



**PULLETS
REARING &
COMMERCIAL
LAYERS
GUIDE**

LFL
The feed you can trust



From week 9 to week 18: **Hiperfo Layer Developer**

After achieving an average weight of 1500g per pullet, the feeding programme must be adapted accordingly. LFL proposes two ranges of feed

1. Laying 19% and Laying 18%.
2. Maxilay 1, Maxilay 2 and Maxilay 3.

Age (weeks)	Phase Feed		Feed Consumption g/day/Layer
	Laying Range	Maxilay Range	
18 - 35	Laying 19%	Maxilay 1	110 to 120
36 - 50	Laying 18%	Maxilay 2	
51 - 80		Maxilay 3	

Important

Chicks should be allowed to empty feeders completely once per day before providing new feed so that the birds can consume all vitamins and minerals present.

FEED TRANSITION

During transition period, it is recommended to mix previous feed with new ones during a period of 3 days.

Days	Ration
1	$\frac{3}{4}$ (Layer Pre-Starter) + $\frac{1}{4}$ (Layer Grower)
2	$\frac{1}{2}$ (Layer Pre-Starter) + $\frac{1}{2}$ (Layer Grower)
3	$\frac{1}{4}$ (Layer Pre-Starter) + $\frac{3}{4}$ (Layer Grower)

FEED STORAGE AREA

The store should be:

- separated from the rearing area or the poultry house;
- dry, cool and well-aerated;
- bird and pest-proof.



The roof must be in concrete to avoid condensation and increase humidity in the house. Furthermore, feed bags should be stored on plastic pallets to avoid absorption of moisture from the floor and walls. A distance of 10 cm should be left between the bags and the walls.

WATER

Water is essential for the control of the bird's body temperature. Thus, the supply of adequate cool and clean water will contribute to a good egg production, since eggs are made up of approximately 60% water. For example, if a layer consumes 115g of feed, it will consume around 230ml of water.



Farmers must check the temperature of water and during hot weather, the use of ice block in water tank helps to lower its temperature. Fresh water should be provided to the flock at a temperature between 20°C to 25°C for at least 2 hours before feed distribution.

Note: During hot weather, the water intake will be higher than normal.

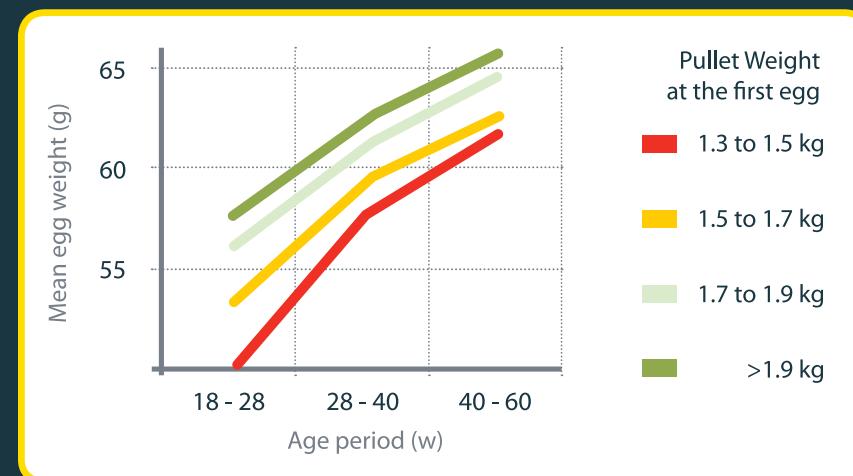
WEIGHING TECHNIQUES

To ensure the uniformity of the flock a good feeding programme is very important. Evenness of the flock is essential to ensure a high peak egg production and good eggshell quality. The aim of the farmers is to produce a flock with 80% of evenness.



The weight should be taken from arrival and on a weekly basis. A random sample of approximately 10% of the flock should be weighted and recorded on a graph for continual performance monitoring.

Mean egg weight is influenced by the pullet weight at onset of lay. The graph below illustrates this hereunder:



DEBEAKING



Debeaking must be done between 6 to 10 days to avoid cannibalism and to reduce feed wastage. Poor debeaking can lead to unevenness in the flock since this reduces the accessibility to feed and water consumption for those birds.

Farmers should ensure that the debeaker blade is red hot and avoid cutting off the upper mandible more than half.

Procedure:

- The index finger should be placed on the chick's throat
- Press the back of the lower mandible to ensure that the tongue is protected
- Tip only the lower beak to cauterise for 2 seconds

Important note: There should be no bleeding after birds are released and an over burning may cause permanent damage.

Furthermore debeaking is a major stress thus the birds should be encouraged to eat and drink by increasing accessibility of both. Vitamin K can be supplemented to the birds to prevent hemorrhages. This is a specialised process and should be performed by a well-trained operator.

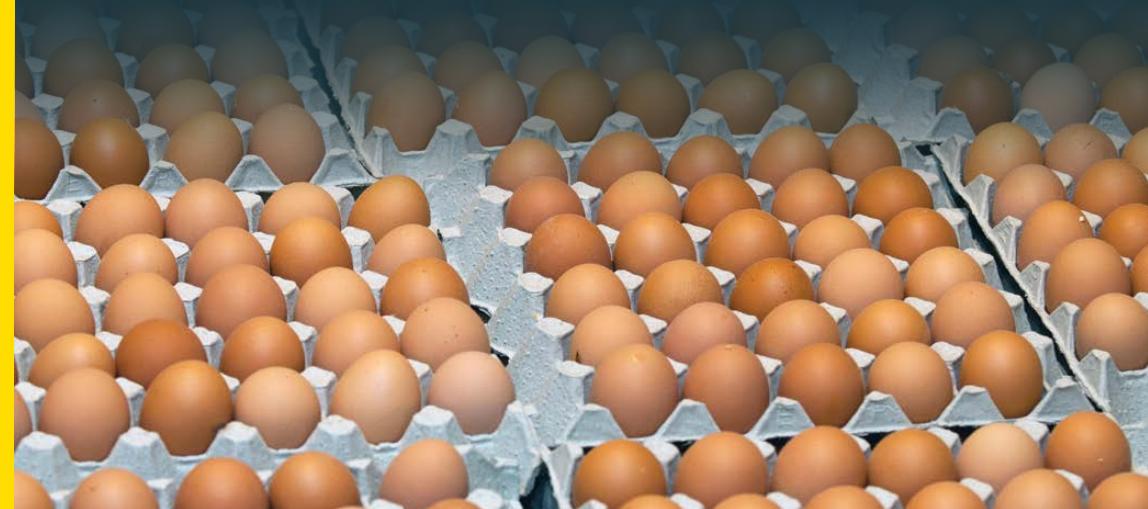
VACCINATION PROGRAMME



Farmers are encouraged to take advice from a veterinarian consultant before the adoption of a vaccination programme which should be according to the sanitary conditions in the country. Farmers should always record the batch number, the expiry date and the name of the vaccine that is administered to the birds. Vaccines should be kept away from heat source before use.

Vaccine containers should be immediately burnt or buried after usage and should not be allowed in the poultry house.

Important note: Deworming should be done generally between 17 and 18 weeks and each three months.



LIGHTING PROGRAMME



Light is an important factor as the production of eggs is linked to photoperiod. Layers come into production with increasing hours of light per day and go out of production with decreasing hours of light per day.

Timers can be used so that the artificial lights do not have to be on all day; they can come on before sunrise and/or stay on after sunset in order to maintain the required number of hours of light per day.

Thus the strict follow-up of a lighting programme is essential to obtain:

- Sexually-mature layers
- High rate of egg production
- An optimum size of egg

Importance of artificial light in the laying poultry house:

- Light allows the layer to identify source of water and feeding
- Light stimulates the pituitary gland (Hypothalamus), which stimulates the hens' ovaries to produce eggs.

LIGHT INTENSITY

The minimum recommended light intensity to photo stimulate layers is at least 40 LUX measured at the feed trough in the darkest part of the house. The lighting system should be designed with a slightly higher light intensity because lamps decrease in light output as they age or if they are not clean. The intensity of light in the building should be 30 to 40 LUX in order to encourage water and feeding consumption. Lighting can be decreased to 10 LUX as from 15 days.

PHASE ONE

Age (days)	Light (No. of hours)
1 - 3	23hrs to 24hrs
4 - 7	22
8 - 14	20
15 - 21	19
22 - 28	17
29 - 35	15
36 - 42	13
43 - 49	12
From 50 to 98 days	12

The above table shows the total amount of light to be supplied to the chicks in the circumstances that a gas brooder is used as a source of heat. The number of hours must be decreased and then increased gradually to allow the birds to adapt to the new conditions.

PHASE TWO

In this phase, the lighting programme will depend mainly on the progression weight of the pullet. Early light stimulation may cause serious irreversible problems such as prolapses or even hindering peak egg production.

Age	Light Supply/Hour
17 Weeks	+2 (depending on a weight of 1500g)
18 Weeks	+2
Total Hours	16 hours of light

Weight of pullet (g)	Light (No. of hours)
1250	12
1325	12.30
1400	13
1480	13.30

It is to be noted that after 1480g, the amount of light supply to the pullets should be increased per week to reach a maximum of 16 hours at 50% production.

GOLDEN RULES

1. DATA RECORDING:

Farmers should observe chicks and also records all parameters affecting performance

2. HYGIENE CONTROL:

Poultry houses should be free from any source of contamination including rodents and wild birds

3. LIGHTING PROGRAMME:

Never INCREASE light during rearing period and never DECREASE light during production period.

RECEIVING THE CHICKS

Farmer should ensure that:

1. All personnel involved in placing the chicks follow the farm's biosecurity precautions and wear clean uniforms and boots. The driver must not be allowed to enter the house.
2. Chicks are carefully removed from boxes to avoid leg damage.
3. The chicks' boxes should be removed immediately from the house and burnt.

OBJECTIVE OF REARING

The main objective of the rearing is to produce uniform pullets of optimum bodyweight before laying starts.

FEEDING PROGRAMME - Phase 1

Age (Week)	Feed Consumption g/day cumulative/chick		Average weight per chick (g)
1	11	77	66
2	19	210	115
3	25	385	205
4	31	602	290
5	37	861	380
6	42	1155	470

(These values concerned a specific breed and more details can be provided by the suppliers of chicks.)

RANGE OF PRE-LAYER FEED PROPOSED BY LIVESTOCK FEED LTD

From arrival to week 4: **Hiperfo Layer Pre-starter**

If the average weight is under 300g at 4 weeks, Hiperfo Layer Pre-starter should be extended over 2 more weeks.

From week 5 to week 9: **Hiperfo Layer Grower**

Hiperfo Layer Grower can be extended to week 11 if specified weight is not achieved as objective is to develop the digestive tract of the pullet.

Age (Week)	Feed Consumption g/day/chick		Average weight per chick (g)
7	47	329	560
8	51	686	650
9	54	1064	740
10	58	1470	830
11	61	1897	920
12	64	2345	1000
13	68	2821	1080
14	71	3318	1160
15	75	3843	1240
16	78	4389	1320
17	81	4956	1400
18	84	5544	1480



EQUIPMENT FOR CHICKS REARING



Density	No. of chicks/m ²			
	1 st week	2 nd week	3 rd week	4 th week
	40	30	20	15
Feeders	No. of feeders/1000 chicks			
	Chain feeders		Plate feeders	
	25 meters		20 plates	
Drinkers	No. of drinkers/1000 chicks			
	Fountain drinkers	Bell drinkers	Nipples	
	10 to 14	6	60 to 100	
Lighting for 1000 chicks	3 fluorescent tubes			
Brooders	2 gas brooders			

HOUSE PREPARATION



Prior cleaning and disinfection are essential before arrival of chicks. LFL strongly recommends the following steps:

1. Remove all movable equipment and leftover feeds.
2. Remove all used litters.
3. Wash poultry house (water tanks, walls, floor) and other equipment.
4. Disinfect the house and equipment with a strong disinfectant.
5. Apply an insecticide and exterminate all rodents as well as wild birds.
6. Allow a rest time of at least 10 days before placing new chicks.

Clean paper, on which feed should be disposed, can be placed on the litter before the arrival of Day Old Chicks. Plate feeders and chick fountains must be used to encourage feed and water consumption.

Farmers should be very careful to use dry wood shavings before chicks' arrival, to avoid severe mortality due to the development of Aspergillosis fungus.

Important

Feeders and Drinkers should not be placed directly under Brooders. Adjust height of feeders, drinkers and thermometers according to the height of the chicks.

TEMPERATURE IN BROODING AREA



The house must be well-heated with the brooders switched on at least 24 hours before chick's arrival until litter temperature reaches 31°C to 33°C.

Age (days)	Temperature under brooder (°C)	Temperature in the whole brooding area (°C)
0 - 3	35	33 - 31
4 - 7	34	32 - 31
8 - 14	32	30 - 28
15 - 21	29	28 - 26

- Fresh water at a temperature between 20°C to 25°C, should be provided to the flock for at least 2 hours before feed distribution.
- Farmers should ensure good ventilation in the poultry house so as to decrease humidity level and to allow renewal of oxygen. This will help to maintain a good litter quality.
- Farmer should be careful about draft (high air circulation) which can lead to respiratory problems if wrongly adjusted.



THE FEED YOU CAN TRUST



LIVESTOCK FEED LTD

Claude Delaitre Road, Les Guibies, Pailles, Mauritius
Tel: (230) 286 3900 | 286 1112 | Fax: (230) 286 1114 | Call free: (230) 800-1112
Email: livestockfeed@food-allied.com
www.lfl.mu