

ABSTRACT

Three experiments were run to study the effect of dietary microbial xylam 500 (xylanase + amylase(500 , 750) , enzyme (Experiment 1) , Phytase (Nutrias P) enzyme (1000, 1500) (Experiment 2) and their combination (Experiment 3) on performance and carcass characteristics of broiler chicks fed on diets containing 15% Prosopis pods (mesquite) . The experimental design used in each experiment was complete randomized design (CRD). Two control diets were formulated in each experiment , (A) negative control diet (without Prosopis pods or enzymes) and (B) positive control diet (with 15% Prosopis pods).In experiment one , two level of microbial xylam , 500 and 750 g/ton were added to the positive control diet . In experiment two, two levels of microbial Phytase, 1000 and 1500 g/ton were added to the positive control diet. In experiment three 4 dietary combinations of xylam and Phytase, (500 xylam and 1000 Phytase g/ ton); (750 xylam and phytase1000 g/ ton); (500xylam and Phytase 1500 g/ ton); (750 xylam and phytase1500 g/ ton) respectively were added to the positive control diet , using 168 chicks, four replicates , each of 7 chicks . All diets in each experiment were formulated to be iso-caloric (3100 K cal/Kg) and iso-nitrogenous crude protein (22.8%) to meet the nutrient requirements for broiler (**NRC 1994**). Experimental parameters covered performance, slaughter and carcass data and economic appraised. The results showed that addition of microbial xylam and Phytase enzymes, individually or in combination to diet containing Prosopis pods improved significantly ($p \leq 0.05$) the body weight gain, feed intake and feed conversion ratio values of broiler chicks throughout the experimental period. No significant differences were observed between Prosopis pods diets supplemented with the enzymes, separately or on in combination with the negative control diet in body weight gain, feed intake and feed conversion ratio values of broiler chicks. The mortality rate was not significantly influenced by the dietary treatments. The results indicated that there were no significant differences among all treatment groups in percentages of carcass dressing , Giblets (liver, heart and gizzard) , commercial cuts (thigh, drumstick and breast) and their percent of meat, meat chemical composition (moisture ,protein ,fat and ash) and subjective meat quality parameters (tenderness , juiciness ,flavor and color) of broiler chicks

Economic appraised values were profitability ratio (1.096) of group D (750 gm xylam/ ton) was the highest of the test groups. Profitability ratio (2.163) of group C (500 xylam + 1000 gm / ton Phytase) was the highest of the test groups. Profitability ratio (1.68) of group C (1000 gm / ton .Phytase) was the highest of the test groups