

## News &amp; Comments

**Locally Isolated *L. salivarius* could be Considered a Good Potential Probiotic***Jenson Easo*

The quality and quantity of the microbial load in poultry's gut, the morphology of the intestinal wall, and the immune system's activity are all intimately related to the growth performance and feed efficiency of the animal. Through the Fish and Animal Feed Act 2010 and Animal Feed Rules 2013, Bangladesh likewise implemented a complete prohibition on AGPs in animal and fish feed. The potential feed additives that have been suggested as alternatives to AGP include probiotics, various herbs, spices, essential oils, acidifiers and organic acids, prebiotics, and various dietary enzymes. Over the past ten years, probiotics have gained significant attention in the field of lactic acid bacteria research, with a particular focus on the genera *Lactobacillus* and *Bifidobacterium* for their potential to naturally improve chicken health.

Islam claimed that compared to other commercial chickens that might be used for commercial application, indigenous chicken from Bangladesh naturally has more healthy bacteria in their Gastrointestinal Tract (GIT). To ascertain the potential probiotic effects of *L. salivarius* and *B. thermophilum* isolated from local chicken cecal contents on growth performance, internal organ development, haemato-biochemical traits, and cecal microbial population for commercial use in broiler chicken, a feeding trial was carried out. In this study, their effectiveness in comparison to AGP was also examined.

The probiotic development project, "Development of multi-species/multi strains probiotic mixture from Bangladeshi indigenous isolates and their validation for possible use in the commercial chicken industry," provided the bacterial strains. Before usage, the isolated strains underwent further probiotic viability testing while being refrigerated at -80 EC. The haematological tests were carried out two hours after the blood was collected. The statistical program for social sciences (SPSS) version 16 was used to analyse the data. One-way ANOVA, Duncan's multiple range test, and LSD were all used to determine statistical significance.

The microbiota in the gastrointestinal tract, which is a component of the digestive environment, has a big impact on the well-being and productivity of poultry. Probiotics, therefore, offer a healthy intestinal environment with increased counts of advantageous microorganisms and can therefore improve poultry development performance. As it has been reported that dietary factors are less important than management and health issues for influencing feed intake in broilers, the difference between broilers and layers may be explained by the fact that broilers have been genetically selected for having a high



feed intake in comparison to layers. The findings unmistakably suggest that the broiler receiving probiotic-I (*L. salivarius*) is the most efficient at converting feed into live weight. There is evidence that both *Lactobacillus* and *Bifidobacterium* species can enhance digestion.

Locally isolated probiotic bacterial strains (*L. salivarius* and *B. thermophilum*) were non-pathogenic, safe, and advantageous to broilers via drinking water, suggesting that it could be a promising feed additive as antibiotic substitutes, improving some haematological traits and improving their health. This would enhance the growth performance of broilers. If live probiotics are as beneficial as freeze-dried formulations, which are typically given with feed, more research is needed to examine the underlying mechanisms and assess the economic implications of using them in broilers.

#### **JOURNAL REFERENCE**

Lita Biswas, Md. Anwarul Haque Beg and K.B.M. Saiful Islam, 2020. Impact of locally isolated probiotics on growth performances, haematobiochemical profiles and cecal microflora of broiler. *Int. J. Poult. Sci.*, 19: 586-595.

#### **KEYWORDS**

*Lactobacillus salivarius*, *Bifidobacterium thermophilum*, growth performance, haemato-biochemical profile, cecal microflora

