

South African opportunity creates a major new hatchery in Natal

Changes in the South African broiler sector a few years ago created opportunities. This included the then major supplier of day old chicks in the free market, National Chicks, being acquired in 2002 by a major agribusiness with poultry interests.

Brian Edmundson, who was in at the start of National Chicks a couple of decades ago and is a larger than life character in the South African poultry industry, saw an opportunity in the day old chick sector and, as they say, the rest is history!

He shared his vision with others and soon



Inside one of the breeder houses.

nine shareholders created what was to become a farmer consortium known as Keystone Hatchery.

At the beginning of 2005 construction started on a 400,000 day olds a week hatchery near Pietermaritzburg in Natal that was to provide local independent broiler breeders with a customer for their eggs and, at the same time, provide independent broiler

growers with a local supply of day old broiler chicks.

Brian had a modern day success story on his hands and it was not long before he had to double his capacity up to 800,000 day olds a week and to increase the number of contract supply farms from four up to 11.

Much of this was due to Brian's vision,

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Left, biosecurity to the fore and, right, inside a new breeder house.





Keystone Hatchery.

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enthusiasm, energy and being sure that everything was done correctly. Compromise is not a word in Brian's dictionary!

Some 70% of Keystone's output is Cobb with 20% Arbor Acres and 10% Hubbard.

Funki chosen

Interestingly, Keystone decided to purchase Funki incubators. Why was this?

Firstly, two of the partners in the consortium had previously worked with the old Funki machines and liked them. In addition, the machines were seen as quality single stage machines and single stage incubation was seen as the way forward.

Couple this to the fact that the local agent, Steve Hobbs, gave the hatchery great support and assistance and the choice to Keystone appeared obvious. On top of this, the Funki machines gave good results and were simple to operate.

The breed mix means that on occasions breeds are mixed in a single stage setter but, when a machine is set with one type of eggs and operated accordingly for those eggs, hatchabilities of >90% are common and hatchabilities as high as 93% have been achieved and first week livability of 99.5% is easily achievable.

Currently, there are 24 Set & Hatch Funki setters, each capable of holding some 121,000 eggs each, and 12 hatchers each of which takes 48,000 eggs.

Successful programming

Success in incubation is dependent on programming the incubators correctly for the type and age of eggs that they hold and correctly adjusting the air flow.

The machines can easily be operated by just monitoring their temperature and Keystone feel there is little need to monitor carbon dioxide.

These Funki machines are well built and are easy to clean. The Classic egg tray is used. In the hatchery attention is already



Inside the egg store and, right, the setter room.



focusing on automation and basket/tray tip-pers have been installed. Next on the agenda is to automate transfer.

The eggs for the Keystone Hatchery come from 20 breeder flocks that are located on 11 farms. These farms are well spread out – the closest being just a couple of kilometres away and the furthest being 120 kilometres from the hatchery.

Eggs are graded on farm and then stored at 18°C and 65% relative humidity. They are sent to the hatchery three times a week.

These contract breeder farms are on tight contracts with only <1.0% of non-settable eggs being the goal and the proportion of second grade chicks at hatch being 0.8-1.4% and this is very much dependent upon breeder flock age.

‘Hands on’ visits

The veterinarian used by the hatchery visits twice a month and these are ‘hands on’ visits with the veterinarian going into the hatchery and on to the farms.

The owners/managers of other farms are encouraged to attend and time is spent exchanging experiences and discussing ways of further improving flock or hatchery performance.

In practice, this means that the veterinarian visits each farm at least once a quarter.

Emphasis on vaccination

South Africa is a country of disease risks and so a special emphasis is placed on vaccination. At breeder level this focuses strongly on protecting the birds against Newcastle disease, infectious bronchitis and Gumboro disease and in the case of the last disease the breeders receive vaccination by injection at day old.

In the hatchery the day old broiler chicks receive Newcastle disease and infectious bronchitis vaccines of the customer’s choosing.

Salmonella is a topical issue. The occasional exotic serotype is encountered but as far as Salmonella typhimurium and S. enteritidis is concerned the hatchery has a good track record. Intensive monitoring occurs and this is centred on checking drag swabs, swabs and fluffs.

So, why has Keystone Hatchery been a success story?

Obviously, it helped that there was a need following the change at National Chicks as there were breeder flock farmers who needed a home for their eggs and there

were broiler farmers who needed day olds. But there is obviously more to this success story. Much of the success is derived from the rigid policy of not compromising on quality and not varying the standards. One of these standards is that the first set of eggs can not be placed until the 26th week.

But, when it comes to success, one must not overlook Keystone’s young, enthusiastic and competent workforce.

Meeting demand

Another major contributing factor is that the management spends time matching breeder flock egg production to broiler farm demand for chicks so as to minimise egg storage and the effects that this can have on chick quality.

Here the hatchery is fortunate in its position of being quite close to some of South Africa’s neighbours and this facilitates the use of exports to help in the management of egg stocks.

Brian Edmundson found and satisfied a need, but surely not even he could have predicted the speed by which this project grew to rapidly become one of the respected suppliers of day old broiler chicks in the South African marketplace. ■

Chicks pulling and grading.



Leaving the Keystone hatchery.

