

BiOWiSH® MultiBio 3P

Broiler Chickens Texas A&M University

Adding BiOWiSH® MultiBio 3P to corn-based diets improves body weight gain and feed efficiency for broiler chickens

Background

BiOWiSH Technologies has established collaborations with universities and independent research firms to investigate the benefits of BiOWiSH® in a wide range of commercial poultry production settings.

These research studies highlight superior performance benefits with the addition of BiOWiSH® direct-fed microbials (DFMs) to various diet compositions, feed types, and application methods such as through drinking water systems. Moreover, our body of research, including a collection of commercial field trials, illustrates the benefits of improved litter quality, reduced ammonia levels, and reduced odor complaints as additional outcomes of BiOWiSH® supplementation in poultry production. All studies can be found online at biowishtech.com.

In the current study, the effects of BiOWiSH® MultiBio 3P were studied when added to corn based feed and given to broiler chickens. For this study, BiOWiSH Technologies partnered with Jason Lee, Ph.D., Associate Professor in the Department of Poultry Science at Texas A&M University (TAMU). Testing was done over the course of six weeks at Texas A&M AgriLife Poultry Research Facility in College Station, Texas.

Objectives

The objective of this study was to determine the benefits of BiOWiSH® MultiBio 3P on broiler weight gain and feed efficiency.

Solution

BiOWiSH® MultiBio 3P is a DFM that is recommended for use at all growth stages in poultry operations. It can be added to pelleted and extruded feeds.

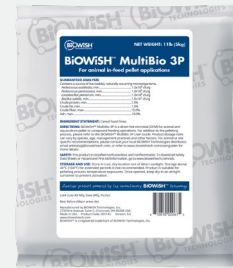
This study followed BiOWiSH recommended best practices by beginning BiOWiSH® MultiBio 3P supplementation at the day of hatch and maintaining proper concentrations by adding more BiOWiSH® with each feed addition. Dosage was 500 grams per ton, in accordance with the best management practices.

Please see the BiOWiSH® MultiBio 3P user guides, available online, for more information on recommended dosages, as they may vary by species and management practice.

Implementation Program

Broiler chicks were obtained from a commercial hatchery on day of hatch. Only chicks that appeared healthy were used in the study. Each chick was assigned to an experimental treatment group based on placement weight. Chicks were then wing banded and placed in floor pens containing tube feeders, continuous water lines, and used litter.

BiOWiSH® MultiBio 3P



All-natural direct-fed microbial (DFM) for pellet and extruded feed manufacturing

Available Sizes

- 5kg/11lbs
- 10kg/22lbs
- 25kg/55lbs

The number of chicks in each group is shown in Table 1.

Treatment group	Replicate pens	Birds per pen	Total
Control	10	35	350
BiOWiSH® MultiBio 3P	10	35	350

Table 1: Experimental group arrangements

The control pellet group was fed an unmedicated, commercial-type, corn-based diet, representative of US standard industry feed practices. The treatment group was fed the control diet with the addition of BiOWiSH® MultiBio 3P.

All feeds were steam pelleted between 85 and 90°C for three to seven seconds. Lighting, temperature, and ventilation conditions were monitored by a Rotem Platinum Junior. Broiler chicks were housed for the duration of the study in an industry-type tunnel ventilated broiler house at the TAMU Poultry Research Facility and provided *ad libitum* access to water and the treatment diet.

Results & Discussion

Overall, broilers receiving BiOWiSH® MultiBio 3P showed improved weight and feed efficiency when compared to birds fed the traditional corn-based diet.

BiOWiSH® supported higher average daily gain. Measurements throughout the study showed that broilers on the BiOWiSH® diet weighed more compared to birds receiving the control diet, as reported in Table 2.

Treatment	Day 14 body weight (kg)	Day 28 body weight (kg)
Control	0.194	0.674
BiOWiSH® MultiBio 3P	0.196	0.683

Table 2: Average body weight of birds during the study

At the conclusion of the study, BiOWiSH® MultiBio 3P treatment animals showed increased body weight and improved feed efficiency, indicated by lower feed conversion ratios (FCR). Broilers with BiOWiSH® added to their diet weighted an average of 63 grams more, with 3.6% better FCR than those on the control pellet diet, as shown in Table 3.

Treatment	Day 42 body weight (kg)	Day 42 FCR (weight/weight)
Control	2.741	1.721
BiOWiSH® MultiBio 3P	2.804	1.659

Table 2: Average body weight of birds during the study

Body weight is the average weight per bird.

Feed conversion ratios (FCR) are corrected for mortalities and weight adjusted.

FCR weight adjustment based on 27g of day 42 body weight equaling 1 point (0.01) of FCR.

The BiOWiSH® MultiBio 3P diet also resulted in a 21.6 ppm reduction in ammonium ion concentrations in litter samples. Ammonia can be detrimental to bird health and negatively impact performance, so reduced ammonium ion concentration in litter is desirable.

This study shows that BiOWiSH® MultiBio 3P is an effective DFM that improves body weights and feed efficiency. When added prior to the pelleting process of a corn based diet representative of industry standards in the US, BiOWiSH® MultiBio 3P increases growth and performance for broilers.



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