



Andre Strauss ensures that his delivery of chicks settle in for optimum production. Note the gas heaters distributed throughout the brooding area and also the brooding curtain in the background.

A little effort goes a long way

Marcos Grassini, Alfa Chicks

The continuous growth in the South African demand for poultry has always attracted farmers, both big and small, who have identified potential markets for their poultry products, be they live or slaughtered chickens. As a result, many people and families take up poultry farming on a small to medium scale to supplement their income - and some of the more serious small farmers manage to provide for their families' basic and other needs, such as the cost of higher education, from their poultry businesses.

Although large commercial farmers produce huge numbers of chickens using minimal labour by implementing multi-million rand automated cages, it is the small poultry farmers who create many more jobs, as their operations are less automated. Their success is vital in supporting job creation and stability in the South African economy.



Marcos Grassini

However, the success of any poultry farmer, regardless of the size of the operation, is directly proportional to the amount of effort that is put into the business in terms of managing every aspect thereof, including finances, cage construction, the planning of cycles, marketing and production management.

Current critical factors

This time of year in particular, cage temperature is an important aspect of poultry farming and production management that requires meticulous attention to detail.

The importance of maintaining the correct cage temperature throughout the production cycle cannot be over emphasised. The temperature is especially critical during the first week and a half of life, because this is when the chicks develop their immune systems and also when the gut develops. A chick only develops the ability to regulate its own body temperature at about three weeks of age.

It is not enough just to purchase high quality chicks from a reputable supplier. It is also vital to provide them with the correct environment in which they can reach their true potential.

During the first 10 days of life, the chick's comfort is of the utmost importance, as a correct environment means that the chick will feel free to move around the cage and eat and drink at its convenience. This means that the gut will start functioning and developing early on in the chick's life - and a healthy, happy gut from an early age means the gut will function as it should, efficiently converting feed into growth right from the start. When the chick's environment is comfortable, it also means that the feed consumed will be converted into meat and not merely used as energy to keep the chick warm.

The poultry farmer must be prepared to provide at least three times as much heat in the winter months as would be necessary in the summer months.

The correct environmental temperature

In the early stages of a chick's life, the chick's ideal core temperature is 41°C. In order for this temperature to be achieved, the average cage temperature at chick level needs to be as close to 32°C as possible.

Most of the chick's body heat is lost through its

feet, which are not insulated by fluff.

As a general rule, the cage temperature should be stabilised at least three hours prior to chicks arriving on the farm. The temperature at chick level can then be lowered by 0,5°C every second day so as to achieve a cage temperature of 20°C by day 28.

If the cage temperature is not uniform, in other words if there are hot spots and cold spots in the cage, the chicks will tend to move to the areas where they are most comfortable and will not want to move away from these comfort areas in order to drink and eat. These chicks will then only fetch feed and water when absolutely necessary for survival. The result is that they are merely eating and drinking to survive and they will never realise their true growth potential. Even worse: the chicks that do not get enough feed will die.

Maintaining the correct temperature

For most small scale farmers, the easiest way to create ideal conditions is to isolate a part of the cage and create a brooding area where temperature and ventilation can be better controlled.

A solid surround of 0,5m high should be placed around the brooders with the recommended number of chicks placed within that cordoned off area to correspond with the heating capacity of the brooder, but not exceeding 55 chicks per square meter. The area must then be increased every day to accommodate the chicks' growth.

The use of gas or electric brooders is recommended, although many small scale farmers tend to use other means such as fan heaters, stove elements, fires in drums and normal asbestos heaters. The key is to remember that hot air rises and so every effort must be made to direct the heat towards chick level and to ensure that the temperature of the entire brooding area is at the desired level.

In the winter months one should always have a back-up source of heat in case of equipment failure or electricity outages.

The cage roof should be properly insulated, both to prevent heat loss through the roof and to prevent condensation from the roof, which will result in water dripping on the chicks, causing numerous problems.

The floor should be covered in clean, fresh wood shavings, that are not too small or too big, to a

depth of 10cm. Wet shavings should be replaced immediately.

Ventilation should never be sacrificed in order to achieve the desired temperature.

It is of the utmost importance to monitor the temperature on a regular basis using a minimum/maximum thermometer. These readings must be recorded and referred to, as in many instances they will assist in explaining sharp increases in mortalities. Successful farmers monitor both the temperature with the use of thermometers placed throughout the cage as well as chick behaviour many times per day/night and make the necessary adjustments to maintain a comfortable environment for the chicks.

Adjustments include adding or removing the heat source and adjusting the ventilation by opening or closing the curtains. Automatic temperature

loggers that can be set to record temperature levels at desired intervals are also available.

Ventilation should never be sacrificed in order to achieve the desired temperature. Always provide more heat instead of reducing the availability of fresh air. A lack of oxygen will result in damage to the chicks' internal organs, which will possibly only manifest as mortalities two to four weeks down the line - after the chickens have eaten all the feed.

In summary

As can be seen from the above, a poultry farmer's success is highly dependent on the farmer's involvement in the production cycle. Attention to detail, adequate preparation prior to receiving the chicks and maintaining a high level of involvement during the production process are key factors in achieving the desired production results.

For any additional queries please contact Alfa Chicks on (012) 561 1205 or by e-mail at sales@alfachicks.co.za.



An example of a simple brooding area. However, the corrugated iron structure of this house will be very cold in winter. Also notice the chicks gathering under the lights, indicating poor heat distribution.



Although a barrier has been created to be able to focus brooding efforts, a brooding curtain is not in place. Notice that the chicks are fairly well distributed within the brooding area. However, the scant heating provided here will not be sufficient for winter.