HATCHER ROOM

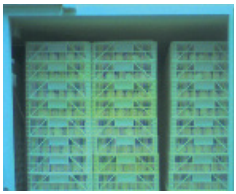
Correct positioning of hatcher buggies

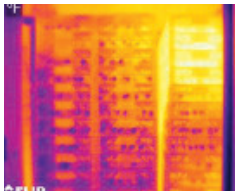
The ventilation capacity of modern hatchers is calculated by the manufacturers to ensure that enough fresh air is introduced and waste air removed.

The fans inside the hatchers are designed to provide an even airflow over all the eggs or chicks in the hatcher baskets. When everything is correctly set up, they prevent hot spots or CO_2 build up around the chicks. Overheating or excessively high CO_2 levels in the hatcher will cause poor broiler performance or in extreme cases reduced hatchability and higher culling rates.

Moving air will always look for the path of least resistance and therefore when pushed around inside the machine it will take the easiest route back to the fans. Positioning the hatcher buggies the correct way, following the manufacturers' recommendations is therefore essential to providing the needed airflow over the eggs or chicks.

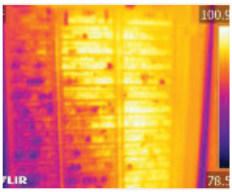
There are various different fan arrangements in different makes of hatcher. Hatchers with a centrally mounted fan will throw the fresh air around the baskets and draw the air back in towards the center of the fan. A different design has the fans mounted to push air upwards, with air then drawn down through the hatcher baskets back to the negative pressure area below the fans. Both systems work well.





However, in either scenario if the hatcher buggies are not positioned correctly leaving too much gap between them some of the air will use that gap as an easy path of return to the fans, depriving some of the hatcher baskets of the air they need.

One of the common problems we see in hatcheries is when the baskets are not stacked correctly at transfer, allowing the stack to lean away from the vertical. The pair of pictures above clearly show the consequences when the outer buggy, leaning away from the vertical, is creating a larger air gap at the top and, as such, is lacking the necessary airflow through the trays. The thermal image shows how this creates a hot spot in the upper right hand corner of the hatcher.



Some older designs of hatcher have baffles installed toward the front of the sidewalls (see above). In these machines it is crucial that the baffles are kept in good repair, and that the outer buggies are touching these baffles in order to force the air through the hatcher baskets back to the fans. We talk a lot about controlling embryo temperature in the setters, and how overheating between days 11 and 18 affects not only hatchability and chick quality, but also broiler growth and livability. New research is showing that keeping tight control of eggshell temperature in the hatcher right up to the point of external pipping is critical if the best performance in the hatchery and the broiler farm are to be targeted.