

1st Day in Broiler

First day in every sphere of life is filled with enthusiasm, little anxiety, and little tension to do something new or to receive something new or to face some new challenges. First day in Broiler poultry farming is of no difference.

Importance

In broiler we only have 35 – 37 days in hand and so every day is important. The first day is very vital in broiler management which contributes 25% share of importance. The chick born today in hatchery has to be accustomed with the farm shed environment; it's feed in feeding equipment and it's water in given equipment. The quicker the chick accustomed with the farm environment the quicker the feed & water intake starts and quicker the desired body weight achieves.

To get the desired performance from today's broiler we need to start from the word 'go' means the pull-out. Average Daily weight Gain (ADG) is very important parameter in broiler which starts only after feed intake by the newly hatched chick. Hence early feeding has immense importance in modern broiler farming scenario.

Our objectives in current broiler in short are MORE MEET IN LESS TIME & WITH LESS FEED. This can only be achieved by obtaining full genetic potential of the chick by early feeding through perfect brooding condition.

Objectives

- To obtain broiler performance as per chick's genetic potentials which is nearly similar with most breeds; Days 35, Body Weight 2 Kg, Livability > 95%, FCR < 1.50 & EEF > 365.
- To make the broiler chicks accustomed with the farm environment as quick as possible.
- To start feeding as early as possible so as to kick starts the ADG .
- To get best livability by minimizing mortality through early & good development of immune system.
- To achieve best FCR by early development of intestine & other organs.

The Chicks

The chick is the basic instrument in broiler; which will give all the smile or money. Everything else is meant for the chicks only like labor, feed, vaccines, medicines, management, infrastructure etc.

Therefore, the chicks must have a good quality; Breed Breeder & Hatchery all has to be good performer which should be judged from past data. The good quality chicks shall be

- Uniform in size & color
- Clean, dry & fluffy appearance
- Bright, alert and active

- Pink colored & smooth shank (un-feathered skin at legs).



Pic 1: Newly Hatched Chick

- Closed healed naval and clean vents.
- Free from congenital deformities or wounds.

Preparation to Receive Chicks:

- **Cleaning & Disinfection of the Farm after last flock culling or Sale**
 - a) Complete removal of old litter materials and disposal
 - b) Cleaning of Spider webs, dust, feathers and other debris from inside & outside of all sheds
 - c) White Wash of all shed including floor, pillar, inside & outside walls.
 - d) Terminal Disinfection of all sheds by Fumigation or Fogging or by Manual Spray
- Spreading of clean & dry new Litter material in all shed before terminal disinfection



Pic 2: Curtain Ventilation Management



Pic 3: Chicks Housing

- **Pre-Brooding Arrangements**

- Arrangement of Heat source like Gas Brooder 1/1000 or Bukhari 1/400
- Arrangement of Gas Cylinder or Coal as per season.
- Old Newspaper 3 Kg/1000 Chicks for 1st 2 days paper feeding
- Washed Chick Tray 1/50 Chicks and Chick drinker with stand 1/50 chicks
- Broiler Pre Starter Feed for 1st 6-7 days
- Brooding time Medicines & Vaccines
- CFL Light 25 Watt/500 Chicks
- Necessary Manpower

- **Brooding Preparation**

- Round Brooding is better than whole house brooding. Diameter of the round brooding for 500 chicks shall be 13.8 feet for 1st 3 days and 16 feet for next 4 days.
- Brooding should be done in each shed except in winter when it should be done in best shed available.
- Old news paper shall be spread over the rice husk in each brooding which need to be changed regularly for 1st 2 days.
- Heat source should be placed in the middle of each round and should be switched on 4 hours before chick arrival.
- Thermometer shall be placed 1.5 feet above the ground level and 2 feet away from heat source.
- Place chick drinker @ 1 per 50 chicks in all brooding with electrolyte water 2 hours before chicks housing to raise water temperature.



Pic 4: Pre-Heating



Pic 5: Brooding Ready

- g) Give good Probiotic in very first water to avoid entry of harmful microorganism and to stimulate immunity against many diseases. DO NOT GIVE SANITIZER WITH PROBIOTIC. Acidifier should be used from very 1st water till last day to reduce drinking water pH which in turn helps preventing bacterial growth.
- h) Place Tray Feeder @ 1 per 50 chicks with thin layer of feed alternatively with drinker in brooding circle just before chick arrival.
- i) Light intensity is very important for newly hatched chicks and it should not be less than 25 CFL per brooding of 500 chicks. Switch on all lights before chick arrival.
- j) During winter double side curtain and cross curtain at the end is important.

After Chicks arrival:

- a) Unload & release 500 chicks in each brooding circle as early as possible. Record Chick Weight.
- b) Sprinkle Pre Starter feed on the paper every hour by making gentle sound to attract the chicks.
- c) Train at least 2% chicks to take water (by beak dipping in chick drinker).
- d) Do not disturb the chicks for an hour; allow them to accustom with the environment.
- e) Provide little quantity of feed by sprinkling every hour to motivate early feeding.
- f) Change Water every three hour with Sanitizer & acidifier.
- g) Remove all wet newspaper & replace with new one.
- h) Keep watchful eye on Brooding area temperature. If temperature goes down, arrange additional heat source (Bukhari) in between the brooding round especially in winter night.

DAY	Temperature (C)	Temperature (F)
1 – 2	33 – 35 °C	92 – 95 °F
3 - 4	30 – 32 °C	86 – 90 °F
5 - 7	29 – 31 °C	85 – 88 °F

- i) A gap of 6 inches should be provided on the top of the side curtain to help remove all toxic gasses from the brooding house and to replace them with fresh air.

- **How to Assess Efficiency**

- Keep a watchful eye on the activity of chicks. The chicks will make heavy noise during first 2 hours which will subside gradually. After four hours of housing the chicks should either eat or drink or sleep or play. If still they are making noise; means your care & nursing are not up to their comfort level. You need to re-assess your brooding management; identify the mistake or insufficiency or incompetence, plan, arrange & implement immediately.
- Within 30 minutes the chicks shall be spread evenly in the brooding area if they feel comfort. The chicks are gathered around the heat source or huddling in a corner indicates inadequate temperature management and action must be taken immediately.



Pic 6: Chicks after 30 minutes of housing



Pic 7: Chicks after 30 minutes of housing

- Crop Scoring: It is the most important tools to measure the brooding efficiency.
 - Feel the crop portion of the chicks to access feed/water intake.
 - 4 hours after delivery - 80% Chicks shall eat some quantity of feed.
 - 10 hours after delivery - 90% Chicks shall eat some quantity of feed.
 - 24 hours after delivery - 100% Chicks shall eat some quantity of feed.
 - The crop should be full & rounded and the contents should have a soft, porridge - like consistency.

Take 10 Chicks from each Sample area. Put the no of chicks with respective status in the given box.

Sample Area	1 st Day CROP FILLING ASSESSMENT (10 Chicks from each sample area)					
	Age (in Hours)	Empty	Only Feed	Only water	Insufficient Fill	IDEAL
1	8					
	24					
2	8					
	24					
3	8					
	24					
4	8					
	24					

If the IDEAL is below 80% after 12 hours OR below 90% after 24 hours, the brooding management must be reassessed. Good score indicates that chicks are under comfortable environment with perfect brooding arrangement. The chicks will not eat sufficiently if they are not comfortable. There are 6 parameters to be taken care for chick's comfort as below:

- Disease Free environment is the 1st issue in comfort
- Bedding, the litter is the bed and should be clean, dry & soft.
- Space should be as per standard; 0.25 – 0.30 per chick on 1st day.
- Temperature is very important and should be 32 – 35 degree Celsius.
- Ventilation must be perfect to remove toxic gasses of brooding house & entry of fresh air.
- Light intensity should be sufficient to encourage the chicks for normal feeding & other activity.

Crop scoring (pattern: 0 – 5) should be carried out daily to check the feed intake of chicks:

- **0 – Crop empty**
- **1 – Less feed & Water**
- **2 – Crop 25% fill**
- **3 – Crop 50% fill**
- **4 – Crop 75% fill**
- **5– Crop 100% fill with feed & water.**

A farm Crop filling Score of 5 indicates that the farm brooding environment is well maintained. The score of 2 or 3 indicates the brooding is not satisfactory.



Pic 8: Crop Filling Score 5

If one can arrange the minimum comfort at brooding house for the newly hatched chicks and provide them fresh Pre Starter feed & fresh water frequently throughout first day he can be 25% sure of flock's success. The chicks will be healthy, strong, & uniform in size and the ADG & body weight will be more. The objective of MORE MEET IN LESS TIME & WITH LESS FEED can only be achieved through perfect first day management of broiler chicks.

Dr B C Dutta, Technical Head,
Broiler Farming Div, Amrit Group of Companies