

What are the effects of climate change on poultry farms?

Climate change means more heat stress for poultry. Heat stress is an above normal seasonal temperature increase or a confrontation with several very hot days. Since birds generally eat less during hot weather heat stress impacts all aspects of production: growth rates, quality and quantity of meat and eggs as well as immunity against diseases. Temperatures above 30-degree Celsius (common in recent times) trigger a reduction in body weight and foster higher mortality rates. It is likely that you have observed that when drinking water is hot, chickens do not drink and eat well. This means fewer eggs and smaller broilers.

In addition, higher temperatures lead to increased disease outbreaks. Overall, climate change puts the productivity of birds on poultry farms at risk. When productivity goes down, profits from chicken production also drop and the poultry farmer feels the pinch.

What can you do on your farm now?

Good news! There are strategies that you can immediately implement on your farm to reduce the effects of heat stress. We have talked to farmers like you during workshops and visits to their farms.

These farmers shared with us some tricks that are helping them ensure that climate change does not drastically affect productivity levels on their farms. You can do the same!



Source: Authors

How can you reduce the effect of the heat stress on the farm?

- Avoid stocking darker colored birds because they attract/absorb heat
- Maintain good ventilation
- If you can, stock the local breed such as Shika Brown and FUNAAB alpha. You can also stock varieties of white or light color breeds adaptable to heat



Source: Authors

How can you provide a cool environment and cold water to chickens when it is hot?

- Plant trees like plantain trees to provide shade to the birds
- Change the litter frequently to avoid accumulation of gas
- Observe your chickens to know the maximum number of birds you can hold in one pen without preventing free movement and air circulation. This means reducing the number of birds per square meter or the number of birds per cage.
- Use energy efficient light bulbs; they emit less heat.
- Give the chickens vitamin C supplements, tonic water to reduce the effects of heat and bury water pipes to keep the water cold
- Were you thinking about starting an aquaculture farm? Well, it can facilitate your access to water cooling if you build it on your poultry farm
- Preventive measures to avoid diseases are important. Follow the vaccination calendar and the administration of essential medicines.
- Use water misting to cool down the birds when it is too hot.
- If you use a water tank, you can release any stored hot water and pump up cold/fresh water from the borehole or the well immediately before giving it to the birds. If you use a well without a tank, you can fetch fresh water each time you need to provide drinking water to the birds. That way, the birds get to enjoy cold water and they can eat well

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- Water tanks can be located inside the pen to reduce the direct effect of sunlight during hot afternoons
- If you end up with hot water, put ice blocks in it to cool it down
- Feeding birds 4-5 hours before the peak of heat to ensure digestion is complete before heat period of the day. This allows for a better feed conversion ratio
- Give your birds anti-heat stress medication to help the birds fair better under heat stress

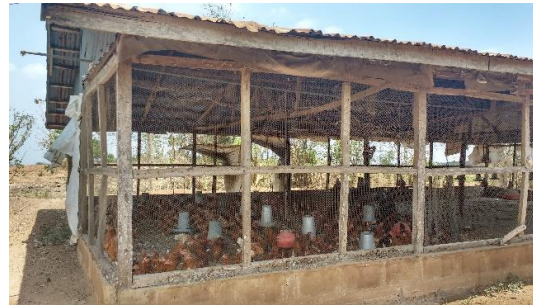
What else should you keep in mind for the future?

- In addition to actively implementing the easy/low cost strategies above, you can also start planning. Scientists predict that the effects of climate change will likely worsen in the region if global leaders do not reach an agreement about mitigation measures.
- If you are planning to build new chicken pens, you should be mindful of the orientation. The sun rises in the east and sets in the west. Thus the open sides (i.e. length) of the chicken pen should face the North and the South. This orientation means that the chicken pen receives less sun rays and remains cooler.
- Ensure that the roof is high enough and that the wall of the pen is low enough to allow for easy air flow/circulation.
- Optimize stocking density by season and heat levels

If your farm is in a remote area, you can even use wire fence instead of cement walls for the chicken pens. This will secure your farm and at the same time allow

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free air flow compared to a concrete or block wall that impairs air flow and circulation. Using aluminum sheets or asbestos for the roof is better than zinc because zinc sheets reflect the heat. For existing structures, you can consider installing fans to improve air circulation.



Source: Authors

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Pamphlet for Better Poultry Management Practices with Changes in Climate



Source: Authors

What is climate change?

Climate change is the long-term change of seasonal weather patterns. It is seen through higher temperatures, high variability and erratic rainfall, changing seasonal trends and more frequent extreme climatic events. Not all the changes are noticeable from day to day or season to season. However, over long periods of time they have impacts on your farms and activities.