

Effects of high fiber diet on the meat quality of finishing black pigs ⁽¹⁾

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Abstract

The purpose of this study was to evaluate the effects of feeding with a high fiber diet on the meat quality of finishing black pigs. A total of thirty-two (16 barrows and 16 gilts) crossbred black pigs (25% Meishan × 75% Duroc) with an average body weight (BW) of 57.8 kg, were randomly divided into two groups which were fed with the control and high fiber diets, respectively. The crude fiber levels in the diets were 3% and 14%. Pigs were allocated into quadruplicate with 4 pigs in each pen. Water and feed were provided *ad libitum*. The experiment was terminated when the pigs weighed 117 kg. Twelve pigs from each group were sacrificed for meat quality analysis. The results showed that the moisture content of *Longissimus dorsi* muscle was significantly ($P < 0.05$) lower in the high fiber diet group. The marbling scores of the color values of a^* and b^* of backfat were higher ($P < 0.05$) in the high fiber diet group. In addition, the flavor, juiciness, tenderness and overall acceptability scores were significantly ($P < 0.05$) lower in the high-fiber diet group than in the control group. Besides, there were no differences in crude protein and fat, L^* , a^* , b^* values, muscle color, firmness and color values of *Longissimus dorsi* muscle between groups. Although the high-fiber diets group had higher marbling score and backfat of redness (a^*) and yellowness (b^*) values of *Longissimus dorsi* muscle, the water content and sensory evaluation of *Longissimus dorsi* muscle were lower.

Key words: Black pigs, High fiber diet, Meat quality.

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