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BROILER FARMING AND MANAGEMENT



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Chapter

2

Planning and Preparations

When we are going to start a poultry farm as profession or say business, at that time planning and making readiness of the poultry farm is very much essential. For this purpose, certain precautionary steps are very much needed, which we will discuss one by one.

PRECAUTIONARY STEPS

Readiness Steps of the Poultry Farm

One Week Before the Arrival of Chicks

1. Here, we have to plan the further batch of the birds/chicks minimum 10–15 days postliquidation of the previous batch on the basis of size of the poultry farm. The gap between previous batch and new batch to be arrived must be minimum 1 week. Depending on this plan, the poultry farm to occupy by the batch at a time and accordingly make the estimate for the total number of chicks required for the whole poultry house.
2. After this remove and clean the whole litter in the poultry house, scrape the floor properly and remove neatly the caked litter.
3. Try to remove and clean the cobwebs from roof and sides of the poultry house and brooming operation should be properly done for the removal of whole dust.
4. After cleansing of roof, clean the floor first by broom and then by water wash with proper force, so that whole unwanted things will be drained out.
5. Then sprinkle caustic soda flakes on the floor of house and then spread this with the help of the broom uniformly over the complete flooring of the shed.
6. Washing and draining out whole caustic soda from the floor of the house after an interval of ½–1 hour is very essential step and also see that the remnants should be washed out properly by second water wash, if needed.

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7. After an interval of 1 day (till the roof, floor and side walls are dried), whitewash the poultry house (side walls and floor) and then keep the poultry house empty up to 7–8 days.
8. If the flooring of the shed is made of mud then scrap the mud along with the litter and try to replace minimum 2–3 inch of fresh mud, then press it properly in one level and then spread the mixture of dry lime powder and bleaching powder immediately till the mud surface is wet and let it be dried properly (Fig. 2.1).



Fig. 2.1: Clean disinfected chick waterer

9. Clean all the equipments with water and then disinfect with effective disinfectants (Figs 2.2A and B).
10. Side curtains should be washed and dried thoroughly.
11. Ensure that the surroundings of the poultry farm are clean and hygienic.
12. The poultry shed must be surrounded by grass, trees and vegetation.
13. Finally, drain out the water tank and pipelines properly by pressurized water force and then put the chloroform or acetic acid liquid three times more than the normal quantity and maintain this at least for 1–2 days.
14. Then wash the tank and pipelines properly, so as to drain the disinfectants from it.

One Day Before the Chick Arrival

1. Replace back all the curtains, which were already cleaned by water.
2. Brooders, waterers and feeders may be disinfected by dipping into disinfectant solutions or sometimes by spraying the surface with standard disinfectants like formalin, asiphor, etc.
3. Litter should be spread over the floor about 2–3 inch.

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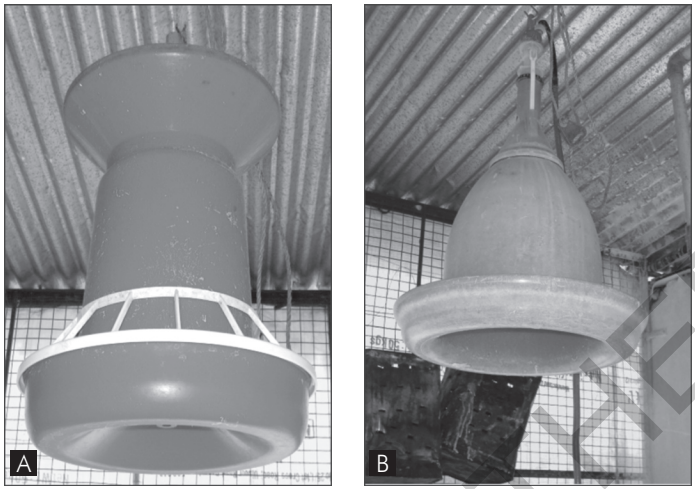

Figs 2.2A and B: **A**. Photograph showing clean roof and feeder; **B**. Clean roof and waterer (disinfection after sale of each batch).

4. Electric and water connections should be properly checked.
5. In canopy brooding, it should be hung in such a way as necessary that birds move freely.
6. If electric brooder is being used then the diameter must be 5 ft, which may be sufficient for approximately 200–300 birds.
7. One group of 2,500 chicks can be brooded, if we use gas brooding, but the specifications of the manufacturers should be used.
8. Use 2% formalin for spraying all over the internal surface of the poultry house and also over the equipment and into the surroundings.
9. We can use the practice of fumigation if the poultry house is small, by using the mixture of formalin and potassium permanganate ($KMnO_4$) at the rate of 40 mL of formalin and 20 g of $KMnO_4$ for 2.83 m^3 area is called '1X concentration' (cubic meter).
10. One side curtains can be opened 1 hour prior to the arrival of chicks, so as to get fresh air in the poultry house.
11. Cover all the litter properly by newspaper after leveling the litter.
12. Medicate the water tank by using antibiotics like Amoxil, tetracycline or even the furasol at 1 g/L of water. We can also use B-complex liquid at 30 mL/100 chicks and vitamin A, D3, E and vitamin C at 5 mL/100 chicks.

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13. We can put small drinkers inside the guards at the rate of one drinker per 80 chicks. Keep these at 2 inch above the ground level by the support of the stand, so that chicks should not fall in.
14. Some people spread maize powder or other feed slightly on the paper.

After Actual Arrival of the Chicks

1. We should get the delivery of the day-old chicks in the cool hours of the day. Likewise, if the climate is cool, we can appeal the hatchery to deliver the chicks during daytime, so as to settle all chicks.
2. However, if the chicks are brought on the same night and if the climate is bad, then we can take the spot decision of keeping the chicks in the same boxes inside the shed up to next morning, because chicks can survive up to 48 hours, without feed or water. We should not delay the chicks in reaching to our poultry shed; otherwise it may lead to dehydration. Thus, see that chicks should reach the shed in minimum possible time.
3. Then open the boxes and make sure that all chicks are active and alive and not dull, so that they should try to jump out of boxes by their own, when the lids of the boxes are taken out.
4. Inspect the order and try to tally the number of chicks as per the delivery note. Take out the dead and dull chicks immediately, otherwise it may cause secondary complications.
5. After the chicks jump out, take them nearer to the medicated water and try to dip the beak of each chick in the medicated water before they are released. Some chicks should be trained to suck the water from nipples, so that other chicks will copy these.
6. Separate the chicks, which are too small or dull or legs are bent and put them separately for brooding.
7. In the gas brooding system, one can use extra bulb for light above the brooder, so as to see chicks' surroundings clearly. Adjust the heating system depending on the comfort of the chicks. If the temperature is high, chicks move away from the heat source and if the temperature is low, chicks huddle together. So, accordingly adjust the heights of the brooder.

ROLE OF HATCHERY AND TRANSPORT SYSTEM

The hatchery and transport system should ensure the following things in all poultry houses:

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1. The correct vaccines are injected to all chicks with correct dosage and accurate form.
2. After chicks are sexed and vaccinated they must be allowed to settle before transport by holding the chicks in darkened area, where the environment is properly controlled.
3. While loading, the chicks should be loaded through controlled environment loading bays into preconditioned trucks for transport to the broiler farm.
4. The expected delivery time of the day-old chicks must be established before hand, so that these can be unloaded and properly placed as quickly as possible.
5. They may be given feed and water immediately after the hatching of chicks.
6. Hold and transport chicks in conditions that prevent dehydration and other types of stress in chicks.
7. Maintain high standards of hygiene and biosecurity in the hatchery and also during transport.

Transport time must be within the local current guidelines or legislation. Hence, at all times up to arrival at the slaughterhouses, adequate protection from the elements is essential. Design vehicles to protect the bird from the elements. Stress over the birds can be minimized by using trailers with adequate ventilation.

In hot weather, use fans, while loading in the truck during transport. Allow at least 10 cm space between every two tiers of crates. Heat stress is more when vehicles are stationary. Hence, vehicles should leave the farm as soon as loading is completed and also drivers should take short breaks, while journey from one place to other in loaded trucks. Unloading at the holding areas of the slaughterhouse must be completed without delay. But, if the delay is unavoidable then supplementary ventilation should be provided. In cold weather, cover the load to minimize wind chill during transport.

While delivery, park the trucks under a cover and remove any canvas, which restricts ventilation. For good bird welfare, nice holding facilities should be provided in the slaughterhouses. Hence, equipment holding areas with lights, fans and foggers and use foggers during period of high temperature if relative humidity is below 70%.

In very hot weather, water can be sprayed into the fans to assist evaporation. In summer, make sure that all fans and foggers are functional in holding areas.

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Broiler farming is gaining good amount of significance due to ever growing demand for its meat, which is good in its protein quality and acceptability. It is also gaining importance due to its rural location close to cities, wherein rural youth can make gainful employment and develop entrepreneurship skills among people. It is also very quick to produce with least amount of investment compared to other business, which generally need huge investment. It is also not a full time trade and can be easily managed within 2 to 3 hours of care in a day. The text included in this book provides a concise overview of broiler industry for the students, professionals and broiler farmers.

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