



# Fundamental Changes for Summer Time Broiler Management

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Now that winter is fully behind us and the thermometers are reaching into the mid-thirties on a more consistent basis we are truly into the full swing of summer. With this change of season comes some new production challenges for broiler farmers around the country. In this article I intend to highlight some of these challenges and provide some fundamental management changes which will help ensure good production results through the summer period.

Over the last 50 years poultry breeding companies such as Cobb have introduced a continually improving broiler to farmers. With this ever improving bird performance has come management changes as well as changes to poultry housing. The biggest contribution of heat to a poultry house is from the birds themselves and with increasing yearly growth rates, getting rid of all this extra metabolic heat while still maintaining performance is one of the main reasons for the rise in environmentally controlled tunnel ventilated houses in South Africa. Many growers have converted their older curtain style houses by adding fans and tunnel inlets to be able keep the birds cool and alive during the hot summer period.

From my experience it is common practice for growers to decrease their minimum ventilation rates during the winter months in order to save on coal/gas expenses or if their heating capacity is not enough to maintain set-point temperatures in the house, both of which will have a negative impact on bird performance. However, now that we are in summer I urge all growers to make sure there is sufficient

minimum ventilation during the cycle, especially in the first week. During summer there should be good air quality at all times, the houses should not feel stuffy and there should be no smell of ammonia. Just like us, chickens like to breathe fresh, oxygen rich air that keeps them healthy and improves their performance, there should be no excuse for not providing this during summer.

The main concern during the summer period starts towards the end of the cycle, when the birds are bigger, when they are producing a lot more heat and when space in the house becomes limited. Failure to keep the birds comfortable during this period will result in lower weight gains and higher mortalities. Over the last three years the main concern I receive from visiting growers during the summer months is “my birds are hardly growing in the last week of the cycle”. First things first is making sure temperature set-points are correct, below is a table with the Cobb recommended temperature guidelines:

Temperature/humidity guide:

Age - days	Relative Humidity %	Temperature °C (F) for chicks from 30 week old parent flocks or younger	Temperature °C (F) for chicks from 30 week old parent flocks or older
0	30-50	34 (93)	33 (91)
7	40-60	31 (88)	30 (86)
14	40-60	27 (81)	27 (81)
21	40-60	24 (75)	24 (75)
28	50-70	21 (70)	21 (70)
35	50-70	19 (66)	19 (66)
42	50-70	18 (64)	18 (64)

- If humidity is less than above, increase temperature 0.5 to 1 °C (1 °F). If humidity is greater than above, reduce house temperature by 0.5 to 1 °C (1 °F). Always use birds' behavior and effective temperature as the ultimate guide to determine the correct temperature for the birds.
- Chicks from smaller eggs (younger breeder flocks) require higher brooding temperatures because they produce less heat about 1 °C for the first seven days.



Data collected over the last two years from over 62 million broilers across a number of South African poultry companies shows the average live weight (34 days) of birds during the winter months (May – August) to be 1850g while the average live weight in summer months (November – February) is 40g lower at 1810g. So how else can you limit lower weight gains during summer?

Making sure your set-points are low enough towards the end of the cycle, 21°C at 28 days and 19°C by day 35 is a good start, however a couple more changes can make a big difference, starting with the time the lights are switched off at night. During the hot day management of ventilation will help keep the birds alive, however it is most likely they are not active and are hot so have not eaten much during this period, once the temperatures cool down later on in the evenings the birds will then compensate for this reduced feed intake. As we all know outside temperatures may only drop to reasonable levels late in the evening and even then birds retain heat for longer, so giving them as much time late into the evening as possible to eat will help improve weight gains. The earliest lights should be switched off in summer is 10pm, the Cobb recommendation is a 4 – 6 hour sleep period from day 8 onwards so switching the lights off at 10 or 12pm should not be an issue. Lights being switched off earlier than 10pm will result in birds still being too hot to want to eat and once the lights are off almost no feed intake will occur thus putting the birds behind their desired feed intake curve, each day this continues to happen puts the birds further and further behind in feed intake resulting in reduced growth.

When the weather is hot we all like to cool down with some or other cold drink, the same can be said for most animals including chickens. Water is the most important nutrient for poultry and it is highly correlated to feed intake. Keeping the water cool (below 27°C) will help keep the birds cool, making sure they receive their desired water intake which in turn will make sure they receive their desired feed

intake and therefore growth. Many growers use header tanks which are above the houses exposed to the direct sun thus heating the water, painting the tanks white can help reduce the heat but providing a shade cover for the tanks will work best. Regular line flushing, at least twice during the hot period of the day will also help keep the water cool. From my experience drinking water in houses with exposed header tanks on hot days with no line flushing measures between 33 - 36°C, this results in heat stressed birds and reduced weight gains.

Of course proper house ventilation management plays a major role in keeping the birds cool and healthy during the final week of production, however this varies widely depending on the size and type of house, ventilation system used, evaporative cooling system, local climate and daily weather patterns. The few simple management techniques I've outlined in this article can be applied to any poultry farm around South Africa and will help improve weight gains and mortalities in the final week of production.