SURVIVAL ABILITY OF BACILLUS PROBIOTICS IN FEED MANUFACTURING AND EFFECT ON BROILER PERFORMANCE AND AMMONIA CONCENTRATION IN ILEUM

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Limitation of antimicrobial use in poultry, food safety and environmental condition are highly concerned in poultry production nowadays. Several alternative products are selected to supplement in poultry feed in order to support expectation on production including probiotics. This study aims to evaluate survival ability of probiotics in feed manufacturing, effect on broiler performance and ammonia reduction in ileum. One hundred and fifty male Arbor Acres Plus broiler were randomly allocated to randomized complete block design with 2 treatments, each treatment comprise of 5 replications with 15 birds per unit. Birds in treatments 1 (T1) received control diet and bird in treatments 2 (T2) received control diet with *Bacillus subtilis, Bacillus licheniformis and Bacillus pumilus* probiotics at least 2.5x103 cfu/ton feed (0.25 kg of probiotics per ton feed). The probiotics has been supplemented to broiler feed prior to process with conditioning temperature 82°C and pelleting. After pelleting process, number of *Bacillus spp*. in T2 feed (1.6 x 105 cfu/g) were higher than control diet (T1) (7.77 x 103 cfu/g) indicated ability of survival of probiotics strains through manufacturing. At 42 days of age, performance data and ammonia in ileum were observed. Performance data showed statistical significant (P<0.05) on FCR 1.537 and 1.490, performance index 418 and 435 in T1 and T2 group respectively. Levels of ileum ammonia were 3.0074 in T1 and 2.811in T2. The results reveal a potential of using multi-strain *Bacillus spp.* probiotics in poultry feed and aims of use in productive performance and ammonia reduction in broiler.

Keyword : probiotics