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THE BROILER FARMING HANDBOOK

Practical guide for small and medium scale producers

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Running a profitable broiler unit requires two things: knowing how to raise birds well and understanding the business side of poultry.
Feed, day–old chicks, transport, labour, energy, equipment, health products and marketing all contribute to your cost of production.

If these costs are not planned and recorded, profit disappears quietly.
This handbook is designed to give farmers a simple step–by–step guide to manage birds and money better so that broiler farming becomes a stable business, not guesswork.

1. WHAT IS COMMERCIAL BROILER FARMING?

Commercial broiler farming means keeping chickens specifically for meat and selling them as a source of income.

Day–old chicks are first placed in a warm brooder where they receive special care. Under good management, broilers reach market weight in about 5–6 weeks.

Modern broiler strains grow fast, have soft tender meat and are preferred in the meat market. In many areas, processors and large traders sign contracts with farmers to rear broilers for them.

Where such contracts exist, marketing becomes easier, provided the farmer follows the agreement.

A broiler is usually harvested below eight weeks of age at a body weight of roughly 1.3–2.0 kg.

2. WHY INVEST IN BROILERS?

Chicken meat provides high–quality, affordable animal protein.

Urbanisation and a growing population continue to increase demand for chicken.

Broilers reach market age quickly compared to layers or local chickens, giving faster cash flow.

With good housing, feeding, health and marketing, broiler farming can be turned into a reliable business that pays regularly.

Broilers

Broilers grow in 30-45 days

30 days to start income

3. COMMON BROILER STRAINS

Hatcheries in East Africa commonly sell these commercial strains (names may differ slightly by hatchery):

Cobb 500

Ross 308

Hubbard

Naked Neck Broiler

4. CHICKEN HOUSING

A good house keeps birds comfortable, safe and productive.

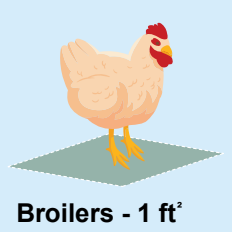
Key points when planning a broiler house:

- Orient the house length from east to west so that direct sun and strong winds do not hit the birds.
- Provide plenty of ventilation. The long sides of the house should be mostly open, fitted with wire mesh and curtains that can be rolled up or down.
- Build on a strong foundation with a concrete floor for easy cleaning and disinfection.
- Use a roof that does not leak and reflects heat.
- Maintain biosecurity: close all gaps that allow wild birds, rats and other animals to enter.
- Fix a hand and foot bath with disinfectant at the main door.
- Where possible, add a roof rain–water collection system and a storage tank.

Space requirement:

- A broiler needs about 1 square foot (0.09 m²) of floor space.
- Layers or improved local chickens need about 1.5 square feet per bird.

When planning to grow the flock later, it is cheaper to build a slightly bigger house at the beginning rather than extending in a poor way.

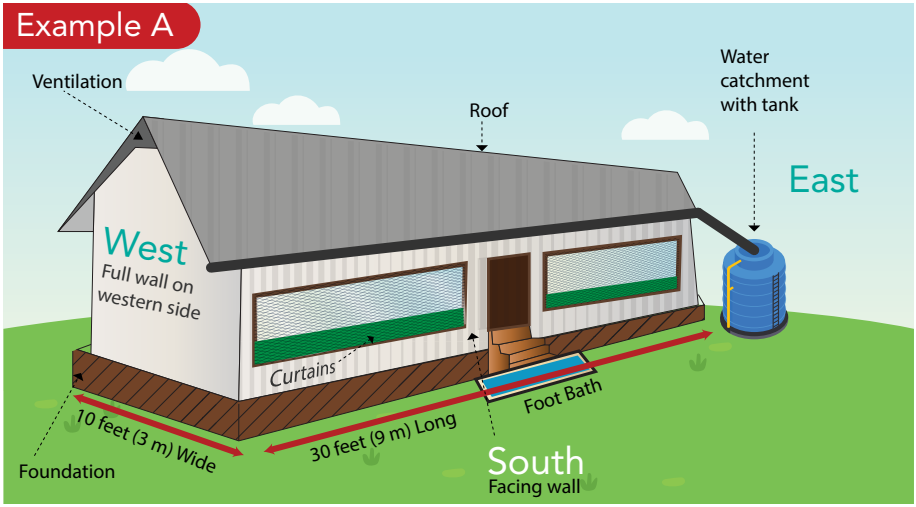


Example A

- House size 10 x 30 feet (3 x 9 m)
- Capacity: approximately 300 broilers or 200 layers / improved local hens.

Example B

- House size 10 x 12 feet (3 x 3.6 m)
- Capacity: approximately 120 broilers or 80 layers / improved local hens.



5. BASIC EQUIPMENT FOR 100 CHICKS

Clean and well–maintained equipment reduces disease and improves growth.

Equipment	Comments	
Feeders	• At least one feeder for every 50 day–old chicks. • Wash and disinfect before use. • Fill with fresh starter feed before chicks arrive.	

Drinkers	• At least one drinker for every 50 chicks. • Use 6– or 10–litre drinkers that are easy to wash and refill. • Keep them slightly raised so litter does not enter and wet the floor.	
Litter	• Use clean wood shavings or rice husks. Avoid sawdust because chicks can swallow it. • Spread evenly to a depth of 5–10 cm. • Litter must remain dry, loose and comfortable under the birds' feet.	
Heat source	• Provide a reliable source of heat such as a charcoal or gas brooder, or electric heater where power is stable. • Always test the heater before the chicks arrive. • Keep enough fuel ready for the entire brooding period.	

Lighting	• Provide almost continuous light (about 23 hours) during the first week so chicks can easily find feed and water. • After the first week, adjust the light and dark hours as explained in the lighting section.	
Brooder guards	• Use round brooder guards made from plywood, iron sheets or strong cardboard. • Allow about 1 m^2 of brooder space for every 50 chicks. • Clean, disinfect and place fresh litter before bringing in chicks. • Cover the floor inside the brooder area with paper for the first 2–3 days to help chicks find feed and prevent them from eating litter.	

6. PROFITABILITY AND FCR

To know whether your flock is performing well, track three main points:

These points will tell you whether your flock is doing well and is profitable:

- **Mortality:** keep deaths as low as possible.
- **Feed conversion ratio (FCR):** how many kilograms of feed are needed to produce one kilogram of live bird.
- **Disease level:** frequent illness increases cost and reduces growth.

How to calculate the Feed Conversion Rate (FCR)

Calculating FCR is simple: it is the amount of feed consumed by the birds and divided by the amount of weight gained. That is the amount of feed consumed per kilo of meat. The lower the FCR the better. It is an indication of the more efficient conversion of feed into meat by the birds.

$$\text{FCR} = \frac{\text{Total feed consumed} \quad \textit{in Kg}}{\text{Total live weight produced} \quad \textit{in Kg}}$$

The lower the FCR, the more efficiently birds convert feed into meat.

Example:

A sample of 100 broilers each weighs 2.2 kg live weight. That is 220 kg in total. Total feed used from day–old to market is:

Starter 50 kg + Grower 100 kg + Finisher 190 kg = 340 kg. FCR = 340 ÷ 220 = 1.55 (approx).

This means the flock used 1.55 kg of feed to produce 1 kg of live bird. Commercial broiler farmers aim for the lowest FCR they can practically achieve.

Tips to improve FCR:

- Keep drinkers about 1–1.5 m away from feeders to prevent water from spilling into feed.
- Use feeders that do not allow birds to scatter feed easily.
- Maintain strong biosecurity and follow a proper health program to reduce disease.
- Sell birds at the correct market weight; birds that stay too long simply eat feed without adding profitable weight.
- Plan backwards from market dates such as Christmas and school–opening so that birds are at the right weight when demand and price are best.

7. RECORD KEEPING

Proper records turn poultry from a guessing game into a measurable business. Records help you to:

- Measure growth and profitability.
- Plan cash flow requirements.
- Detect problems early and see whether management changes are working.

Records needed for Broiler Production

Event	Record	Comment
Chick placement	• Number of chicks, source, date and time of arrival. • Chick quality, average weight and uniformity. • Deaths on arrival.	• Live weight • Uniformity • Number of deaths on arrival
Mortality	• Daily and weekly deaths. • Cumulative total. • Post–mortem findings where available.	• Post mortem records

Medication and vaccination	• Date, product used, dose and batch number. • Reason for treatment or vaccine. • Any unusual reactions.	• As per veterinary instructions
Feed	• Date received, quantity, type and supplier. • Total feed consumed per flock. • Any comments on feed quality.	• Accurate feed consumed should be recorded • Quality of feed
Water	• Daily consumption where possible. • Water to feed ratio (for larger farms). • Water source and any treatment used. • Sudden change in intake should trigger investigation.	• Sudden change in water intake should be a cause of concern
Environment	• House temperature and air quality. • Litter condition. • Major changes in weather.	
Harvesting/Sale	• Number of birds sold and total live weight. • Date and time of collection. • •Remarks from buyer or processor such as carcass quality and condemnations.	

8. CHICK MANAGEMENT AND BROODING

Brooding

Brooding is the period from day–old to about two to three weeks when chicks cannot control their body temperature and need extra heat and close attention.

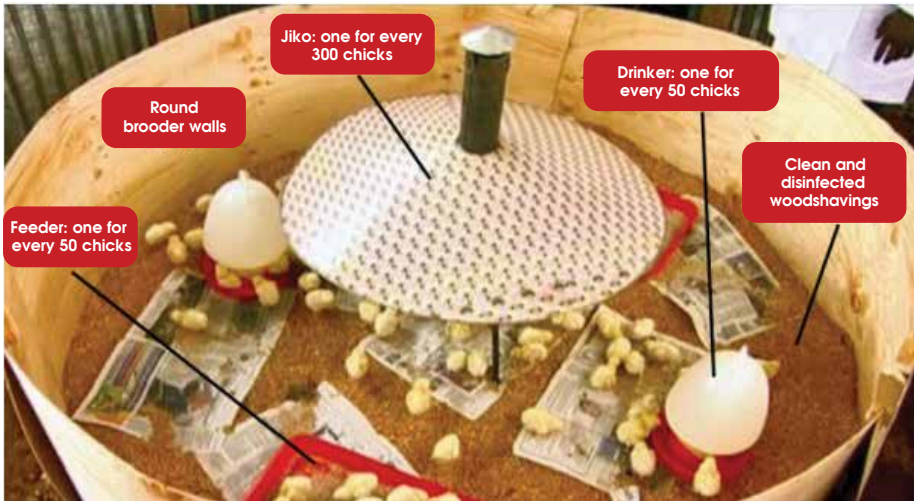
Preparing before chicks arrive:

- Wash the house thoroughly and disinfect at least a few days before placement.
- Spread fresh dry litter 5–10 cm deep.
- Install brooder guards, heaters, drinkers and feeders.
- Pre–heat the house several hours before chicks arrive so the floor and air are warm.
- Fill drinkers with clean water and allow chicks immediate access.
- Place starter feed in trays or on clean paper inside the brooder to encourage early feeding.

Good Brooding Management

- Aim for uniform chicks; uniformity leads to uniform growth and easier marketing.
- Focus on four main factors: temperature, fresh air, clean water and quality feed.

- When these are correct, most of the work of brooding is already done.



Temperature Management

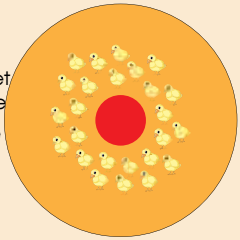
A practical guide is to feel the temperature of the chick's feet against your cheek.

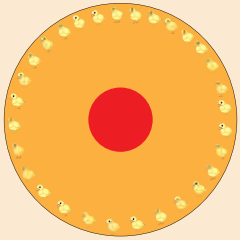
- Cold feet: increase heat.
- Very hot feet: reduce heat.
- Feet similar to your skin: temperature is about right.

As a guide, start brooding at around 32–33 °C at chick level and reduce by about 2 °C every three days, depending on season. By day 14 the temperature is usually about 27 °C under good conditions.

Too cold
No activity, chicks get close to heat source

Action: Increase temperature.



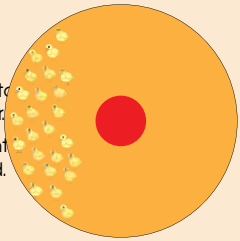


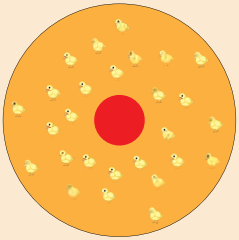
Too hot
No activity, even spread, chicks are away from heat source.

Action: Lower temperature.

Windy
No activity, chicks move to one side of brooder.

Action: Check breeze, light and noise around.





Right temperature
Good activity, chicks are spread well.

No action needed.

Chicks need to be kept at the right temperature to eat, drink and grow well. After 14 days (if warm) or 21 days (if cold) take your chicks out of the brooder

DID YOU KNOW? INTERESTING FACT

You can check the chick's temperature by placing its feet on your face.

- If the feet feel cold, they are cold, and you need to increase the temperature.
- If their feet feel hot, they are hot and you need to reduce the temperature of the brooding area.
- If their feet feel the same temperature as your face, they are OK.

Chick behaviour and temperature:

- **Too cold:** chicks crowd directly under the heat source, make noise and show little activity.
- **Too hot:** chicks move away from the heat source and may pant; they spread out and look dull.
- **Windy:** chicks move to one side of the brooder to escape drafts.
- **Comfortable:** chicks spread evenly around the brooder, active, eating and drinking.

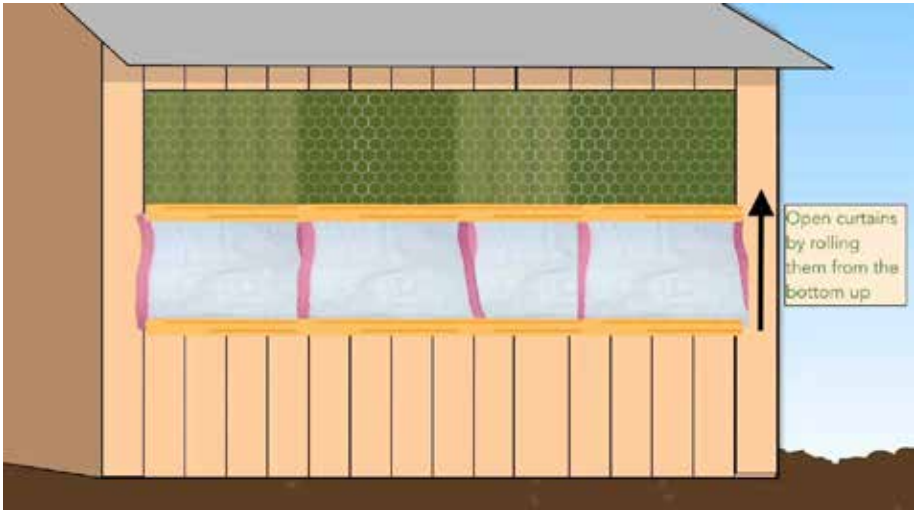
Brooding space:

- During week one, chicks should occupy roughly one–third of the house within the brooderguard.
- From the second week, gradually open the brooder area until birds occupy about two–thirds of the house.
- By three weeks of age, birds should have access to the whole house.

  Too many birds in a small space leads to suffocation, stunted growth and poor access to feed and water

Ventilation during brooding:

- Fresh air removes harmful gases such as ammonia and keeps litter dry.
- Open side curtains from the bottom upwards to avoid direct wind on the chicks.
- In very cold or windy weather, adjust curtains carefully so that air enters without blowing directly on birds.



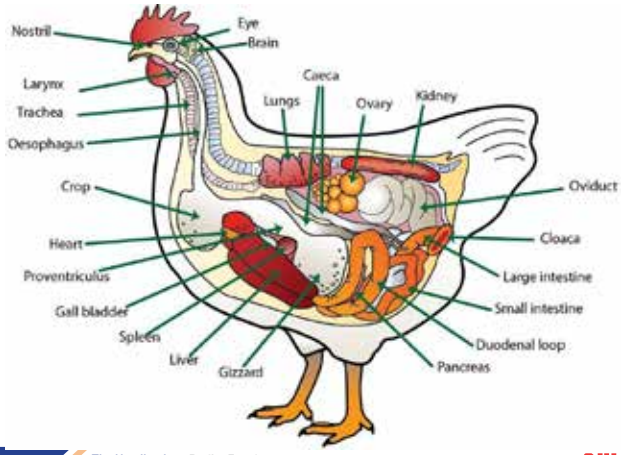
9. FEEDING AND CROP FILL

Feed is the largest single cost in broiler production, so it must be used wisely.

- Provide clean starter feed immediately when chicks arrive.
- Healthy chicks will quickly drink and eat, and feed will collect in the crop.

Crop–fill check:

The crop is a small pouch at the base of the neck where feed and water are stored.



- Two hours after placement, gently feel the crops of 30–40 chicks from different parts of the brooder.
- At 2–3 hours, at least 80–85% of chicks should have full, soft crops containing feed and water.
- After 24 hours, aim for 95% crop fill; after 48 hours, almost all chicks should have full crops.

  Poor crop fill indicates problems with temperature, lighting, water or feed availability.

Feeding programme (example):

Stage	Phase 1	Phase 2	Phase 3
	Broiler Starter	**Broiler Growers**	**Broiler Finisher**
Types of feed given	• From day 0 to day 13. • Fine crumble, low dust. • About 350 g per chick over this period.	• From day 14 to day 24. • Slightly larger pellets. • About 1.0–1.5 kg per bird over the two weeks.	• From day 25 to day 35 or sale. • Larger pellets. • About 1.5–2.0 kg per bird until market age.

Changing feeds:

Change gradually over several days to avoid stress.

- Starter to grower between days 11–14 by mixing small amounts of grower into starter and increasing daily.
- Grower to finisher between days 23–25 in the same way.

General feeding tips:

- Use feeder sizes that match the age of the birds.
- Keep feeders clean and never allow mouldy feed.
- Adjust feeder height so that the lip of the feeder is at the level of the bird's back.
- Maintain about one hanging or round feeder per 50 birds and increase equipment as birds grow.

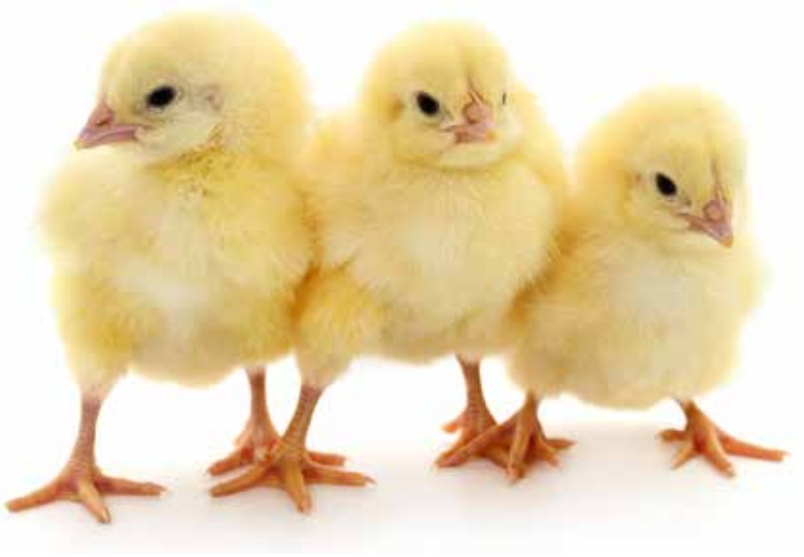
10. WATER MANAGEMENT

Water is more important than feed; birds can survive longer without feed than without water.

- Provide cool, clean water at all times.
- Chicks should not walk more than about 2 metres to find a drinker.
- Any sudden drop in water intake usually signals a serious problem such as disease, heat stress or blocked lines.
- Prevent leaks; wet litter quickly becomes a source of disease.

Remember!

roughly two–thirds of the chicken's body is water. Protect water quality and supply as carefully as feed.



11. LIGHT MANAGEMENT

Light influences feeding, growth and activity.

- During the first week, supply almost continuous light (about 23 hours light and 1 hour darkness) to encourage chicks to eat and drink.
- After day 7, gradually increase the dark period.

Example schedule:

- Days 1–7: 23 hours light, 1 hour dark.
- Day 8: 20 hours light, 4 hours dark.
- Days 9–14: 10 hours light, 14 hours dark (in one or two dark periods).

Adjust according to your management system, power reliability and bird performance.

12. LITTER MANAGEMENT

Litter is the material placed on the floor to absorb moisture and provide a warm, comfortable surface.

Good litter:

- Feels dry and friable when squeezed in the hand.
- Smells fresh, not strongly of ammonia.
- Does not cake or form hard layers.

Management tips:

- Use a concrete floor where possible for easy cleaning between flocks.
- Maintain adequate litter depth, topping up thin or wet areas.
- Remove and replace very wet patches around drinkers.
- Where available, wood ash mixed with fertiliser–grade superphosphate can be spread lightly on the floor under the litter to help reduce ammonia release.
- Dirty, wet litter stains birds' feet and bellies and lowers carcass quality.

13. STRESS MANAGEMENT

Stress reduces immunity and performance and may lead to sudden deaths. Common stress factors in broilers:

- Excessive noise and rough handling.
- Predators such as dogs, cats, rats and wild birds.
- Temperature that is too hot or too cold.
- Poor ventilation and high ammonia.
- Frequent changes in feed or water supply.

Reduce stress by handling birds quietly, maintaining constant care routines and providing a secure, calm environment.

14. BIOSECURITY AND DISEASE PREVENTION

Preventing disease is cheaper and more effective than treating sick birds. Key biosecurity measures:

- Keep a dedicated pair of gumboots and overalls for the poultry house.
- Place a foot bath with disinfectant at the door and renew the solution regularly.
- Keep the surroundings clean; remove old litter, empty bags and rubbish away from the house.
- Restrict visitors; only necessary staff should enter the chicken house.
- Keep different age groups in separate houses to break disease cycles.
- Clean and disinfect all equipment between flocks.
- Control rodents and wild birds.
- Do not keep old feed; dispose of mouldy or caked feed as it may contain toxins.
- Sick and dead birds should be removed quickly. Bury or incinerate carcasses and never eat or sell them.

CONCLUSION

Broiler farming can be a rewarding business when birds are managed carefully and records are kept honestly.

By controlling housing, brooding, feeding, water, health and marketing, farmers can protect their investment and grow their poultry enterprise step by step.

Use this handbook together with advice from animal–health and nutrition professionals to keep improving every flock.

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