Keeping chicks comfortable

Newly hatched chicks can not regulate their body temperature and rely on suitable environmental conditions to keep them comfortable.

In an ideal production system, chicks would be moved from hatcher to farm promptly and quickly. In real production systems there can be several hours between take off and when the chicks are placed on the farm.

The best first week mortality and post-hatch performance will be seen from chicks kept in good conditions between leaving the hatcher and placement on the farm. Suitable room conditions are:

- **Room air temperature 22-28°C (depending on air speed around the boxes).**
- **Relative humidity 50-65%.**
- **85m³ fresh air per hour per 1000 chicks – the CO_2 level in the room should not go over 2000ppm.**

Figure 1 *High CO_2 level measured in a holding room with insufficient ventilation.*

The chicks will be calmer if the chick holding room has dim blue light. Temperature, humidity and air speed all interact to determine the temperature around the chicks. A good ventilation system will remove hot, humid air from around the boxes, without creating a draft directly on to the chicks.

Air temperature at chick level inside the box should be around 30-32°C (86-89.6°F), 60-70% RH. Chicks use behavior to help control their body temperature, so monitor chick behavior to know if they are comfortable or not. Chick vent temperature is easy to measure, and highly correlated with deep body temperature. The optimum chick vent temperature is 39.4-40.5°C (103-105°F).

- **Chicks that are too cold, vent temperature below 39.4°C (103°F), start to huddle and have cold legs and feet.**
- **Chicks at correct temperature are quiet and evenly spread out.**
- **Chicks that are too hot, above 40.5°C (105°F), start panting.**

Chick vent temperature measurements can be used to check chick comfort in hatchers, chick rooms, in chick trucks and during the first two days of brooding. Chicks should be sampled throughout the area where they are being held and from near the top, middle and bottom of chick box stacks. Pay particular attention to areas:

- **Where chicks are observed to be panting or huddling.**
- **Where there is fast air movement around the chick boxes.**
- **Near walls and doors.**

Most of the above causes have to do with maintenance and can be avoided by having an effective preventative maintenance plan in place.

Figure 2 *A good layout for a chick holding room with well spaced buggies.*