

Zambia – a real African success story!

One of the most stable African states is Zambia and the agricultural sector there is enjoying good times. This is especially so in the poultry sector as the Zambians like both poultry meat and eggs.

The success of agriculture in Zambia is exemplified by the fact that last year the country was a net exporter of maize – something which a decade ago would have been looked upon as just a pipe dream.

To find out how the commercial breeding companies are responding to this challenge International Hatchery Practice visited Hybrid Poultry Farm (Z) Ltd who produce Cobb broiler chicks for the Zambian market and for their own use.

The Zambian market currently equates to some 400,000 or so day old broiler chicks a week, of which Hybrid produce approximately half, Ross Breeders Zambia produce 40% and Bekomo produce 10%.

On the table egg front some 15,000 day old pullets are produced a week. Hybrid have some 60% of this market with their Hendrix (formerly Bovans) Goldline and Nera chicks, Bekomo have 30% and the remaining 10% is imported.

On the broiler front Hybrid have recently changed from the Cobb 500 to the Cobb Avian because, although the broiler performance is about the same under African conditions, the Cobb Avian gives another dozen or so eggs.

The company is opening a new hatchery and breeder farms in the Copper Belt region in the north of Zambia and already two Cobb Avian flocks are on the ground. The oldest of these is now



The commercial hatchery in Lusaka.

almost three months old. In addition, two Cobb Avian grandparent flocks are on the ground.

The breeding operation in the Lusaka region currently uses the Cobb 500 and also houses the table egg breeders.

Historically, Hybrid was the old Arbor Acres breeding operation in Zambia. In 1996 this was bought out by the then management with the help of a venture capital company and in 2003 it was acquired by its new owners who have a variety of interests in eastern Africa and high hopes for their Zambian acquisition.

In 2004 serious restructuring and developing of the company started. This includes the Kitwe project in the Copper Belt and a major refurbishing and rebuilding project that involves the farms and hatchery at Lusaka. The new hatchery at Kitwe uses the Indian Jamesway machines as these are seen as very robust having retained many of the

attributes of the old Jamesway models and they are extremely competitively priced.

We visited grandparent and parent farms on the Shelley complex, which is some 50km north of Lusaka before returning to the commercial hatchery which is located in Lusaka. This complex covers some 980 hectares and is divided into three stand alone sections, which are 1.5km from each other.

The grandparent farm receives two shipments of grandparents a year. Historically, the Cobb 500 came from England via Nairobi in Kenya. Now the Cobb Avian grandparents come from Cobb in Arkansas, USA, via London and Nairobi.

The grandparent shipments are quarantined for 14 weeks and during this period the farm is in total isolation – even the staff are confined to the farm for this 14 week period.

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Grandparent houses. Note the location of the entry shower blocks. In the picture on the right the poultry house is immediately behind the entry shower block.



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During quarantine the birds are inspected weekly by a state veterinarian and are released from quarantine if these inspections are satisfactory and if blood testing results, which are done in the company's own laboratory using Idexx and BioChek ELISA kits, are also satisfactory.

On the grandparent farm strict biosecurity is enforced and access to the houses is only for those who have a real need to enter them and is following a shower at both site and house level.

In addition, both overalls and boots are colour coded – one colour stays inside the houses at all times and the other is for outdoor use.

At grandparent level liveability is typically 96% plus at point of lay and the laying performance is excellent with egg production some 6-7% above Cobb standard with hatchabilities of 86 and 72% for the female line and male line flocks respectively.

Eggs are collected six times a day with the first collection at 8.00am and eggs are graded on farm and then stored at the on farm egg store at 15-18°C. Fumigation of hatching eggs occurs on the farm.

Two or three times a week eggs are transferred to the grandparent hatchery which is close by on the complex. Eggs are set every 10 days in a Jamesway Big J setter, which effectively batch incubates the eggs. Each setting comprises of 25,920 eggs and typically this will pro-



The grandparent hatchery.

duce some 8,000 female line hen chicks and 2,900-3,000 male line cockerel chicks. Jamesway hatchers are used.

All the production of breeder day olds is used internally in the company whose goal is to have six 55,000 PoL farms on a day old to death, all in, all out basis.

One of the original commercial breeder farms was near by and we visited it. This farm had five 4,500 PoL hen breeder houses. Some of the commercial breeder farms also have a house of table egg breeders. These are shipped straight in from Holland as parent stock chicks.

This and all the other farms have a very interesting biosecurity feature – they have their own small feed mills! These mills bulk buy their maize and store it.

When feed is required the maize is milled and has the other ingredients added to it. Each unit also has its own stand by generator – an essential piece of equipment in a country where the public supply of electricity is at best variable and where summer temperatures can exceed 40°C.

This system has two real advantages. Firstly, the number of movements of external vehicles on the breeder farms is virtually nil and, secondly, each farm is a

self contained unit, which is not reliant on the vagaries of supply from an external mill.

The complex has its own supply of high quality artesian water which is sourced from the company's own bore holes. All houses have bell drinkers and are fed manually.

On the vaccination front a thorough programme is employed which is designed to adequately protect the birds against Marek's disease, Newcastle disease, infectious bronchitis, reovirus, Gumboro disease, Mycoplasma gallisepticum, pox, avian encephalomyelitis (tremor), Salmonella enteritidis, fowl cholera, coryza and coccidiosis.

Newcastle disease is a real risk and laying flocks have their immunity regularly enhanced by La sota spray vaccinations at 36, 40, 45 and 50 weeks. In addition, birds are wormed monthly.

So, what does Hybrid put their good performance down to? In essence, they feel it is due to their isolated locations and their high biosecurity protocols coupled to good staff control and discipline and a comprehensive vaccination programme.

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Left, the novel cardboard nest boxes that maximise between cycle biosecurity. At the end of the crop they are burnt and replaced by new ones. Below, open sided commercial breeder houses. The big mounds are ant hills!





A commercial breeder farm and its entry block.

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In addition, they instil into all their staff that work is an on-going learning exercise and that at the end of each day, each week and each crop you should always ask yourself ‘what have I learnt today that I can use to do an even better job tomorrow?’

The third farm on the complex is known as the ‘Piggery’ because once that was what it was. Today, this site is in the middle of being razed to the ground and will eventually have 12 new 130 x 10m breeder houses and be one of the best commercial breeder farms in

Africa. Eggs from the commercial breeder farm are shipped to the commercial hatchery in Lusaka two or three times a week in plastic egg crates.

These crates are colour coded and crates of a particular colour always service the same breeder farm. The commercial hatchery is also undergoing refurbishment and expansion and it also uses Jamesway machines. The chicks it produces go on to company broiler farms or out to external growers or customers. Those broilers destined for ultimate sale by the company are then processed through the company’s own

processing plant which is also in Lusaka.

A lot has happened in the last year or two at Hybrid and this has been greatly facilitated and has also been financed by the buoyant Zambian marketplace.

Other countries in the region should take Zambia as their model because the Zambian success story is one of team work that is characterised by political stability coupled to commercial entrepreneurship.

If one goes back 20 or 30 years Zambia was very much the proverbial ‘tortoise’ and, as in Aesop’s fable, the tortoise has eventually beaten the hares! ■

On going developments at the ‘Piggery’ site.

