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Cobb 500 Broiler

Management Guide for Broiler Management

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The Cobb 500 broiler offers through its carefully and systematically developed genetic potential, the conditions for a **high weight gain** with a simultaneously **improved feed conversion**.

In order to bring this potential to the full development, it is to control the development of the birds from the start. For this purpose, various factors have to be considered in the broiler management. This booklet serves as a guide for the first days and weeks of the growing period. Please respect the laws and regulations of your country.

To optimize your results your Cobb technical service is also at your disposal.

PREPARATION

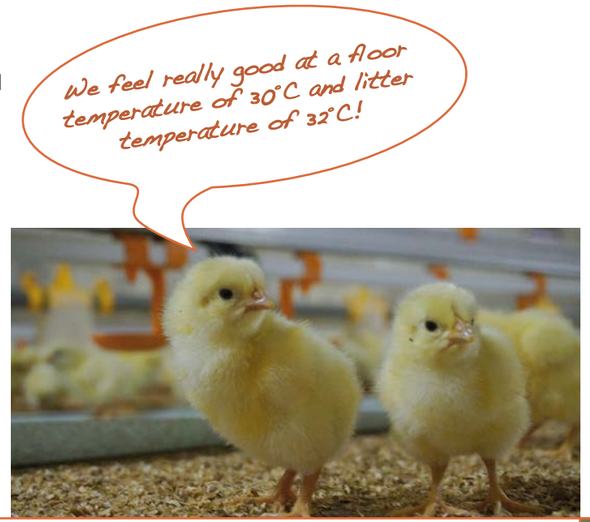
CHICK ARRIVAL HOUSING

HOUSE CLIMATE

FARM EQUIPMENT

House Check

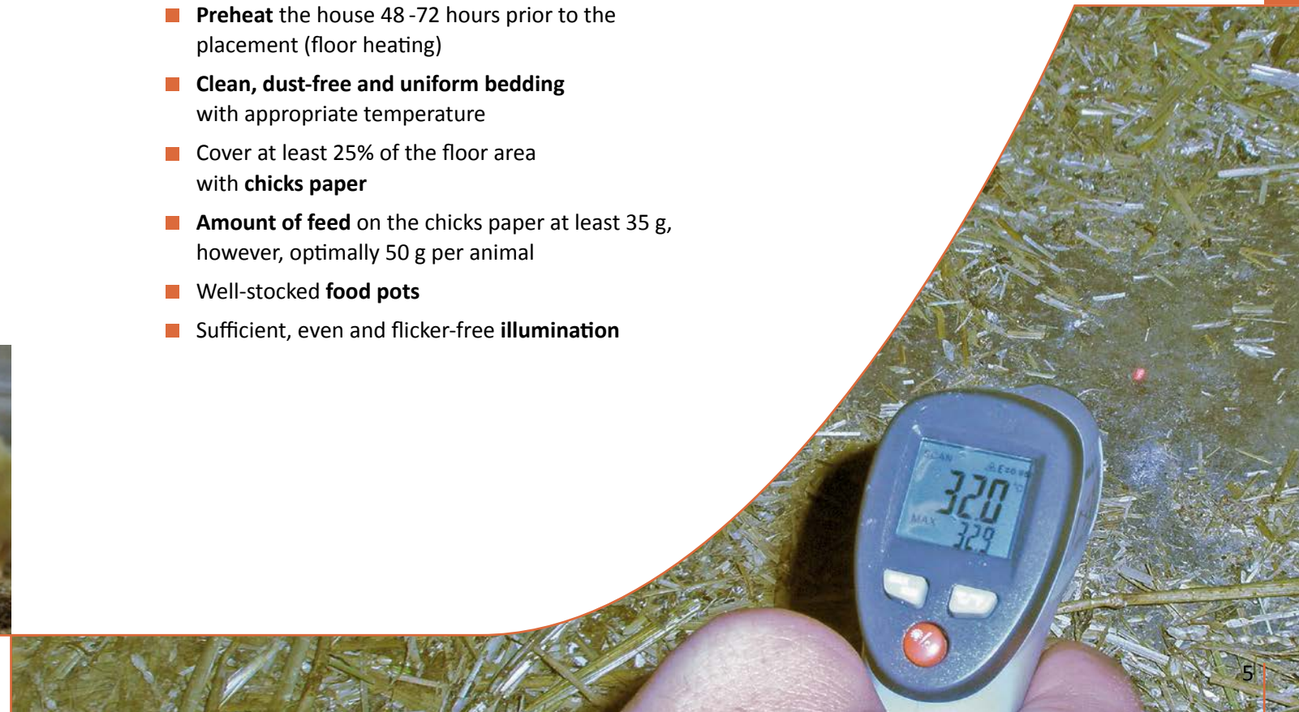
- ☐ Pre-heated **house** with optimal temperature
- ☐ **Drinking line** in bird's height (beginning at eye level of the chicks - later so that the animals drink with a stretched neck)
- ☐ **Short paths** between food and water
- ☐ Switch on the **minimum ventilation** before the arrival of the chicks (Oxygen and CO_2 content control)
- ☐ Review of the **house climate**: temperature, humidity and air velocity in the house (see table in chapter „temperature")



From the parameters humidity, air velocity and temperature results in the **perceived temperature**. This may differ from the measured air temperature.

Housing Preparation

- **Preheat** the house 48 -72 hours prior to the placement (floor heating)
- **Clean, dust-free and uniform bedding** with appropriate temperature
- Cover at least 25% of the floor area with **chicks paper**
- **Amount of feed** on the chicks paper at least 35 g, however, optimally 50 g per animal
- Well-stocked **food pots**
- Sufficient, even and flicker-free **illumination**



Crop-Check

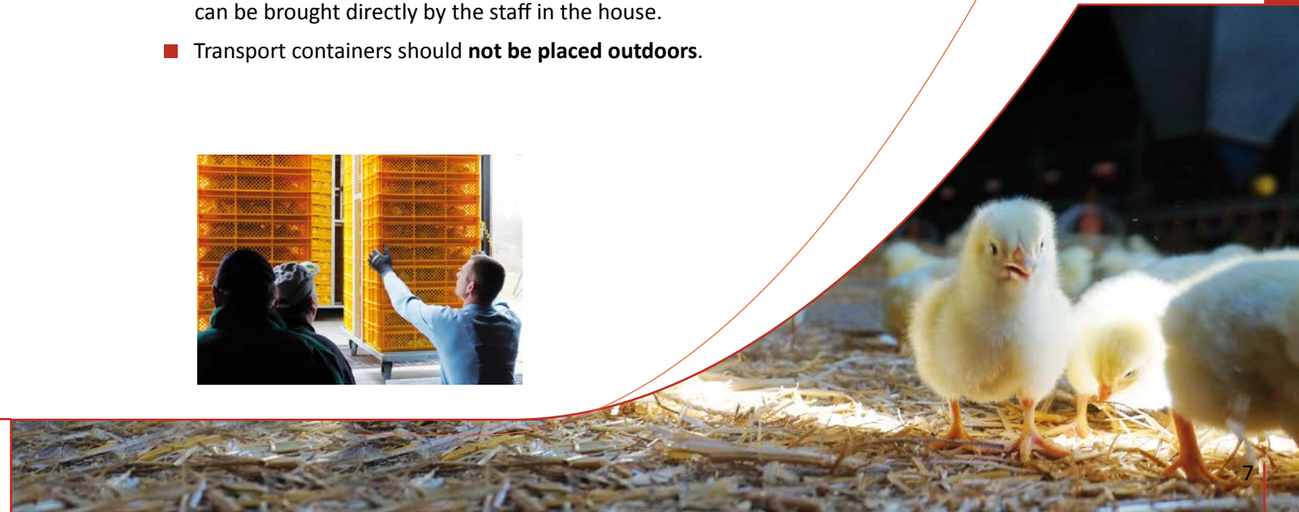
- ☐ **The main objective** in the first hours after arrival on the farm should be to provide **as many chicks as possible with food and water.**
- ☐ There should be about **100 chicks** checked per house after arrival day.
- ☐ **Crop content** should feel mushy (water and food have been recorded in the correct relation)
- ☐ When control **95 %** of the chicks should show a filled goiter.

Condition of the crop	Mushy filled with feed & water	only feed	only water	empty	total number of checked chicks
Number of checked chicks					
%	> 95 %				

Chick Arrival/Housing

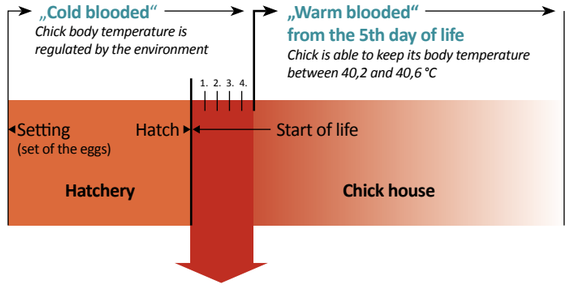
- At **arrival** at the farm, the transport vehicle should be positioned in a way that the chicks do not get drafts during discharge.
- **Staff** should sufficiently be available on site to perform the housing of the chicks can be quick and gently.
- **Transport containers** should be unloaded so that they can be brought directly by the staff in the house.
- Transport containers should **not be placed outdoors**.

CHICK ARRIVAL HOUSING



House Climate

The chicks are not able to regulate within the first week of life their **own body temperature**, so the control of the ambient temperature and condition is a „**thermo-neutral zone**“ just at the beginning of the breeding of particular importance.



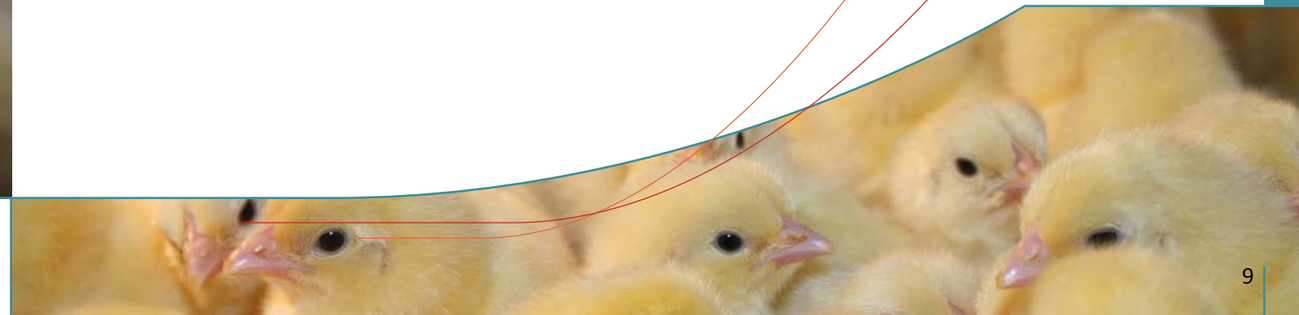
For a chick the first 5 days of live are critical. In this time period high attention should be kept to temperature and humidity.

„Thermo-neutral Zone“

The **optimal environment** in which the animal has to expend no additional energy to stabilize the body temperature, is referred to as **„thermo-neutral zone“**.

A close observation of the distribution of images, and the behavior of animals is a prerequisite for the design of ambient temperature. The herds should not be kept too warm under any circumstances. This makes them inactive.

The optimal environment is a basis for healthy animals.



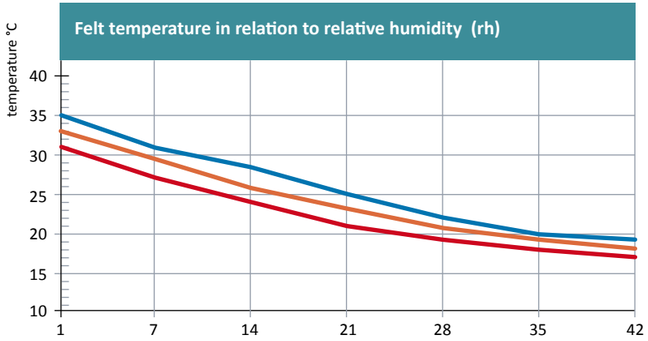
Temperature

- The normal **body temperature** of a chick is between 40.2 °C and 40.6 °C.
- The **distribution pattern in the barn** and the body temperature of the chicks give hints about the welfare of the birds.
- In a cool environment the bird needs more energy to stabilize the body temperature. This is said simplified **„burned“** and will be missing for growth.
- Unfavorable ambient temperatures cause **stress to the animals**.
- The body temperature **can be measured rectally** at Chick with a thermometer.

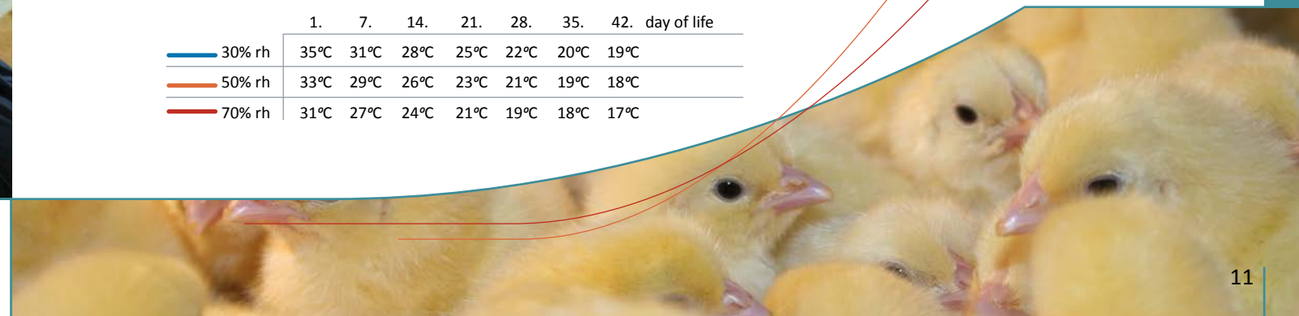
Handy tip

A very fast impression is obtained if you hold the legs of the chick to the neck or cheek. If the legs feel cold the floor and/or the air is too cool.

The following diagram shows the relationship between humidity and temperature are shown. The values are adapted to the age of the birds. Through our many years of experience in practice, the values have been proven.



	1.	7.	14.	21.	28.	35.	42. day of life
30% rh	35°C	31°C	28°C	25°C	22°C	20°C	19°C
50% rh	33°C	29°C	26°C	23°C	21°C	19°C	18°C
70% rh	31°C	27°C	24°C	21°C	19°C	18°C	17°C

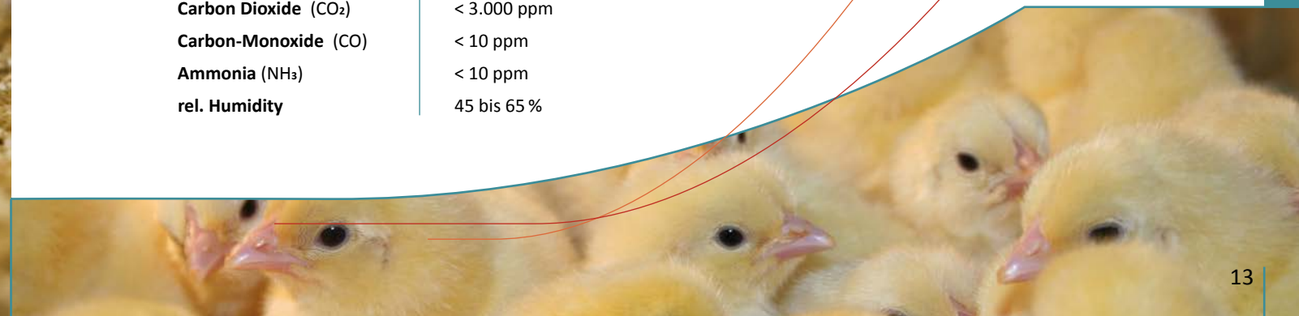


Ventilation

The ventilation is still the definitive tool for the management of the house environment. The ventilation can be the decisive factors such as oxygen and harmful gas content and humidity influence.

A CO_2 concentration of about 3,000 ppm is a health hazard (Particularly in the first 5 days of life).
By damage to the respiratory tract due to harmful gases (eg. CO_2) oxygen uptake can not proceed optimally.
The growth of the chick may be delayed.

Criteria of air quality	
Oxygen (O_2)	> 19,6 %
Carbon Dioxide (CO_2)	< 3.000 ppm
Carbon-Monoxide (CO)	< 10 ppm
Ammonia (NH_3)	< 10 ppm
rel. Humidity	45 bis 65 %



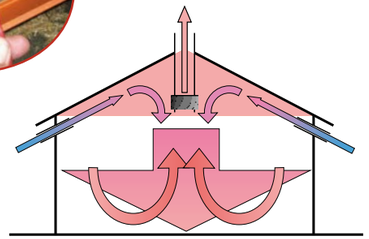
Minimum Ventilation

At a **minimum ventilation** physical properties of **negative pressure** can be made available. The inlet valves are controlled so that less air can flow, as the transport fans from the building. It follows:

- Air reaches a **high speed**, it brings to the ceiling, where it expands at slower heating of.
- Through expansion and warming the air **absorbs more moisture**, slowly decreases.
- Above the ground the **old air is mixed**, harmful gases are diluted, oxygen content increases, excess moisture is absorbed.
- **Displacement of the spent air** transport over fans.

Airspeed of the incoming air and negative pressure in the house in relation to the house wide to reach a optimum Level of Ventilation

Width	Negative pressure (Pascal)	Air speed at valve	Distance till sloping (m)
10	8	3.50	5.00
12	10	4.00	6.00
15	17	5.00	7.50
18	26	6.35	9.00
21	37	7.50	10.50
24	42	8.00	12.00

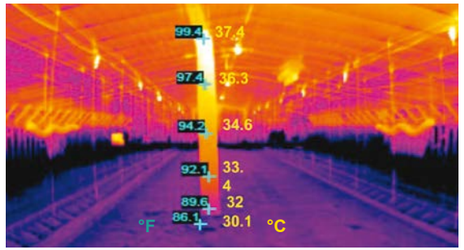


Measuring device
The measurement of **air velocity** entering the barn through the supply air shows if the negative pressure of the the **ventilation is correct**.

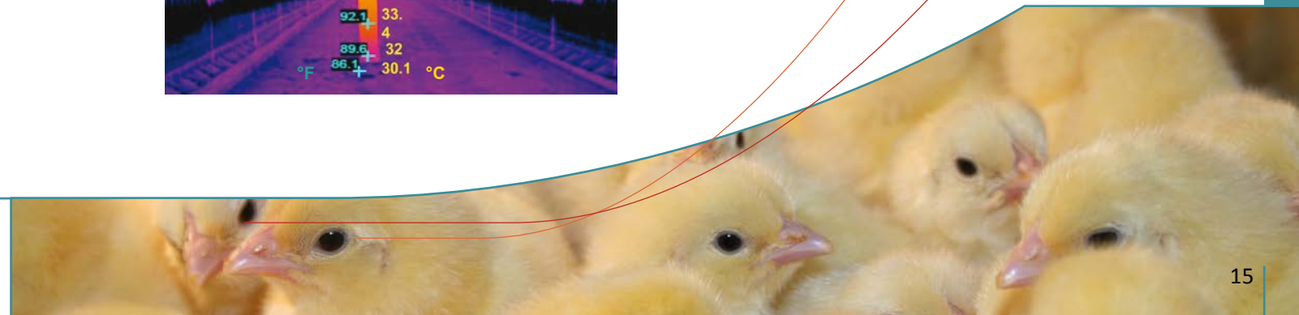
Interval Ventilation

In an **interval ventilation** works with **ventilation phases**. The fans run at certain time intervals, in so-called intervals. The fresh air has more time to warm up and stretch – **this saves energy**!

The starting frequency is obtained from the **respective fan-power and to moving air volume**. The fans run during intervals at full load.



The **collected warm air** under the roof area **can be used again** by optimal ventilation, thereby saving energy costs, among others.



Light

Practical experiences show positive results in the rearing of birds if dark periods are offered, one hour is offered in the first few nights after a habituation phase. As early as the third day six hours the animals a dark can be given. This contributes to the natural rhythm of the birds. The intestinal health is supported and promoted the skeletal formation.

- Improved uniformity and less losses in the growing Period at **balanced and stress-free animals**
- Always have the dark phase in a block **without interruption**
- Always keep **start times** for dark phases **at the same time**
- **Do not interfere dark phases** by phases of work from fatteners, veterinarian or other technical visits
- **Reduce dark phase** depending on the day of depletion

I need some sleep a day to grow better!

* During the resting phase, the skeleton is relieved, therefore, a larger amount of calcium and phosphorus for bone formation. The skeleton is perfectly formed, and the growth of the chicks is promoted.

Feed

Crucial to the success of the Cobb 500 broiler is the use of a suitable feed according to the recommendations of Cobb Germany.
The advantage of the Cobb 500 broiler is in the optimal utilization lower nutrients in the feed.
The Cobb 500 broiler is the most efficient broiler in the world.

In order to take targeted on the development of the herds influence the feeding in several phases is recommended to divide. This gives the **following advantages:**

- **Protein concentration** decreases from phase to phase **gradually increases energy** on the other hand (controlled growth, improve feed efficiency, high gain at the end of the fattening, since the animal energy-oriented lining absorbs)
- **Support the limb and skeletal health** (the bird is not overloaded, in connection with a light program the animal receives at any time matched amount of vitamin and minerals)
- **Cardiovascular system** can be developed accordingly, since the daily gain are controlled; intestinal health is supported, developmentally there is no oversupply of nutrients.

Our Feed Recommendation can be found in the supplement: „Feed & Growth recommendation“.

Water

Attention!
Avoid high and low pressure in the drinking lines.

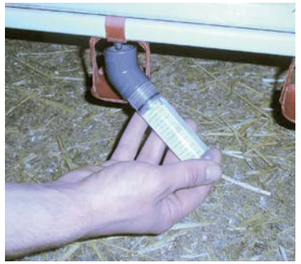
Water pressure is not equal to the volume of water which is available to animals. The animals spend more and the same time to the drinkers, regardless of the volume (less than a minute).

- Higher pressure does not equal more consumption
- Excessive pressure causes splashing and wet litter
- At low pressure causes less consumption up to 20 %
- Low pressure means an inadequate supply of water at the watering

Measurement of the Water Flow

Measurements of the **water-flow rate** of the drinker line in the house are giving an objective view, whether the animals can take on enough water. The **water meter of Cobb** can determine the flow rate of the water in the watering exactly.

Ask your technical Cobb consultant for the meter.



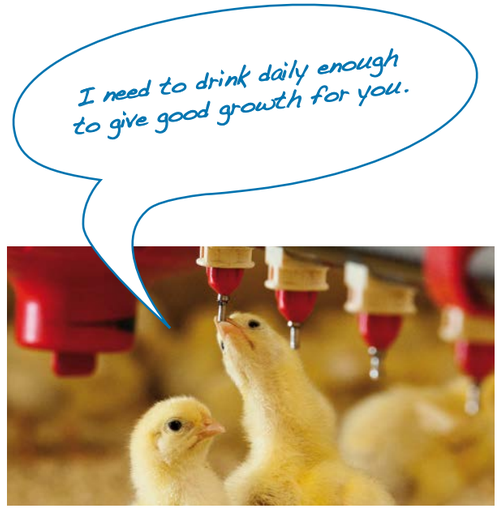
Recommended water flow per nipple	
1. Week of life	40 ml/min
2. Week of life	50 ml/min
3. Week of life	60 ml/min
4. Week of life	70 ml/min
5. Week of life	90 ml/min

Technical Check up

To ensure optimal access of animals to feed and water, the following figures for housing systems have proven:

- ☐ Distance between the **drinker lines**: 3 m
- ☐ Number of animals per **nipple:** 10 to max. 15 animals
- ☐ Distance between the **feed troughs**: 4 m
- ☐ Number of animals per **feeding tray**: max. 70 animals (Diameter of the pots of 330 mm or circumference of 1030 mm)

For round feeder pan a usable range of about 0.66 cm is calculated per kg total bodyweight.



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