Handling of day-old chicks and management of brooding have a direct relationship on chicken productivity. A newly hatched chick cannot regulate its body temperature. In natural brooding the hen provides the heat but in artificial brooding the heat source must be provided.

In brooding, provide the right temperature for the chicks, feed and water as seen in the illustration of artificial brooding below.
Preparation for artificial brooding

- Isolate brooding houses from other houses containing older birds.
- Provide foot baths at the entrance of each house.
- Thoroughly clean and disinfect the house and equipment prior to brooder setting.
- Spread litter (Use wood shavings NOT saw dust) in the brooder and disinfect it by spraying with a disinfectant.
- Arrange drinkers and feeders.
- Ensure that brooder ring and heater are in proper working condition before chicks’ arrival.
- Provide chicks with clean drinking water mixed with glucose and liquid paraffin on arrival.

Brooder Management

Cut an 8 x 4 feet hardboard or the equivalent into two equal parts lengthwise and join the pieces to form a circle as shown below:

The brooder should be ready prior to disinfection. Fill the ring with suitable litter material such as wood shavings (not saw dust) or straw, up to 4 inches thick from the floor, and then spread newspapers to cover the litter on the floor. The heat source should be placed at the centre of the brooder ring. Expand the brooder ring regularly to create space for the growing chicks. Hold the boards with pegs to allow for expansion.

<table>
<thead>
<tr>
<th>Number of chicks</th>
<th>Brooder ring diameter (feet)</th>
<th>Estimated No. of hardboards</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>100</td>
<td>10</td>
<td>1 ½</td>
</tr>
<tr>
<td>150</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>200</td>
<td>20</td>
<td>2 ½</td>
</tr>
</tbody>
</table>

Induction of Chicks

- Light the brooder heat source an hour prior to chick arrival so that the ring temperature is 32°C.
- Count the chicks on arrival.
- Wait for about 30 minutes to allow the chicks to take water before introducing feed in a chick feeding tray or clean egg tray.
- For the first 3 days observe chicks every 2-3 hours to ensure they have taken feed and water.

Chicks Behaviour

Continuous Lighting should be provided for the first 48-72 hours after placement to help chicks find feed and water. Provide adequate floor, feeders and drinking spaces. Maintain optimal light and good ventilation for the chicks comfort.
Chick Examination and feeding
Examine the chick crops 12 hours after placement to ensure they have taken feed and water. About 95% of the crop should feel soft and pliable indicating chicks have successfully located feed and water. Hard crops indicate chicks have not found adequate water. Swollen and distended crops indicate chicks have located water but insufficient feed. Rearrange the drinkers and the feeders to enhance accessibility by the chicks.

The use of open feeding trays at placement is recommended to help chicks locate feed easily. Provide 1 chick feeding tray measuring 30 x 45 cm (1 x 1½ ft) per 100 chicks placed between the main feeder and drinkers adjacent to the heat source. Provide the open feeders for the first 7-10 days.

A number of heat sources can be used as below

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of chicks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic heaters (jiko)</td>
<td>100</td>
</tr>
<tr>
<td>Infrared lamps (250 w)</td>
<td>250</td>
</tr>
<tr>
<td>Pancake Heater</td>
<td>1000</td>
</tr>
</tbody>
</table>

Cold brooding using a haybox brooder

All enquiries should be addressed to:

Centre Director
KALRO-Naivasha
P.O.Bo 25-20117
NAIVASHA
Tel. 0708200975, Email. peter.alaru@yahoo.com or kalropoultry@gmail.com
Website: http://www.kalro.org/asal-aprp
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