HATCHER ROOM

Assessing chick maturity at take-off

The process of hatching is a drastic physiological change-over for the embryo. Internal pipping involves the transition from chorioallantoic (exchange of nutrients and gasses within the egg) to lung respiration and, during external pipping, the chick works very hard to break the eggshell.

This process is exhausting for the chicks, so before take-off they need to spend some time in the hatcher to rest and dry out. It is critical for day-old chicks' livability and performance after placement that hatcher conditions are correct for the final stage, and that they are at the right maturity level when they are pulled from the hatchers to be processed.

Immature or 'green' chicks will still be wet, lazy and sleepy (Fig 1), and not ready to eat and drink when placed at the farm.

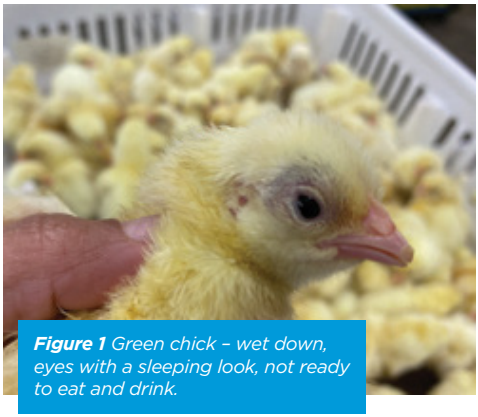

Figure 1 *Green chick – wet down, eyes with a sleeping look, not ready to eat and drink.*

On the other hand, chicks can also be dehydrated when pulled out from the hatchers. Those chicks will be dry and noisy. A great tool to assess chick maturity at take-off is to measure chick yield. Day-old chicks with the right maturity at take-off will have a chick yield between 67-68%. Chicks with yields above 68% can be considered green chicks, and chicks with yields below 67% can be considered dehydrated chicks. Both will perform poorly at the farm when placed.

Assuming the incubation time is correct, chicks incubated in low temperatures or high humidity will tend to look green at take-off, because both will experience delayed development. Conversely, eggs incubated in high temperatures or low humidity will become dehydrated in the hatchers. Unbalanced machines, with hot and cold spots, can make the hatch spread very wide by affecting development speeds, (Fig 2).

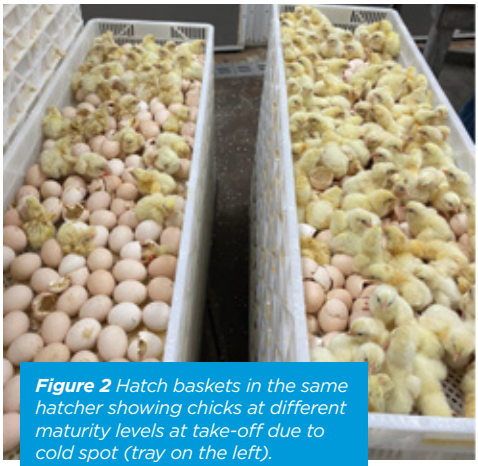

Figure 2 *Hatch baskets in the same hatcher showing chicks at different maturity levels at take-off due to cold spot (tray on the left).*

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Assessing chick maturity at take-off *Continued*

The incubation time for a batch of eggs can be affected by several variables including temperature, egg size, parent stock breed, egg storage time, breeder flock age and setter type. After the chicks hatch, if held too long in the hatcher, they can overheat and dehydrate. Therefore, it is important to monitor chick yield to make sure that adjustments are made as needed.

Day-old chicks with the right maturity at take-off, which have had enough resting time after they hatched out, will be active and ready to feed and drink when placed at the farm. Chicks that did not have enough time to dry out in the hatcher (green chicks) will be more interested in sleeping than starting to eat and drink when placed on the farm.

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