TRANSFER

# Do you make regular checks for transfer damage?

**With the increasing use of automation at transfer, it is tempting to believe that transfer damage is rare.**

Yet, when we visit hatcheries, we often see significant amounts of transfer damage when doing a breakout. To make an accurate check for transfer damage, you need to look a bit further than the standard simplified QA check. Ideally, count the number of unhatched eggs per tray in a full stack of hatcher baskets, then look more closely at the eggs in the 3-4 worst trays. Ideally, this should be done so that every transfer crew is monitored at least twice a month; more often if they have new team members.

Transfer damage is caused by rough handling when the eggs are moved from the setter tray to the hatcher basket (cracks from earlier in incubation are easy to see, because in these the egg contents will have completely dried out). Transfer cracks will have some drying out, especially of the shell membranes, but the contents will still be soft (if the egg was infertile, or the embryo died early in incubation the egg contents will generally still be liquid).

The damage shown in the top photograph is usually caused when the tray or buggy has to be pushed hard to get it into position. It tends to be seen on the top trays (after transfer) or on whole buggies if the hatchery floor is damaged. Excessive pressure in the vacuum lifter can damage the blunt end of the egg; in this case the shell does not flake away from the egg. The other common form of external damage is when the handling system has bars or ridges which can cause a linear hole in the side of the egg.

Although it is fairly easy to identify the characteristic external damage caused at transfer, it is possible for the impact to kill the embryo without damaging the shell. When this happens, there are usually blood clots visible, caused by rupture of the external blood vessels.

***Figure 1*** *Impact damage to egg shells during transfer. Impact was to the side of the egg, and the embryos were close to full term and slightly dried out. The shell membranes are white and papery.*

***Figure 2*** *Impact damage.*

***Figure 3*** *Damage caused by a ridge or bar on the handling equipment.*

***Figure 4*** *Transfer damage does not always damage the shell; this shows a late dead embryo where rough handling has caused bleeding, and the blood has then clotted.*