MANAGEMENT FEATURE

Are aviary systems suitable for the Australian market?

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Are aviary systems suitable for the Australian market? Well I am not going to answer that questions. What I want to do is give you some information which will help you make the decision for yourself given that everybody's situation is slightly different.

If you ask for my opinion, then I would have to say yes, but with a number of cautions/question marks.

There are already aviary systems operating in Australia and New Zealand.

First I want to take a look at the European regulation that the aviary systems have been designed to conform with. There are quite a few different associations but I have taken the most common features and compared them to the Australian regulation which I have found in the code of practice.

You can see there are some big differences in regard to the stocking density (Europe 9 birds/m. Australia 30kg/m), feeder space (Europe 10cm chain feeder/bird, Australia 2cm/bird) drinker space (Europe 10 birds/nipple, Australia 20 birds/nipple) etc.

The only common thread is the requirement for nest space @120 birds/m. For the purpose of my calculations, I have used a stocking density of 10 birds/m. I know you can go higher, many people run 12 birds/m but 10 birds seems to be a figure that works well consistently.

Generally the market in Australia and New Zealand to date has been toward flat deck systems. We originally started with the 2/3rd slats and 1/3rd scratch area which was an RSPCA regulation. This led to problems with dust in the house and also a high level of floor eggs if birds were not managed well.

After that we moved to fully slatted houses, this reduced the dust levels and also reduced the floor egg problem. In Australia there is no requirement under the code for scratch areas. This is in contrast to the European regulation where it is mandatory.

To alleviate these issues, Big Dutchman and a number of other companies started to develop aviary systems in the late 1980s when Sweden banned the sale of eggs from cage systems. As you can see the market has developed from there and Aviary systems have been so successful in Europe and the United Kingdom that we have sold over 25,000,000 bird places.

We now have seven basic systems and over 60 variations to fit the various house styles, sizes and individual farmer's requirements.

We started by putting manure belts under a single slatted area. Under the regulations this meant that we could use the area underneath the manure belt and then also the slatted area on top in our calculations and due to the increase in bird numbers we added additional feeder, drinker and perching space.

This resulted in the development of the Natura Nova 1 tier. We then found by adding a second and third tier we could get more birds into the house for less cost per bird. This is how we ended up with the Natura Nova 260 and the Natura Nova 260 twin.

I want to focus on a couple of systems which I think may be best suited to this market. These are the Natura Nova 260 twin and the Natura 60/70.

Natura Nova 260 Twin

In a 12m wide house we can get an additional 12m of slatted area effectively doubling the calculated bird area. This system has the ability to close the birds into the system when they are first moved into the house.

This has a number of benefits:

- All birds have access to feed and water on all levels. You don't have the situation where a bird can jump down on the floor and then be unable to get back into the system.
- You don't have a problem with birds moving into an area in the system where they do not have access to feed and water.

• By locking the birds into the system at the beginning they get use to visiting the nest on a regular basis and this leads to more eggs laid in the nest.
• The rearing of the birds is not as critical as it is with systems where the birds immediately have access to the floor.

To give you an example of stocking density, if I take a house with a dimension of 100m x 12m (typical old Hi-rise shed) with a stocking density of 10 birds/m we can fit 12,000 birds into this house using a normal flat deck system. With a Natura 260 Twin system we can fit 21,962 birds into the same size house again with a stocking density 10 birds/m. If we look at the cost per bird, it is higher with the Natura system by 41% but we can fit 83% more birds into the house.

If you are building a new farm and have a total bird number in mind this can be achieved with a lot less houses than with the standard flat deck system. If you take the building cost also into consideration then the saving becomes apparent. This system also allows you to maximize the floor space in old cage houses which have to be converted.

The second system I would like discuss is the Natura 60 and Natura 70. These systems have been designed for the Barn or Cage Free market. The idea came from a number of Dutch farmers who were looking for a system that gave all the benefits of a cage system in regard to management but at the same time gave the bird's access to a scratch area while meeting all of the current European regulations.

The Natura 60 system has a number of clean bird free aisles (depending on the house width) that you can walk along and do you daily inspections etc. Any 'system eggs' roll to the aisle so you can easily pick them up and put them onto the egg belt, you have the ability to lock the birds in the system, this is important when you first move the birds into the house and ensures that the birds find feed and water and get use to visiting the nest, which means hopefully more eggs laid in the nest.

You can also keep the birds locked in the system in the morning until all the eggs have been laid only then letting the birds down onto the scratch area.

With the Natura 60 we can calculate 60 birds/running meter per row and 72 birds/m with the Natura 70.

I think rearing is the biggest factor to the successes of Aviary style systems and I would not recommend anybody put in an Aviary system before looking at a suitable rearing facility. In an aviary system you cannot use birds that have been reared in cages or on the floor. It is extremely important that the birds learn to jump and fly at a young age as they will need these skills in the Aviary systems, when they have to make the transition to and from feeding, scratching, nesting and resting areas.

You start to brood the day old chicks in the system as you do with a cage rearing house, all birds together in one tier. After about 10 days you split the birds with 50% going into a lower level. I about the 4th week the doors to the starter tiers are opened an pullets are able to move around the entire house this is when the learn to jump and fly. Especially in the morning when they have to leave the resting area and move to the lower levels to eat.

Due to having to move around between the different levels the pullets are encouraged to express a uniform behavior. By the time the pullets are transferred to the laying system at 16 weeks they are well trained and are immediately comfortable. They already know that they can find feed water and perches on different levels of the system so they spread out accordingly.

Advantages of aviary systems over flat deck systems

• Higher stocking density up to 83% more birds in same size house
• Good laying performance
• Manure removed weekly
• Lower mortality. The birds have more opportunity to escape or hide if they are being chased
• Birds locked in the system from the start, leading to better nest acceptance and more eggs in the nests
• Birds are more active, this means more nest visits and fewer floor eggs

Disadvantages of Aviary systems over flat deck systems

• Higher level of managment required
• Birds have access to the litter
• Controlled enviroment, ventilation becomes more important due to higher stocking density
• Lighting control, sunrise/sunset feature required
• Specialised rearing essential
• Standby generator

So yes, I think that aviary systems are suitable for the Australian market but special attention needs to be paid to the following:

• Rearing
• Management
• Ventilation
• Lighting

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