ABSTRACT OF THESIS

Effect of in ovo Methionine supplementation on performance of broiler chicken

Shams Riaz

Course, level of education: Animal Nutrition and Feed Safety, MSc

Host Department/Institute: Department of Farm Animal Nutrition

Primary thesis advisor: Dr. Veronika Katalin Halas; Head of Department; Department of Farm Animal Nutrition

Delay in the feeding to newly hatched chicks usually take 24 to 48 hrs to reach the farms from the hatcheries. Post hatch rate of weight decrease due to starvation is 0.14 to 0.17 g per hour. That being the case it is crucial to feed the chicks as early as possible. *In ovo* feeding in the late embryonic stage before hatching could provide the nutrition that could stimulate the rapid growth of the chick's internal body systems. Aim of study was to evaluate the early nutritional strategies especially 0.5% DL-Methionine *in ovo* at day 17 of incubation on the performance parameters of the broiler bird. Hatching of 800 Ross 308 eggs (160*5 treatment groups) was carried out at MATE Kaposvar Department of Farm Animal Nutrition according to Aviagen management guide 2019. Hatching eggs are divided into 5 groups: No intervention (NI-0) with early feeding, *in ovo* saline group (IoS-0) with early feeding, No intervention (NI-48) with 48hrs delayed feeding, *in ovo* saline (IoS-48) with 48hrs delayed feeding, *in ovo* methionine (IoM-48) with 48hrs delayed feeding. Parameters measured in the experiment are BW, ADG, FI and FCR. The feed was pelleted based on corn soybean diet divided into 3 feeding phases: Starter phase (1-10 days), grower phase (11-21 days) and finisher phase (22-35days). Feed and water were given *ad libitum* from the self-feeders. It was concluded from the experiment that feeding chicks with no delay have positive effect on the body weight of chicks until the end of the experiment. Average daily gain of early fed chicks is significantly higher than the delayed fed groups until 2nd feeding phase. During the finisher diet phase, the average daily gain was not significantly different among all treatment groups. FI and FCR was also not different by the end of experiment. With reference to the experiment results, it can be deduced that early feeding is crucial for the chicks 48 hours of delay in feeding can prolong the days needed to reach the market weight being not economical for the farmer. *In ovo* methionine intervention at Day 17 into the amnion does not improve BW, ADG, FI and FCR of broiler chicks from day 1 to 35.