

News & Comments

***Moringa oleifera*: An Additive in the Broiler that Improved the Feed Intake**

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One of the most popular poultry operations, broiler production has a quick turnover and is carried out on a variety of scales. It offers prospects for a higher intake of animal protein and has raised the standard of living for many rural and urban residents of Zimbabwe and other African nations. Particularly for small-scale farmers, it has produced money and opened up employment opportunities. Chicken is inexpensive, simple to prepare, high in protein, readily available fats, low in cholesterol, and full of nutrients. The antioxidant capabilities of *Moringa oleifera* can reduce lipid peroxidation and extend the shelf life of meat. Additionally, MO can enhance physico-chemical characteristics, animal and human health status, and growth in broilers through its medical effects.

This study aimed to ascertain the impact of feed based on *Moringa oleifera* on broiler chicken development, livability, and physicochemical characteristics (pH, colour, water holding capacity, and marbled fat).

The study was carried out at the Bindura University of Science Education, Astra campus. In this study, 45 Irvine's day-old chicks (Cobb 500) were employed. At 14 and 18 days, the chicks received infective bursal disease vaccinations at the hatchery. This study employed a Completely Randomized Design (CRD). For the first two weeks, all of the chicks were fed a typical starter diet. The difference between feed offered and feed that was left over was used to calculate feed intake. The percentage of food that is turned into meat is known as feed conversion efficiency. The Garcia et al. method was used to assess the Water Holding Capacity (WHC) of breast muscle. The marbling fat content was analyzed using the Soxhlet technique. To examine growth, pH, WHC, marbling fat content, and colour, the General Linear Model (GLM) procedure of the Statistical Analysis System.

As the level of MOLM inclusion rises, so do ash, Ether Extracts (EE), and Crude Fibre (CF). The final weights were not greatly impacted by MOLM. As the level of MOLM incorporation rises, the final weight of the birds decreases. The findings indicated that food had no discernible impact on the pH of breast meat. The findings examined the effects of dietary mixes of *Moringa oleifera* leaves and crushed maize on the antioxidative potential and physicochemical properties of broiler breast meat, support this. They discovered that dietary supplementation had no impact on pH. In this study, liveability was 100%, which may be a result of the usual methods of rearing. Under ideal circumstances, biosecurity and brooding were carried out. WHC of breast meat was impacted by diet. Every step of the meat processing process results in water loss. Low WHC meat results in a lower yield because meat



processing involves many steps. For higher yield and more consumer pleasure in terms of colour, flavour appearance, juiciness, and softness, meat with a high WHC is advised. No dietary intervention changed the marbling fat percentage of chicken breast meat.

The best outcomes were achieved when *Moringa oleifera* was added to broiler feed as a feed additive. These improvements included feed intake, average daily growth, and colour features (L^* = lightness, a^* = redness, and b^* = yellowness). The addition of MOLM to the broiler diet alters the colour of the feed and imparts flavour, increasing feed intake. In broilers fed T_2 (5%) and T_3 , the antibacterial effects of *Moringa oleifera* were demonstrated (7%). Despite sharing the same cages, they did not die from bloody droppings, in contrast, to control birds. Broiler meat's colour changed due to carotenoids in MO, which also improved the meat's capacity to retain water.

JOURNAL REFERENCE

Gadzirayi, C.T., A. Chikwanda and F. Tuwe, 2022. Growth performance, liveability and physico chemical properties of broiler chicken fed *Moringa oleifera* based diets. Int. J. Poult. Sci., 21: 82-89.

KEYWORDS

Moringa oleifera, broiler feed, meat qualities, water holding capacity, colour attributes

