

Delivering benefits to both the breeder and the broiler farmer

The concept behind HatchBrood is now becoming more accepted and with significant numbers of day old chicks being placed in the system, International Poultry Production recently visited PlusFour in Holland to see how this novel brooding system is evolving.

PlusFour is a new Dutch operator in which father and son, Willy and Koen van Lith, and the Lagerwey hatchery are the main client.

The perfect environment

The basic principle of the HatchBrood is to give the day old chicks a perfect environment with continual access to feed and water for the first three to four days of their life so that they get the best possible start.

This is achieved by placing the day olds into special HatchBrood baskets and then holding these in what is effectively a hatcher.

This machine is built along the same lines as a HatchTech hatcher or the Hatch-Traveller chick transporter.

This design basically places perforated radiators between rows of baskets and then air is gently forced through the radiators and over and under the chicks in the boxes.

This is used to create the ideal temperature (40.2-40.5°C) for the chicks as each radiator (that is, each section of brooding boxes) has its own temperature sensor which will initiate a corrective response if the temperature varies from the desired



The unit for dispensing feed into the HatchBrood basket.

temperature profile. Each HatchBrood basket has enough food for the chicks placed in at the outset.

This process and the placing of the day old chicks in the boxes can be done automatically on a conveyor.

The quality of the feed is very important because you do not want to depress feed intake and growth on day three or four because the chicks have picked out all the big particles and left any undesirable and

unpalatable dust. This is achieved by providing a high quality mini pellet that is manufactured by Provimi.

After this the chicks are transferred to the broiler house. The baskets containing the day old chicks are then slotted in between the radiators of the HatchBrood cabinet.

When this is done the chicks have access to a mini water trough which runs on the radiator along one side of the basket. Also running along both sides of each radiator are special strip lights which provide the light the chicks need.

Thus, the feed and chicks go into the basket and the air (temperature), water and light are supplied through the sides of each basket. For the first 24 hours chicks receive continuous light then a programme of three hours on, three hours off is adopted.

The water is kept cool and attractive for the chicks by flushing fresh water through the trough every hour or so.

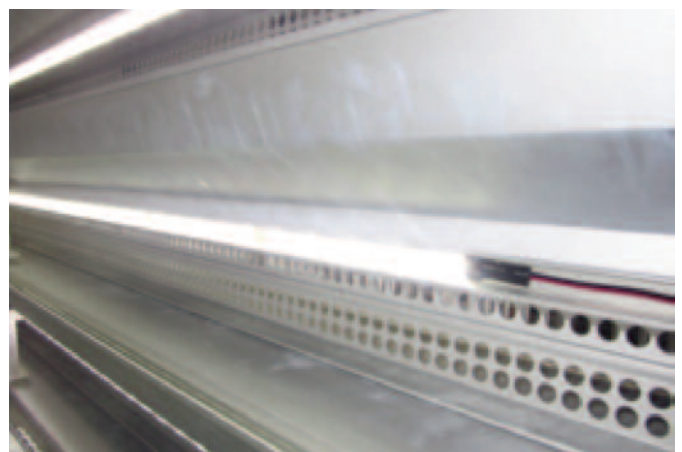
In effect, all the problems that can arise with the traditional placement of chicks on a farm, such as delivery days, no food and water during transportation, chilling, chicks being too far from feed or water and general stresses, are avoided.

On many farms all these management issues are countered by the prophylactic use of antibiotics.

In Holland the Dutch government is tightening up on antibiotic usage and a really appealing aspect of the HatchBrood system

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Lights, water and air inlets down the sides of the baskets.





Chicks in the HatchBrood basket and, right, note the gap between the plastic floor and the paper that allows warm air to circulate under the chicks.

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is that the chicks get a better start without the use of antibiotics. To date, almost 30 million birds have been through the system.

As a result of this the Dutch government favours the system and encourages its use. In fact one large Dutch integrator has seen an 80% reduction in total antibiotic usage in flocks that have gone through this new system and none in the HatchBrood system has ever received antibiotics.

The system can produce seven day broiler weights of 220g or higher, but practice has shown that a seven day weight of around 200g is fine as the higher weights can favour the development of leg problems at around day 24.

Reduced mortality

The first week's mortality is significantly reduced and birds can go to slaughter a day earlier. Typically, HatchBrood's four day mortality figure can be half of that achieved if the day olds are placed straight on to the farm.

However, the benefit to the broiler farmer is much more as the chicks do not come to his farm until they are three or four days old.

Add all this up and it equates to an extra half cycle of production per house per year. Thus, kg of meat produced per m² per year is significantly higher and this is certainly translated financially to the farmer's bottom line.

As the birds are reaching slaughter weight earlier they are eating less feed and this impacts on FCR. Some farmers have claimed as much as 11 FCR points advantage but this probably also reflects the poor start that birds used to receive on such farms before the advent of HatchBrood.

The best broiler farmers can expect a 2-3 FCR points advantage but when this is added to lower mortality, no antibiotic



Left, the feed trough and, right, baskets of chicks stacked in the HatchBrooder.

costs, earlier kills and increased throughput per year the benefits really start to add up.

The HatchBrood only needs one day's downtime between cycles for cleaning and disinfection and all the baskets can go through an automatic basket washer that can be placed in the line after the chicks have been lifted.

Extra chicks per hen

Another real benefit to the industry as a whole is that chicks from eggs less than 50g, such as those in the early production of a breeder flock, can be processed through the HatchBrood system and these perform satisfactorily when they are subsequently placed on the broiler farm.

This can mean an extra two or three chicks per breeder hen. When one considers that a 40-45g hatching egg going for use as commercial food grade liquid egg is worth 2€ cents and a 45-50g egg is worth 5€ cents this is a significant saving when one considers a hatching egg to be worth 18-19€ cents and a day old chick around 33€ cents.

In this system 40,000 chicks can be processed on just 82m² of floor space, which is much more energy efficient than traditional broiler production. In fact, it is calculated that broilers going through the HatchBrood system have 20-30% less energy costs.

One slight drawback is that chicks need to be transported twice – from hatchery to HatchBrood and from HatchBrood to farm. However, this can be greatly overcome by placing the HatchBrood facility adjacent to the hatchery! Interestingly, when you go into a Hatch-Brood facility you wonder where all the chicks are because it is so quiet!

Perhaps this is because a satisfied chick is a quiet chick and we should take more notice of noise on the broiler farm when chicks are placed there at day old.

Perhaps those chicks are actually telling us something! ■