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Ministry of Environment Water & Agriculture
Kingdom of Saudi Arabia المملكة العربية السعودية



ABSTRACT BOOK

MENA Poultry Conference

"Poultry Production under High Environmental Temperature"

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Riyadh, Saudi Arabia

**Welcome from Chairman of the
MENA Poultry Conference
"Poultry Production under High Environmental Temperature"**

Dear all attendance

On behalf of the Organizing Committee and the WPSA Saudi Branch it gives me a great pleasure to welcome you all to the MENA Poultry Conference "Poultry Production under High Environmental Temperature". This conference will provide a platform for the exchange of new ideas, information on the latest advances and for building up and strengthening professional relationships.

I would like to express my sincere gratitude to the esteemed scientists who will make this conference more meaningful with their presentations and the sponsors who made this conference possible.

I wish you all an enjoyable and productive time at the conference and a wonderful stay in Riyadh.

Prof. Ibrahim H. Al-Homidan

President of World's Poultry Science Association- Saudi Branch
Chairman of The Middle East and North Africa Poultry Conference

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Carcass characteristics of broiler chickens administered aqueous probiotics

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Abstract

Implications: In poultry production, probiotics may serve as a potential supplement for the enhancement of meat yield and better carcass traits. The use of probiotics helps in maintaining the intestinal microbial balance, thereby supporting digestion and as well as contributing to the general well-being of the birds. Additionally, it may also be required for the production of safer meat and egg for human consumption.

Introduction: Antibiotics have been used for several years in poultry production to enhance growth. However, some nations have banned the use of antibiotics for promoting growth, meat yield and carcass characteristics. Increasing microbial resistance to antibiotics and its eventual residual effect in the meat and egg for human consumption raises a lot of issues on food safety and negative health implications. Many researchers are interestingly searching for safe alternatives to the use of antibiotics in poultry production. One such alternative is the use of probiotics.

Materials and methods: The research was conducted at the Poultry Unit of the Federal University of Technology Minna, Niger State, Nigeria. One hundred unsexed day old Cobb 500 broiler chicks were weighed and randomly allotted to five treatments in a Completely Randomized Design. Treatment 1 (control) had no probiotics, while treatments 2, 3, 4 and 5 had 7.5, 15.0, 22.5 and 30.0 g of *Lactobacillus fermentum* probiotics per 4 litres of water, respectively. The birds were raised on deep litter. Single phase iso-caloric and iso-nitrogenous diets were fed to the broilers. Feed and water were provided *ad libitum*. Broilers were weighed weekly.

Results: Observation from results obtained in this study, revealed that broilers on treatment 5 recorded the highest ($P < 0.05$) final live weight and carcass weight. All the birds under probiotic treatment had a higher live weight than the control group. Major internal organs like the heart, liver and lungs were not significantly ($P > 0.05$) influenced by dietary treatments. Treatments 4 and 5 had similar drumstick weight which was significantly higher than the control treatment. The breast meat weight for the control was the same with treatment 5 birds. Broilers in treatment 1 (control), without probiotics, obtained the lowest weight for back meat cut.

Conclusion: The study showed that the supplementation of aqueous (*Lactobacillus fermentum*) probiotics of 30 g/4 litres of water (treatment 5) resulted in improved final live and carcass weight of broiler chickens when compared to the control. This may probably indicate that *Lactobacillus fermentum* probiotic is growth supportive. Future research may be directed towards determining the effect of the use of other beneficial live microbial species in the drinking water of poultry.