The Effect of Giving Bacillus Kampung Subtilis Xylanase Enzyme in Feed on Chicken Local Performance

Muhammad Miftahul Choiri
Poultry Agribusiness Study Program
Department of Animal Science

ABSTRACT

This study aimed to evaluate the effect of adding xylanase enzyme from Bacillus subtilis to feed on the performance of local chickens, particularly in terms of feed intake, body weight gain, and feed conversion ratio . The research was conducted at the Feed Processing Technology Laboratory and experimental poultry house in Antirogo Village, State Polytechnic of Jember, from May to December 2023. The material used was 100 unsexed day-old chicks (DOC) of local chickens, and the treatment began when the chickens were 10 weeks old. The study used a Completely Randomized Design (CRD) with four treatments (P0 = 0 ml/kg, P1 = 2 ml/kg, P2 = 4 ml/kg, P3 = 6 ml/kg xylanase enzyme) and five replications. Observed parameters included feed intake, body weight gain, and feed convertion. The results showed that xylanase supplementation had a significant effect on feed intake (P<0.05), with the lowest value in P1 (555.87 g/bird) and the highest in P0 (579.47 g/bird). However, there was no significant effect on body weight gain (P>0.05), nor on feed covertion (P>0.05), although the best feed convertion was found in P1 (4.58). The reduced feed intake in the treatment groups indicates that xylanase improved fiber digestibility, allowing chickens to meet their energy needs with less feed. However, since the treatment was applied during the finisher phase (10–13 weeks), the effect on growth and feed efficiency was not fully optimized. In conclusion, xylanase from Bacillus subtilis significantly affects feed intake, but not body weight gain or feed covertion. The recommended optimal dose is 2 ml/kg of feed..

***Keywords** : local chicken, xylanase, Bacillus subtilis, performance*