SETTER ROOM

Keep setter floors dry

Wet setter floors are often seen in hatcheries. Staff do not usually pay much attention, and often think they are unavoidable.

Wet floors can have several negative effects on incubation conditions and chick quality. Firstly, water will evaporate off the open water surface, causing localized cooling of the surface. The rising water vapor will then hit the eggs placed on the lower egg trays.

This has a cooling effect on these eggs slowing down their embryo development compared to eggs in other positions in the setter.

In addition, with machine temperatures around 100°F (37.8°C) the wet warmth provides an ideal environment for promoting the growth of mold and bacteria – especially on wet surfaces. The water vapor can also carry bacteria and mold spores which can settle on the egg shell or penetrate through micro fissures in the shell into the egg. In other words eggs on the bottom of a machine with a wet floor will be cooler and in danger of becoming contaminated.

With some single stage setters, especially if they are sealed for most of the first half of incubation, it is very difficult to avoid wet floors and walls. The eggs release moisture through the egg shell, and in a well sealed incubator humidity builds up to very high levels. At these very high humidity levels and at incubation temperature, condensation on the walls and pipework is almost unavoidable, and the water soon drips down to the floor.

The best way to prevent the humidity building to such a high level is to open the dampers slightly once the setter is up to temperature, leaving it very slightly open for the first 24 hours of incubation.

Once the dampers are closed, the humidity will build again, so it is usually best to start ventilating the setter after day seven of incubation at the latest.

Once single stage setters are being ventilated, or in a hatchery which uses multi stage setters, then the floors should always be dry. If water is seen on the floors, then action needs to be taken to stop it.

Wet floors in incubators can be caused by:

- **Leaking connections to the cooling pipes, the humidity spray nozzles or solenoids.**
- **Pinholes in the copper cooling pipes.**
- **Condensation from the cooling pipes or solenoids – especially if the water chiller is set colder than necessary.**
- **Catching troughs or gutters not in place, blocked or leaking.**
- **Spray nozzles not functioning properly.**

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

Figure 1 *Standing water on the floor of a single stage setter at the end of the sealed period.*