Smaller hatcheries are now reaping the benefits of in ovo technology

The introduction of the first commercial in ovo vaccination system over 20 years ago was one of the driving forces behind the increasing size and efficiency of hatcheries that we have witnessed over the intervening years.

Globally, more than 15 billion eggs are now vaccinated each year using in ovo devices, and the technology has allowed companies to improve the performance of their birds.

Until recently, in ovo technology was generally considered as a tool for larger companies with a throughput that justified the investment both financially and in terms of space. In fact, it may have even contributed to the creation of a two-tier hatchery industry in developed markets.

However, last year Zoetis, the same company that brought us the first commercial system, launched a new, smaller in ovo device designed specifically with smaller hatcheries in mind.

Time and labour savings

One of the first hatcheries to adopt the new Embrex Inovoject m was Vikon Farms, a family owned company based in California, USA. Vikon hatches 40-50,000 eggs each week and used to vaccinate all of its chicks subcutaneously, as general production manager, Orlando Montes, explained: "You had to take the chick in your hand, put it in front of a sensor on a vaccinating device, and it was injected automatically in the neck. It takes skilled workers to do that, and if you get it wrong it kills the chick.

"Vaccinating manually took four or five people plus others to move baskets and get things ready, so seven or eight people were involved on hatching day. With the Inovoject m we have reduced that to five people, with just two operating the machine. We process up to 15,000 eggs per hour using the Inovoject m, so the whole job can be done in just over three hours – compared to five to six hours before. So we have really reduced the amount of labour needed."

Orlando first saw the Inovoject m on the internet and decided to contact the

Continued on page 8

Continued from page 7
manufacturer, Zoetis, to find out more. Two months later, the device was up and running.

"One of the good things about this smaller Inovoject m is that it does not need any special installation. All we had to do was to fit a bigger air compressor – and that was on the outside of the building wall.

"Zoetis people made three training visits, and they were very patient and professional. Now we feel very comfortable that we can do it ourselves.

"We have a local Zoetis contact who does a routine maintenance visit every three months and who is there in case we need help urgently."

Flock performance

Vikon is rightly proud of its birds, which are bred on site from a unique heritage variety stretching back more than 60 years.

The company supplies the Asian market, where consumers prefer slightly tougher meat with a stronger flavour, so birds are grown slowly for 14 weeks. They are fed an all-vegetable diet and are raised without the use of hormones, growth promoters or antibiotics. Vikon has USDA approved heritage and traditional status.

Orlando has seen a definite improvement in flock performance since switching to in ovo vaccination.

"We are getting very good hatchability, which has increased by 1-2%, and we have also seen a reduction in chick mortality in the first two weeks of 0.75-1.0%. There is also better uniformity, the birds look healthier and feed conversion is better.

"One of the great benefits is lower feed costs. Corn price is very high at the moment and accounts for 60-70% of our production costs. So you have to be as efficient as you can. Inovoject m is the type of technology that you want to have on your side."

"Before, about 80-90% of our birds were successfully vaccinated – so between 10 and 20% would die or get sick and not develop to their full potential. That means a non-uniform flock and a reduction in feed efficiency. Now, 100% of our birds are vaccinated, so we have a healthier and more uniform flock – and a better feed conversion."

Plans for expansion

Vikon plans to expand over the next few years and double production to 100,000 eggs a week. According to Orlando, this may mean installing a second Inovoject m.

"In ovo has lots of benefits as you get almost 100% of chicks vaccinated and protected before they hatch, so they have a better immune system from the start. And you do not have to handle the chicks, so they have less stress and we can reduce the amount of labour we need."

The Vikon experience shows that the use of in ovo technology to enhance hatchery efficiency and bird performance is now a viable option for smaller companies, such as those supplying niche markets.

The new system is being made available around the world by Zoetis and may prove to be particularly attractive to hatcheries in emerging markets in Asia and Latin America which want to expand production and enhance efficiency to meet growing demand.

It may also help smaller hatcheries in developed markets that would like to expand to make the most of economies of scale, or simply reduce their operating costs. ■