

COMPARISON OF THE EFFECTS OF THREE DIFFERENT TYPES OF PROBIOTICS ON THE AMYLASE ACTIVITIES OF THE SMALL INTESTINE MUCOSA OF BROILER CHICKS

Fazlollah Moosavinasab

*Department of Veterinary, Behbahan Branch, Islamic Azad University, Behbahan, Iran
E-mail: fzmoosavi@gmail.com*

ABSTRACT

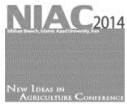
In recent years the use of additives in animal and poultry food and nutrition is highly regarded by researchers and specialists. One of the most important of these additives, microbial products that are used in diets chemically called probiotics.

Probiotics is unlike antibiotics (anti-life) it means pro- life. These words describe live microbial additives in food that can create a microbial balance in flora population in small intestine, prevent gastrointestinal infections, cause a positive effect on improving animal performance, and increase livestock and poultry growth factors.

We can distinct Probiotics from Antibiotics. Since Probiotics are living organisms it is difficult to determine their exact amount and behavior. The most important characteristics of Probiotics are that after using by animal and poultry, nothing will remain in tissues. Moreover, unlike antibiotics, they do not cause any microbial resistance. In this study, 180 one day-male chicks from the Ross type provided and randomly divided into four groups and kept in four separate areas in a saloon. Each group included three replicates, each comprising 15 chicks. A group called the control group and other groups were experimental groups, all conditions for the groups (control and experimental) were similar. The first day of the growing period, control group fed diets without probiotic other groups containing three different types of probiotics (the first group: bacteria + yeast, the second group: only bacteria and the third group: only yeast). According to NRC diets (without fish meal) were used in initial period (1- 21days) and growth period (22 to 42 days). Food and water were available freely. During the growing period all standard conditions of temperature, humidity, light, ventilation and management of all chickens in accordance with standard parameters were the same. in 21st and 42nd days of growing period after 3 hours of food deprivation, two chicks from each replicate (total of 24 chicks per day) were Randomly selected and cutting off carotid artery and jugular vein were killed and quickly the 1, 10, 30, 50, 70 and 90 percent of intestines' length were cut for enzyme activity study. Amylase activities was measured and compared. The results of this study using SPSS software linear model analysis were compared using two-way ANOVA and Turkey tests. ($\alpha \leq 5$).

Results showed that enzyme activity Amylase at the end of 21st day in primary small intestine a significant increase. But a there was no significant difference activity between experimental and control groups in 42nd days.

Keywords: Broiler, Chicks, Probiotics, Small Intestine, Amylase



The 1st International Conference on New Ideas in Agriculture
Islamic Azad University Khorasgan Branch
26-27 Jan. 2014, Isfahan, Iran

