

### عنوان مقاله:

Effect of wheat bran inclusion in barley-based diet on villus morphology of jejunum, serum cholesterol, abdominal fat and growth performance of broiler chickens

### محل انتشار:

دوفصلنامه علوم و فناوری دامداری, دوره 4, شماره 1 (سال: 1395)

تعداد صفحات اصل مقاله: 8

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#### خلاصه مقاله:

This research was conducted to investigate the effect of inclusion of wheat bran (as a source of insoluble fiber) in a barley-based diet, fed from 11 to 42 d of age, on villus morphology of jejunum, serum cholesterol level, abdominal fat pad and growth performance of broiler chickens. Three hundred and thirty six 10-d-old female Ross 308 chicks were allocated to six diets with four replicates of 14 birds per diet. The diets were a corn-based diet (CN); barley-based diet without (BL) or with multi-enzyme (BL+E, 500 mg/kg of the diet, Rovabio Excel 10%); and barley based-diet that contained 4 (BL+WB4), 8 (BL+WB8) or 12 (BL+WB12) percent wheat bran. Average daily gain, average daily feed intake and feed conversion ratio (FCR) were measured from 11 to 42 d of age. Serum cholesterol level was measured on d 24. Villus height (VH) and villus surface area (VSA) of jejunum, and relative weight (% of body weight) of abdominal fat pad were measured at 42 d of age. The birds receiving CN, BL+E, BL+WB4 and BL+WB8 had significantly (P < 0.01) lower FCR than those feeding on BL. VH (P < 0.01) and VSA (P < 0.001) in the jejunum increased in birds receiving CN, BL+E and BL+WB12 compared with BL birds. Serum cholesterol level in birds fed with BL+WB12 diet decreased (P < 0.05) compared with CN birds. The birds fed with BL, B+WB4, B+WB8, B+WB12 diets showed lower (P < 0.05) relative weight of abdominal fat pad compared with CN diet. In conclusion, the results of this study showed, when broiler chickens fed barley-based diet, the inclusion of lower levels of wheat bran in diet could have a positive effect on feed efficiency, whereas serum cholesterol level, VH and VSA were influenced with the .inclusion of highest level of wheat bran

### کلمات کلیدی:

Barley, broiler, villus morphology, performance, cholesterol, wheat bran

## لینک ثابت مقاله در پایگاه سیویلیکا:

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