

### **Abstract**

A study was done to investigate the effect of yeast culture (Diamond V XPC) and alloenzyme (Allzyme SSF) on the performance and gut morphology in broiler chicken. One hundred and sixty broiler chicks were fed on diets formulated according to Kenya Bureau of Standards (KeBS) specifications and supplemented with either alloenzyme (0.02%) or yeast culture. Four treatment diets were formulated. Diet 1 was supplemented with yeast culture, Diet 2 both yeast culture and alloenzyme, Diet 3 alloenzyme only and Diet 4 was the control diet and yeast culture and enzymes were not added. The birds were slaughtered when they were 21 and 42 days old and the lengths of rectum, caeca, ileum, duodenum, jejunum and the weights of the gizzard, liver and bursa of Fabricius were recorded. Performance parameters such as feed intake, weight gain, body weight, Feed Conversion Ratio (FCR) and Protein Efficiency Ratio (PER) were also recorded on the 21st and 42nd day of age. There were no significant effects ( $P > 0.05$ ) of yeast culture on growth performance and on gut morphology across treatments. However, birds fed on diets supplemented with yeast culture had a trend of increased performance compared to the control diet. Alloenzymes had no effects on broiler performance and gut morphology.