



Commercial Layer Guide

General Preparation

Thoroughly clean equipment and facilities by removing all debris and dust left by the previous flock and by washing with a high pressure washer. Manure should not be stored closer than 300 m from the brooder houses and should not be located upwind. Eliminate rodents, wild birds and other vermin. Make any necessary repairs, and clean and disinfect water lines and tanks. Feed bins, and feeders must be emptied, cleaned and disinfected. Do not place chicks until the house and all equipment in it have been allowed to dry for 10 to 12 days.

Isolation and Sanitation

Isolation and restricted access to the brood / grow area are of prime importance for the control and prevention of poultry disease. Traffic between the brood / grow area and lay houses should be avoided. An important part of isolation is keeping poultry houses free of outside birds, rodents and other wildlife because they can be a major source of disease causing agents and parasites. Houses for adult and growing flocks should be separated by a minimum distance of 100 m. Caretakers should be assigned to one house and should not go back and forth between houses. Managers inspecting flocks should visit the youngest flock first and the oldest last. A foot bath containing fresh, clean disinfectant should be placed at the entrance to each house. The disinfectant solution needs to be checked at least once a day and changed frequently. Allow only essential personnel in and around the poultry houses. Do not allow drivers of off-farm vehicles to enter any poultry houses.

Getting Chicks Off to a Good Start

Before the Chicks Arrive:

1. Make sure the correct temperature is being maintained uniformly inside the building.
2. Ensure that there is sufficient litter. **DO NOT REUSE OLD LITTER FROM PREVIOUS FLOCKS. USE NEW LITTER.**
3. Heat the brooder 24 hours before the chicks arrive.



4. Make sure there is uniform distribution of drinkers and feeders thorough the brooding area.
5. Pick up your chicks early to avoid dehydration. Avoid transporting the chicks in the heat.
6. Make sure that as the chicks are transported there is sufficient ventilation so that the chicks breathe well. All windows of the vehicle must be open. **NEVER TRANSPORT CHICKS IN THE BOOT OF THE CAR.**
7. The design of the house should allow sufficient air while preventing direct sunlight to the chicks. So construct houses facing north and south. When planning housing space for the birds use: For birds on open floor plans in brooding space should be 13.4birds per square meter and in growing phase 7.2birds per square meter.
8. Good record keeping is very important.

After Chicks Arrive

The longer the chicks remain in the boxes, the greater the degree of potential dehydration. This may result in early mortality and reduced growth as indicated

- ❖ Place chicks gently and evenly onto paper within the brooding area. Feed and water should be freely and immediately available.
- ❖ The empty boxes should be removed from the house without delay.
- ❖ Provide 24hrs light for the two to three day and there after 23hrs of light for the first seven days to encourage feed and water intake. The light intensity should be good to allow birds to find water and feeds.
- ❖ It is important to socialize the birds to humans. So the poultry attendant should gently walk through the house about 4 times a day, to make the birds get familiar with humans.
- ❖ Check crops 8hrs and 24hrs after placement. Do a sample check of about 30-40chicks at three or four different places within the house. Each chick crop should be felt gently. In chicks that have adequate water and feed, the crop should be full, soft and rounded. If the crop is full but hard there is not enough water, if it is swollen and full of water, there aren't enough feeds. After 8hrs 80% of the birds should have the target crop and after 24hrs 95-100% should have the target crop.



The chick on the left has a full, rounded crop while the chick on the right has an empty crop.

- ❖ Fresh feeds and water should be available and regularly checked.

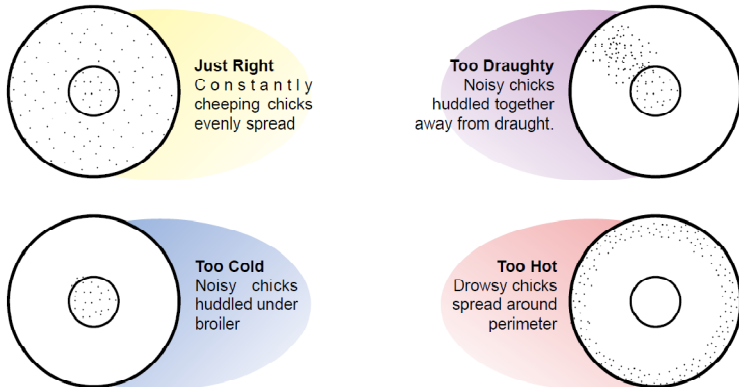
CHICK CHECK 1” - 4 to 6 Hours Post-Placement

- Sample 1% chicks per brood area.
- Check: temperature of feet against neck or cheek.
- If the feet are cold, reevaluate heating temperature.
- Results of Cold Litter:
 1. Poor early feed intake
 2. Poor growth
 3. Poor uniformity

An excellent indicator of floor temperature is the temperature of the chick's feet. If the chick's feet are cold, the internal body temperature of the chick is also reduced. Cold chicks will be seen huddling with reduced activity and resulting in reduced feed and water intake and therefore reduced growth rate. By placing the feet against your neck or cheek one can readily learn how warm or cold the chick is. If they are comfortably warm, the chicks should be actively moving around the brooding area.

Guide to Brooding Temperatures

Observe chicks and adjust to their comfort. The diagram below shows how to observe chicks based on temperature conditions.



Signs of Distress

Be alert to distress signals produced by the chicks. React appropriately to the following chick behavior:

- Listless and prostrate chicks which indicates excessive heat.
- Loud chirping indicates hunger or cold.
- Grouping (huddling) together indicates excessive cold or drafts.
- Pasted vents which may indicate excessive heat or cold.

Water

Chicks must have access to plenty of clean, fresh, cool water (make sure the water is not warm from the heat of the brooder). This is necessary for flocks to get off to a good start. Water intake must not be restricted under any conditions. It is important that you have good clean water. Dirty water from dirty sources has a lot of bacteria and can disease. If your source of water is not good, treat water to kill the

Feed

An optimal feed is a very homogenous mash feed. If this is not available, crumbles are better than a sub-optimal mash for early growth.

Lighting Program in Rearing for Day Old Chicks

When the day old chicks arrive on the farm, they have been intensively handled in the hatchery and often had a long transport to their final destination. Common practice is to give them in the first 2 or 3 days after arrival, 24 hours light to help them to recover and to provide those chicks enough time to eat and to drink.

Beak Treatment



It is best to beak trim between 7-10 days. However, this requires proper beak trim machines where a chick beak is placed in the holes and trim done. If this beak trim machine is not available, debeak at 3 months with a very hot knife. Care should be taken to avoid cutting the tongue or poor trimming of the beak.

Feeds in Growing Stage

Four diets (Starter, Grower, Developer and Pre-lay) during the brood / grow period are very adequate for a growing layer chicken. Each diet should be supplemented with vitamins and minerals as indicated. Each diet should be fed until the appropriate target weight listed in this guide is achieved. At that point the next diet should be fed. It is important that before you move to the next diet the chicks have attained the target weight. For example, do not move from starter to grower until the birds have attained a weight, delay the feed movement until birds are the right body weight for their age in weeks. Make sure that you buy your feeds from a good supplier or that you know how to formulate good feeds. Mistakes made during the growing period can lead to poor production in lay and cannot easily be corrected during the laying period. The first 8 weeks of the chicken's life are very important so if you compromise on feeds, you will end up with problems in lay. So ensure that the quality of the feeds is very good. Biyinzika Poultry International will be selling good quality feeds, so buy your feeds from only a recognized company branch and not from agents.

Body Weight

Monitor body weights every week during the growing stage starting from when the chicks are two to three weeks until when they have started laying. Also check for chick uniformity. Smaller chicks should be separated and reared separately to allow them to catch up with the rest of the flock.

Body Weight Gain

If a flock is not reaching target body weights, check the feed and water consumption rate as well as feeder, drinker and floor space. Inadequate cage or floor space can cause a reduction in feed consumption. If the problem persists, do not rule out the possibility of an error in feed delivery or feed theft. If the water is contaminated or has off flavors, water consumption will decrease followed by a decrease in feed consumption. Disease may also be an important factor in reduced body weight. If a disease problem is suspected, get an accurate diagnosis of the problem as soon as possible. Always use experienced crews to beak treat birds. Improper beak treatment is very detrimental to the maintenance of



correct body weights. Maintain temperatures in which the birds will be comfortable – generally 18 to 24 °C, if possible as heat stress can lead to poor appetite.

Target Weights	
—Growing Period—	
Age in Weeks	Body Weight* g
1	70
2	120
3	180
4	250
5	340
6	440
7	540
8	640
9	750
10	860
11	960
12	1060
13	1140
14	1200
15	1260
16	1320
17**	1400
18	1480

* Pullets grown on the floor or in a tropical climate can be 50 g lighter than shown.

TYPE OF FEED	AGE in Weeks	Daily feeds per bird (g/day)
Starter	1	10
Starter	2	16
Starter	3	22
Starter	4	28
Starter	5	34
Grower	6	40
Grower	7	46
Grower	8	52
Grower	9	57

Please note these are only guides. Do not limit the amount of food layers eat. Allow them to eat as much as they can.

Move from one diet to another based on body weights. For example if the birds are 5 weeks but still underweight, do not change to grower, stay on starter feeds until the birds attain the body weight for their age.

It is important to give the chicken developer feeds as they help train the birds to eat.

Pre-lay help the chicken transition to a higher calcium diet as they prepare to lay. However do not use it for too long.



Developer	10	61
Developer	11	64
Developer	12	66
Developer	13	67
Developer	14	68
Developer	15	70
Developer	16	72
Pre-Lay	17	74
Pre-Lay	18	76
Pre-Lay	19	80
Pre-Lay/ Lay	20	90

Diet or phase changes

Diet changes are governed by target body weights, and not by bird age. Close monitoring of the chicks' body weight is therefore a key prerequisite for diet changes. If chicks are below the recommended target weight at 4 weeks of age (when a change from the starter diet to the grower diet is normally recommended), the starter diet should be fed longer until the target weight-for-age is met. If there is a large discrepancy between the chicks' body weight and the target weight, diets can be reformulated with higher energy concentrations. Other options to consider include any factors that affect feed intake and, therefore, consumption of energy and nutrients. These factors include:

- Speed of feeders and the duration of the feeding—the feeders should run long enough to ensure that feed is distributed throughout the barn, adding 2 to 3 cm (1 in) of feed in the feed trough.
- The numbers of feedings per day—the feeders should run when the lights are turned on in the morning and before lights are turned off in the evening. Additional feeding periods should be distributed throughout the day, potentially with a pause in the middle of the day so the birds can empty (or almost empty) the feed troughs. A midnight feeding can also be used to increase feed consumption.
- Drinking-water flow rate—if birds do not drink water, they do not consume feed.



- Insufficient feeder or water space (crowding)—too little access to feed and/or water decreases feed consumption and, therefore, growth rate.
- Feed refusal—could be caused by presence of molds or mycotoxins. Parts of the feed may not be consumed if ground too fine (i.e., poor particle-size distribution) or if the crumble-quality is not good.
- Abrupt feed-formulation changes—too large changes in feed-ingredient composition or nutrient content may (temporarily) decrease feed consumption.
- Lack of perches or insufficient perch space—perches improve the social environment and allow less-aggressive birds in the flock to consume more feed and water.

Basic Rules for Lighting Programs

Guidelines for growing period

Start pullets with 20 to 22 hours of continuous and bright light during the first week of age.

Alternatively, an intermittent lighting program (4 hours of light followed by 2 hours of darkness) can be used during the first week of age. The dark period (or periods) serves as 'resting time' and helps strong chicks show the weak chicks how to find feed and water.

- Step-down day length from 20-22 hours of light the first week of age to either
 - 9-10 hours of light at 10 weeks of age or, if longer,
 - the longest natural day length the flock will be exposed to from 8-18 weeks of age.
- Increase day length 1 hour at the 18-week after the chicks attain the right body weight target.
- Add 15-30 minutes per week (or every 2 weeks) until either
 - 16 hours total light
 - Maintain the 16 hours of light throughout the laying period of the birds. For example, turn on lights at 4:30am and then when its bright outside, let the natural daylight to provide natural light and then in the evening turn on the lights at about 6:30pm to 9:30pm.



It is important to note that at the onset of laying, light stimulation should not be provided until flocks reach the optimum body weight. Flocks which are light-stimulated into production at lower body weights will likely produce below normal egg weight and suffer from reduced peak production and post-peak dips in production.

Timing of light stimulation can be used as a tool to help attain desired egg size. In general, earlier light stimulation will result in a few more eggs per hen, but at a tradeoff for slightly reduced egg weight. Later light stimulation will result in a few less total eggs, but a slightly larger egg weight earlier in production. In this way, lighting programs can be customized to best meet the egg size demand of a particular market.

Provide light stimulation when the target body weight is reached, usually around 17 to 19 weeks of age. The initial light increase should be no less than 1 hour. Increase the day length by 15 to 30 minutes per week until 16 hours of light is reached.

Allow no decrease in day length or light intensity in adult layers. Such decreases in day length will adversely affect egg production.

Vaccination:

Please follow the vaccination guide we gave you when you picked the chicks.

Ensure that the birds are dewormed on a monthly basis especially during laying period.