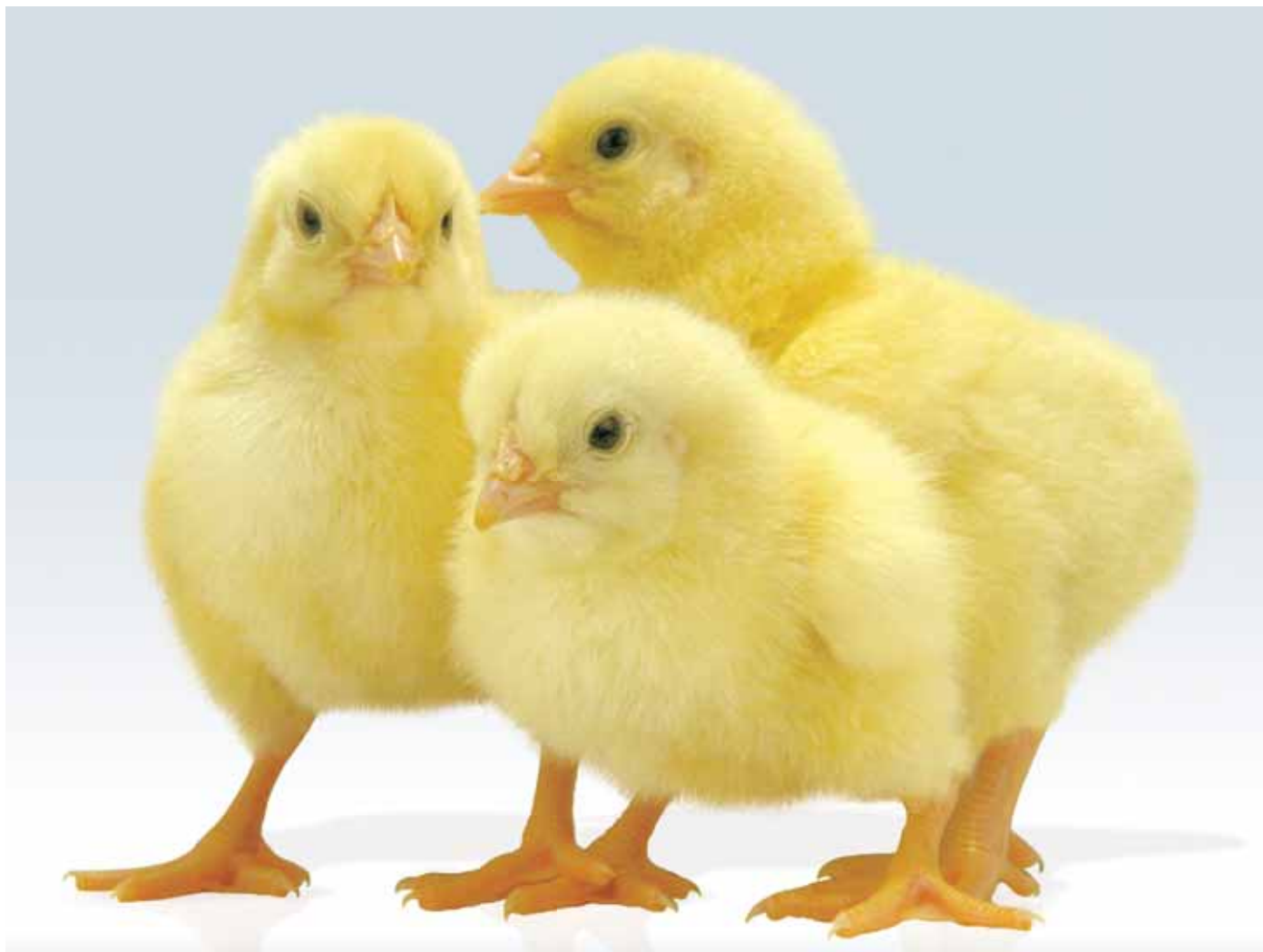


The Hatch Window

The hatching of strong, viable birds is a key factor in increased broiler performance. To increase the probability of strong birds, good hatchery management becomes critical. One management technique is to measure the hatch window.

The hatch window is an investigation to check the number of chicks hatched after the eggs have been transferred from the setter to the

hatcher. If the eggs are hatching too early, the chicks become susceptible to problems such as dehydration. Dehydration to chicks this early could lead to increased 7 & 14 day mortality and/or poor broiler performance. If the chicks are hatching too late, the result could be poor hatchability, chick quality problems, increased pipped eggs and live embryo unhatched eggs.



Method for examining the Hatch Window

The procedure to investigate the hatch window is quite simple and should be included as a hatchery routine.

1. To investigate immediately and to understand how the chicks are hatching after the eggs have been transferred to the hatcher use the top three trays marked as 1, 2 and 3 to test. This allows the hatching trays to be taken out and replaced quickly without interfering with the hatching process.



2. Before the examination, ensure that you have a table for a work area adjacent to the hatcher and a sheet to record the number of chicks hatched. Ideally it is better to work with two people. The first person will bring the hatcher tray to the table and return the hatcher tray once the count is complete. The second person will count the chicks and record the data.



3. Record the figures and return the hatcher trays as quickly as possible to the hatcher.



4. Check the setter. To check how the setters are functioning from the time of set to transfer, select a flock and place a minimum of three trays in the Top, Middle and Bottom positions of the setter.



5. At transfer carefully mark the hatchery tray with the position of the setter tray. Ensure that an identification label is securely attached to the tray, which will not

be removed. Place the transferred eggs in the top three positions in the front of the hatcher for ease of maneuverability when checking.



6. Select the times that you wish to carry out the examination.

EXAMPLE

48 hours before pull.....	07.00 hrs
43 hours	12.00 hrs
38 hours	17.00 hrs
33 hours	22.00 hrs
23 hours	08.00 hrs
13 hours	18.00 hrs
Day of Pull	06.00 hrs

48 to 33 Hours before pull

Ideally there should be no chicks hatching.



23 Hours before pull

25% of the total pull should be hatched.



13 Hours before pull

75% of the total pull should be hatched.



Day of pull

100% of the total pull should be hatched. The chicks should be dry and ready to process.



The shell debris should be clean.



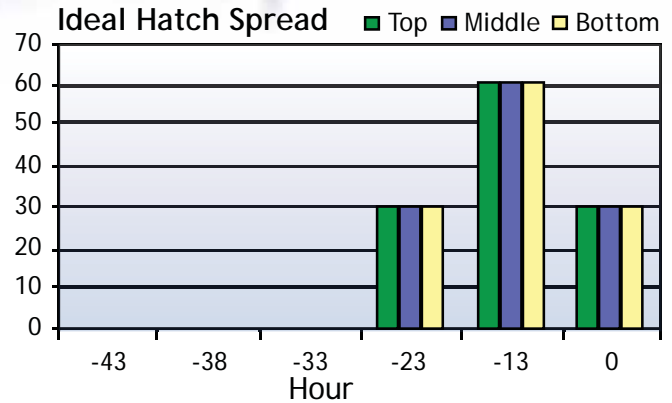
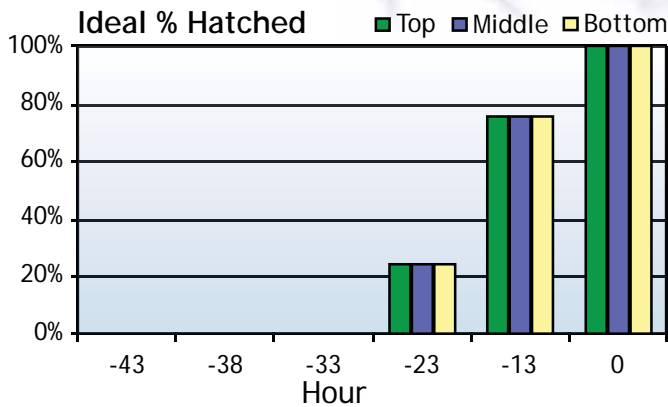
An example of advance wing feather growth: This indicates that the chicks have hatched too early. If the shell debris is

soiled with meconium is another indication that the chicks have hatched early.



This is the normal wing feather growth when the incubation cycle is correct.





Factors affecting early hatch include:

- Extended Pre-heating period
- Setting eggs too early
- Incorrect setter and hatcher temperatures
- Hot spots inside the setter and hatcher
- Incorrect ventilation
- Seasonal temperature changes
- Too many fertile eggs in the hatcher

Factors affecting late or delayed hatching include:

- Setting eggs too late
- Incorrect setter and hatcher temperatures
- Incorrect ventilation
- Seasonal temperature changes
- Eggs which have been stored for long periods
- Eggs which have been stored at too low a temperature
- Incorrect setting patterns in multi-stage machines
- Disease/fertility problems

Conclusion

The hatchery manager should be aware of the condition the chicks appear at Pull. The Hatch Window should be investigated periodically during the seasons. Not all hatcheries have a temperature-controlled environment. Where there is no control, setter and hatcher room temperatures may fluctuate during the year affecting the time the chicks will hatch.

Setter / Hatcher and Ventilation calibration is an essential part of hatchery management. Investigating the Hatch Window is an indication that procedures may need to be changed and regular servicing / maintenance of equipment is maintained.

The Hatchery Manager must have knowledge of 7-day customer / company mortality. It is essential information to understand what is happening with hatchery incubation.

Steven Tweed

Steve Tweed has served in the UK working as a hatchery expert since 1966. He brings with him extraordinary knowledge of hatchery operations as he has been responsible for the Pedigree, Great Grandparent and Parent hatcheries for over thirteen years.



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