than chicken and has less fat content.
8. It promotes body and brain development in children.
9. Naturally, the quail eggs are on par with that of children, moreover they contain less cholesterol.
10. Quail meat and eggs are a nutritious diet for pregnant mothers.
11. Highly age limit (survival- live) 2.5 To 3 yr.
12. They require very little amount of food in a day compared to the chicken.

## Incubation

To start quail farming, you must need to have an eggs incubator. This is best and the quickest way to venture in quail farming business. If you do not have an eggs incubator, it would mean that you have to buy mature birds. The mature birds rarely incubate the eggs after being raised with the commercial feeds, and when they do, they can only hatch a few chicks per time and you will take a very long time before you have enough quails for a good business. The other reason as to why you must have an incubator is because it will give you control of when you want to incubate the eggs unlike the natural way of incubating through the mature quails which would mean that you have to wait for the birds to start brooding.

At Ecochicks Poultry Limited, we have a wide range of quail eggs incubators and we sell them at pocket friendly prices. The cheapest one goes for Ksh14000 and can incubate upto 120 quail eggs at a time.

The incubation period normally takes 18 days.

## Structure

One of the advantages in the rearing of quails is the relatively small space that is required. This also means that the cost of putting up a cage is less.

A good general guideline is to have two square feet allotted for every adult bird. Construction does not have to be overly robust, as walls made of wire won't encounter many shear forces from the wind, and need only keep small birds inside. The bottom half of the cage, however, should be made sturdy enough to prevent animals such as skunks, cats, or dogs from breaking in. It is also wise to extend the chicken wire a foot into the ground so that animals cannot tunnel in or out.

Give your birds a place where they can have shelter from the rain and shade from the hot sun. Also, cover the food and the water so that they don't get drenched in downpours

Keep the cage clean and put the feed in a place where rats can't get to them. Cockroaches can be a problem if the cage isn't clean

The materials commonly used in making quail cages are:

1) plywood

2) ¼ inch mesh wire

3) 1" x 1" lumber to serve as framework for every stage in the quail's life, space requirement varies.

Generally the following tips will help you in constructing your quail birds structure:

1. Six Quails can be reared in a square ft. of floor space.
2. After 2- weeks Quails can be reared in cages. This will help to gain good body-weight as un-necessary wandering of animals is avoided.
3. Cage- system: Quails in cage system of rearing should be followed in this way:-

AGE	CAGE SIZE	NO. OF BIRDS	
FIRST 2 WEEKS	3*2.5*1.5 FT.	100 -BIRDS	
3—6 WEEKS	4*2.5*1.5 FT.	50- BIRDS	

4. Each unit is about 6 feet in length and 1- foot in width and sub-divided in to 6 sub units.
5. To save space, the cages can be arranged up to 6 tiers high, they can be 4 to 5 cages in a row.
6. The bottom of cage is fixed with removable wooden plates to clean the bird-droppings.
7. Long narrow feed through are placed in front of the cages .water through are placed at the back of the cages.
8. Commercial egg layers are usually housed in colonies of 10—12 birds per cage.
9. For breeding purposes, male Quails are introduced in the cages in the ratio of 1 to 3 - Females.

See the next page for images of structures that will guide you in constructing your own quail structure:

FIGURE I. GROWER/LAYER CAGE

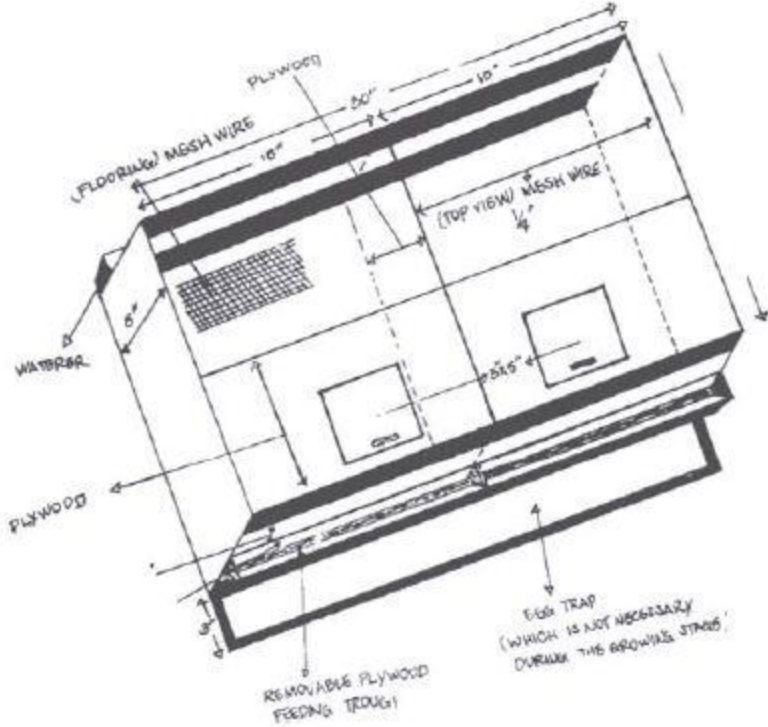
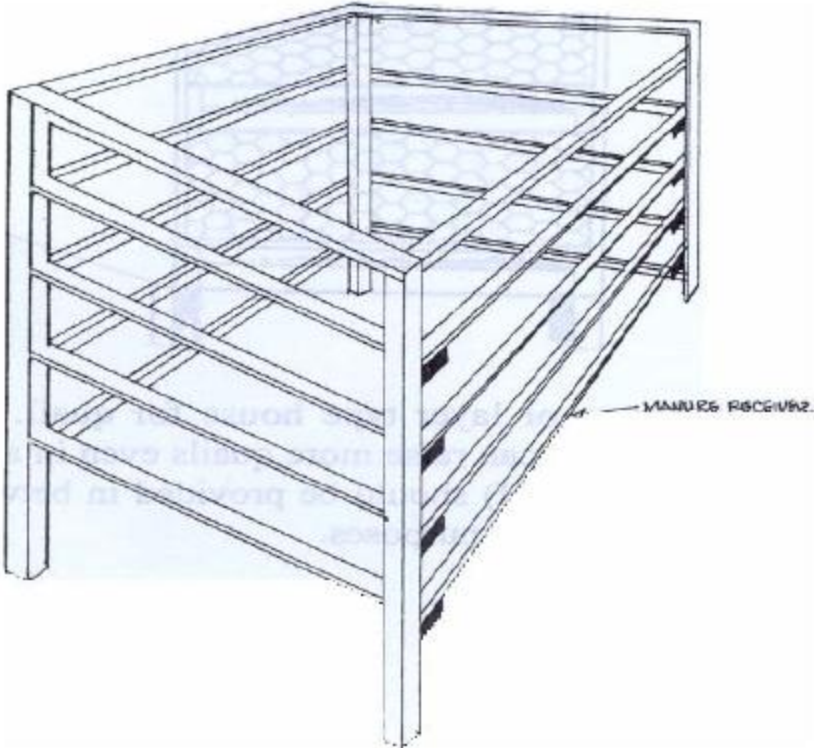


FIGURE II. GROWER/LAYER STAND



Basically, you don't have to have a complicated structure. The following picture will give you an idea of what a perfect quails cage looks like:

This cage measures 8 ft by 2 ft and can accommodate about 240 quails.



Fig. III A *brooder box* measures 2' x 4.5 x 1' and can accommodate 200 chicks. A 50 watts bulb is needed to give heat to the chicks

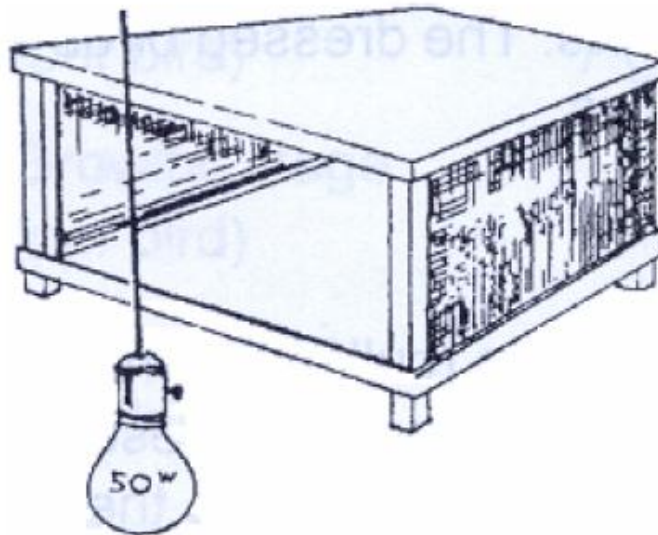
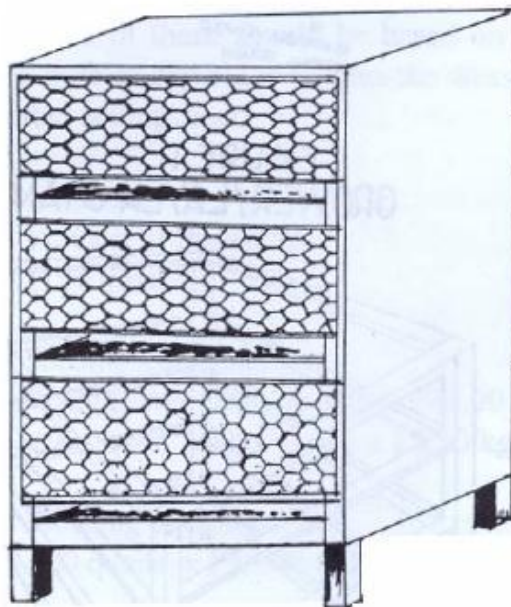


Fig. IV Battery or layer type house for quail. This type of housing, one can raise more quails even in a limited space. Sheets (i.e., G.I) should be provided in between layers for waste collection purposes.



## 1. Brooding requirements

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### 1. Temperature

During the first five days, the temperature requirement of the quail chick is 95° F. this may be reduced to 90° F on the 6<sup>th</sup> day down to 85° F on the 10<sup>th</sup> day after which the quail birds will have developed enough feathers to keep their body warm under ordinary room temperature

To ensure better circulation of air in the brooding box, air vents should be provided. Used clean cloth or sack can be spread over the screened portion of the brooder especially during the first 10 day. This will help conserve the heat in the brooder. Five or six layers of clean and dry newspaper shall be used to cover the mesh wire flooring during the first 10 days. This practice is necessary because it will not only help conserve the heat inside the brooder box but more importantly, cleaning and removal of quail manure (which is done on every other paper) is facilitated by just rolling the topmost layer of paper. After the 10<sup>th</sup> day, all the papers are removed and feeding trough covered with ¼ mesh wire (to avoid too much spillage) will be used. Water in the drinking fountain should be changed daily and care must be exercised to avoid spilling of water over the paper to prevent unnecessary dampness.

Gas lamp or electric bulb may used to control the temperature inside the brooder. The brooder box must be cat and rat proof. With proper feeds. Enough water and optimum temperature maintained, the mortality of quails can be kept at 5%-8% during the brooding stage which usually last up to 15 days. (Figure II shows a typical brooder box.)

### C. Rearing Management

After the 15<sup>th</sup> day, the birds are transferred to the growing cages (Figure1). During the growing stage, it is not advisable to expose the birds to more than 12 hours of light. For smaller operation, a brooder/grower box combination can be constructed but the space requirement of the birds should be observed.

Only birds which are healthy and with uniform size should be transferred to the growing cages. The small ones should be disposed. The average mortality from the start of the growing period up to 35 days is 1 % - 4 %. On the 35<sup>th</sup> day, the male birds are already discernable by the dark brown color of the breast feather. At this stage, the female birds can be segregated and transferred to the laying cages. Approximately 40 % of the total population can be chosen as layers on an assumed 50/50 male/female ratio. The remaining birds can be fattened up to 60 days

before these are dressed and sold as broilers. During the 25 days fattening period, light should be restricted form 6-8 hours a day. This practice will improve the quality of meat.

#### D. Layer Management

On the average, quail start laying after 45 days from hatching. The production cycle lasts for 300-320 days and within this period the laying efficiency should be maintained at 65 %. Some of the major consideration when managing layers are;

- a) Feeding – this will be discussed separately
- b) Water – like any other bird, quail needs a lot of fresh and clean water. Whenever possible, flowing water should be maintained except when there is supply problem in which case water should be replaced daily and the watering trough must be cleaned everyday.
- c) Culling – For large scale operation, it is advisable that massive culling be done regularly, preferably on a quarterly basis or even once every 4 months. Birds that have physical defects should be removed including those which have grown fat, or are sickly and are not laying eggs. This latter condition is manifested by the size of the vent and the conformation of the abdominal parts.
- d) Removal of Waste – Because of the high protein content of the quail feeds, quail manure has high ammonia content which will cause discomfort for the birds if not removed daily. Removal of the manure can be facilitated by placing a manure receptacle or receiver under the cage.
- e) Light – Laying quails may be given extra light up to midnight. This will allow the birds to consume the feed in the trough. Furthermore, the weaker birds in the group will have enough time to eat after the dominant ones have eaten their share.
- f) It is not advisable to mix male birds in the laying cage except when fertile eggs are to be produced. If there is an intention of producing fertile eggs for future replacement, the male should be kept in separate cage and should only be mixed with the layers at the time fertile eggs are to be produced at a ratio of 1:6 and 1:3 for the Japanese and American breed, respectively.
- g) Quail birds are very sensitive to high salt level in the feeds. The optimum level of this mineral should be kept at 7 % and in no case be more than 1 %.



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## E. Feeding Management

The major cause of failure in quail raising is the faulty feeding practice employed by the raiser . most of our quail raisers today feed commercial chicken feeds to quails. This is an erroneous practice and it should be corrected. The protein requirements of chicken and quails are different and as such the use of chicken feeds in quail raising is not advisable. Bellow is a comparison of the crude protein requirement of chicken and quail.

	Quail	Chicken
Chick stage	28%	21%
Grower stage	24%	16%
Layer stage	26%	15%

From the above information, we can clearly see the mark difference in the Primary requirement of both birds. Quail cannot survive on chicken feeds for a long time. If ever they will survive, the mortality rate will be very high sometimes reaching up to 70 % from day old to 45 days. Moreover, the growth of the birds is very uneven and the survivors will not be efficient layers. The productive laying period for quails fed with chicken feed do not go beyond six months.

Another disadvantage of feeding chicken mash to quails is the very occurrence of molting which affects severely the egg production.

The claim that mixing quail feeds with higher protein is expensive and not economical is baseless. The advantages of giving the right ration far outweigh the cost of giving chicken feeds. This advantages can be summarized below:

1. Mortality rate can be kept low with good feed:
  - 5-8% from 1-15 days
  - 1-4% from 16-35 days
  - 8-12% from 36-360 days
2. Production:
  - a) Laying efficiency can be easily maintained within the average range of 63%-68% for a period of 300-320 days. It is not rare to get laying efficiency of 80%.
  - b) Eggs are bigger and more nutritious
  - c) For breeders – fertility and hatchability are high

These things when quantified and taken together would positively refute the claim that feeding quails with higher protein content as recommended here is costly and uneconomical.

During the first 15 days, the feeds of the birds should be grounded to a fineness enough to pass an ordinary window screen wire.

Like chicken, quails are affected by abrupt changes in feeding. Hence, it is not advisable to change feed abruptly.

Generally feeds can be formulated as follows : .....

<b>FEED- INGREDINTS</b>	<b>CHICK- MASH</b>	<b>GROWER - MASH</b>
-----	<u>  </u> 0 TO 3 WEEKS	4 TO 6 WEEKS
MAIZE	27	31
SORGHUM	15	14
DEOILED-RICE- BRAN	08	08
GROUNDNUT CAKE	17	17
SUN-FIOWER- CAKE	12.5	12.5
SOYA- MEAL	08	-----
FISH-MEAL	10	10
MINERAL- MIXTURE	2.5	2.5
SHELL- GRIT	-----	05

## **NOTES :**

- Feed material should be made of small particles.
- A- 5 weeks old- Quail consume 500gm. Of feed .
- Quail of 6 month old , consume about 30 to 35 gms. Of feed perday .
- Quails require about 400gms. Feed for the production of 12- eggs .
- Broiler – starter mash can be used by adding 5kg. of oil cakes to 75 feed the particles size is reduced by grinding the feed for one more time .

### **G. Maintaining Health**

There is no known morbid disease of quails. While they suffer from some respiratory disorders, these do not spread fast and the mortality rate is very low. Hence it is not difficult to maintain the health of birds. Regular cleaning and disinfection program, however, should be followed. Cages and broiler boxes including the incubator and hatchery trays can be cleaned with strong water dried under the sun. spraying with disinfectant follows. Vitamin premix can also be added to the feeds or the drinking water to promote growth and improve the laying performance.

## **IV. MARKETING**

### **A. Eggs**

Eggs are the main product of quails. For small scale/backyard quail raising, this can be placed in a basket and marketed fresh. For bigger operation, it is advisable to pack eggs in carton boxes with individual dividers to protect the quality of the eggs. Storing eggs in a cool dry place where air circulation is good can keep the eggs fresh for a period of seven days.

### **B. Broilers/stewers**

The average feed conversion ratio of quail is 3:1. this poor feed conversion efficiency makes a broiler production uneconomical and therefore any broiler produced should be treated secondary product in quail raising. The procedure in dressing quail is the same as in chicken. The birds are bled and scaled in hot water (about 132-135 F) after the feathers are removed. Evisceration follows. The dressed birds are then chilled and packed by the dozen or in kilos.

## **IMPORTANT GENERAL NOTES:**

1. At the age of six- weeks, female Quails usually weight “ 175- 200 gms.” And the Males weight about “ 125 -150 gm.”
2. Female Quails start laying eggs at 7 –weeks of age and continue up to 22- weeks of age
3. Usually egg laying happens during the evening time of the day .
4. The Quails egg usually weight about “ 9 to 10 gm ,and also goes to 12gm with properly nutrition- care.
5. The breast of the male Quail is usually narrow, and covered with equally distribute brown and white feathers. But the female quail has a broad breast covered with brown feathers with black- dots.
6. The male and female quails should be separated at the age of 4- weeks.
7. Sixteen hours of light per day should be available to the egg laying Quails.

## **MANAGEMENT OF QUAIL-CHICKS**

The day old quail- chicks usually weight “ 8 to 10 gm.” Hence , The Quail chicks need more temperature , absence of adequate temperature and expose to high speed cool- wind leads to clustering of young ones , which result in high-mortality .

## **DISEASES OF QUAILS:**

- When there is deficiency of vitamins and minerals and minerals in the female quail breeders , the chicks obtained from their fertile eggs are usually lean with weak legs .
- To prevent this the breeder females should be provides with optimum minerals and vitamin in their feed .
- Generally Quails are resistant to infectious diseases than chicken . so there is no vaccination required for quails .
- Proper management of Quail chicks , dis-infecting farm premise , providing clean drinking water to quails and feeding of quality concentrate feed will prevent diseases outbreak-sin Quail farms .

## **LICENSE REQUIREMENT FOR QUAIL- FARMING :**

- A government license is required to start quail farming considering the

jungle variety of the bird, which is a protected species. Please visit the nearest KWS offices and you shall get valuable assistance.

In case of further enquiries or clarifications, feel free to call us on 0707787884.

Thanks.