

## عنوان مقاله:

The effects of herbal plants on Mucin 2 gene expression and performance in ascetic broilers

## محل انتشار:

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## خلاصه مقاله:

**BACKGROUND:** The mucus layer plays an important role as an intermediate for the protection of the gut against acidic chyme, digestive enzymes, and pathogens; in addition, it acts as a lubricant and facilitator of nutrient transportation. Phytochemical compounds seem to promote intestinal mucus production. **OBJECTIVES:** The current study was conducted to investigate the effects of low and high levels of energy and amino acids in combination with turmeric, thyme, and cinnamon on chicken performance and expression of mucin 2 gene. **METHODS:** The eight experimental groups consisted of diluted and condensed diet with and without the addition of 5g/kg of each turmeric, thyme, and cinnamon to the diet. Chicken performance was recorded. Expression analysis of the mucin 2 gene was carried out by quantitative RT-PCR. **RESULTS:** Body weight gain, feed intake, FCR, and mortality rate were not affected by diets ( $p>0.05$ ). A significant ( $p<0.05$ ) reduction of the mucin 2 gene expression was observed in chickens fed by condensed diet; however, the expression increased by supplementation of turmeric, thyme, and cinnamon. **CONCLUSIONS:** These results, in addition to the function of herbs in increasing the activity of some enzymes which is possibly related to the mucin biological pathways, showed that the application of turmeric, thyme, and cinnamon could be useful in poultry diets. It appears that supplementation of turmeric, thyme, and cinnamon could increase mucin 2 gene expression in the small intestine, and this can improve intestinal digestive function and defense

## کلمات کلیدی:

broiler chicken, cinnamon, mucin 2 gene expression, thyme, turmeric

## لینک ثابت مقاله در پایگاه سیویلیکا:

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