

## **Broiler Production Viability in Zimbabwe: Production Efficiency Is Key**

18 June 2014

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The cost of raising a broiler is rising steadily as a consequence of the prices of inputs which have been on the upward trend in the last few years. In times like these most producers would have considered the easy way out, which is to adjust the selling price of their commodities in order to cushion themselves. Unfortunately for Zimbabwe's poultry producers, the situation cannot be dealt with that easily because the steady rise in production costs has come at a time when there is this much talked about deflation coupled by a burgeoning number of local poultry producers. This has seen unprecedented increase in competition for customers whose buying power has been waning with each passing day as a result of the economic challenges bedevilling the country at the moment. This scenario has left scores of small scale producers asking whether anyone can rear poultry profitably under these circumstances. My response has always been "yes you can, if and only if you increase your production efficiency."

*Loosely defined- production efficiency in this case alludes to resource utilisation in such a manner that one realises optimal output having put in the least of resources. This is achieved through making sure that management techniques gun for high feed conversion ratios, improved survivability and achievement of market weights in a short time.*

In broiler production the 1<sup>st</sup> seven days are very crucial in that this is the period when there is a marked development of the skeleton, muscles as well as vital organs such as the respiratory organs and the gastro-intestinal tract. This is the period when the chick must develop a good appetite and establish its feeding habits. This has overall bearing on the performance of the broiler later on, for instance, a well developed gastro-intestinal system will be instrumental in achieving better feed conversion ratios. In the same vein, a chick which fails to achieve good systems development early enough will have immunological impairments such that when the yolk sac wanes the chick will struggle with fighting off infections. This often hampers overall growth, feed conversion, flock uniformity and ultimately survivability. Given that in livestock production weight is used to measure growth performance; in broiler production the seven-day weight is considered a very good indicator of how well a chick has started off. It is also used to predict how well the bird will fare in its later life in terms of parameters such as feed conversion efficiency, survivability and target market weights.

A chick weighs around 40g at day old and with good husbandry can grow increasing its weight about 4.25 times to reach a target seven-day weight of 180g. The reason why husbandry practices have to be up to scratch is because for the chick to achieve the target weight it uses 80% of its energy for

growth and the remainder for maintenance. If this order is derailed by either inappropriate temperature regimes, irregular supply of nutrients or water, the target is missed. This often leads to the proliferation of small underweight birds in the flock and an unnecessary peak in overall mortality.

For one to reach the much revered seven-day weight of 180g they have to pay attention to a number of factors as enshrined below:

**Feed:** Chicks should be able to find feed and water as soon as possible following their placement in the brooder house. This is essential in that when a chick is hatched it survives on the residual yolk from where it draws antibodies and nutrients. The chick experiences very minimal growth as long as the yolk has not been fully absorbed. The complete absorption of the yolk sac is stimulated by the entrance of feed in the gut of the young chicks and rapid growth processes are initiated. Hence provision of feed as early as possible after placement gives the chicks a good head start.

**Crop fill:** If a chick fails to take in enough feed to fill its crop by end of three days, one is sure to have small birds that fail to recover for their entire life. One should therefore check crop filling after 24 hours and above 85% of the birds should have filled their crops. Pay attention to feed intake again at day four, because as yolk sac absorption is finalised, digestive upsets may cause a dip in feed intake. Feed should be easily accessible, that is, feeding space should be ample and distance travelled to access feed should be very minimal.

**Diet characteristics:** The diets that one feeds to the chicks should be formulated in such a way as to provide highly digestible materials given the fact that the chicks system is not yet developed. More so, the feed presentation (i.e. mash or crumbs) should be appropriate as to facilitate high intakes to support the expected rapid growth.

**Disease Control:** Management should ensure that chick placement is done under strict sanitary conditions and bio-security protocols are judiciously observed. This is important in hedging the chicks from infection because any infectious challenge that occurs at this stage will cause a growth check. Also given that the immune status of the chicks is still fragile, any disease challenge can actually result in unnecessary mortalities.

**Brooding Environment:** Brooding houses should be able to provide temperatures, humidity and ventilation that encourages feed intake. Taking for instance, if the temperatures are too low, the chicks will move away from feeder pans choosing to huddle near source of heating in the house. During that time their energy is then used for heat generation in their bodies at the expense of growth. On the contrary if the temperature is too high chicks also stop feeding in an attempt to lower the body temperatures.

**In conclusion let me draw your attention to the fact that research has revealed that the final weight of the bird is increased by between 80-90g when the 7-day weight increases from 160 to 180g. In addition to that, 7 day weight above 180g led to an improvement in feed conversion by 10 points which translates to a 5% reduction in feed requirements. Of importance is the fact that higher 7 day weights showed marked reduction in overall mortality which means that a good number of birds will make it to slaughter age. Hence by pushing to achieve the target 7-day weight**

**one realises that they harvest more broilers of higher weight using far less feed. So in this case you will have a competitive advantage when entering the market.**

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