



饲养方式对甘南州藏猪肉营养成分、脂肪酸组成及挥发性化合物的影响

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Effects of Feeding Systems on Meat Nutrient Contents, Fatty Acid Composition and Volatile Compounds of Tibetan Pigs in Gannan Prefecture

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摘要 本文旨在研究不同饲养方式对甘南州藏猪肉营养成分、脂肪酸组成及挥发性化合物的影响。选取甘南州当地藏公猪仔猪48头, 随机分为4个饲养组: 天然放养组(I组)、基础饲粮组(II组)、基础饲粮+葵花籽油组(III组)、基础饲粮+鱼油组(IV组)。于6月龄时屠宰并进行相关指标的测定。试验结果显示: 1) 与II、III、IV组相比, I组猪肉的粗蛋白质含量显著降低($P<0.05$), 而水分含量显著升高($P<0.05$), 不同饲养方式对猪肉粗灰分和矿物质营养成分没有显著影响($P>0.05$)。2) I组C18:2n-6含量显著高于II、III组($P<0.01$), C18:3n-3含量显著低于II、III组($P<0.01$), III组多不饱和脂肪酸对饱和脂肪酸的比率(P/S)显著高于其他各组($P<0.01$), IV组n-3脂肪酸含量显著高于II、III组($P<0.01$)。3) I组烃类含量显著高于其他各组($P<0.05$), 醛类和含硫化合物含量显著低于其他各组($P<0.01$), 而各组醇类、酮类、酸类含量差异不显著($P>0.05$)。由此可见, 天然放养方式对甘南州藏猪肉营养成分有影响, 而油脂强化则无影响。不同饲养方式会改变其脂肪酸组成, 同时会对其各类挥发性化合物的比例产生影响。

关键词: 藏猪肉; 饲养方式; 营养成分; 脂肪酸组成; 挥发性化合物

Abstract: The purpose of this study was to investigate the effects of different feeding systems on meat nutrient contents, fatty acid composition and volatile compounds of Tibetan pigs from Gannan prefecture. Forty eight pigs were randomly assigned to four diets: pasture grazing group (group I), basal diet group (group II), basal diet with sunflower seed oil group (group III) and basal diet with fish oil group (group IV). Nutrient contents, fatty acid compositions and volatile compounds were determined after slaughter after feeding 6 months. The results showed as follows: 1) compared with group II, III and IV, the CP content of group I was decreased significantly ($P<0.05$), however, the moisture content was increased significantly ($P<0.05$), and the ash and mineral contents had no significant difference ($P>0.05$). 2) The C18:2n-6 content of group I was significantly higher than that of group II and group III ($P<0.01$), but the C18:3n-3 content of group I was significantly lower than that of group II and group III ($P<0.01$), the P/S ratio of group III was significantly higher than that of other groups ($P<0.01$), and the n-3 fatty acid contents of group IV was significantly higher than that of group II and group III ($P<0.01$). 3) The hydrocarbon content of group I was significantly higher than that of other groups ($P<0.05$), aldehyde and sulphocompound of group I was significantly lower than that of other groups ($P<0.01$), but the alcohol, ketone and acid showed no significant difference ($P>0.05$). These results indicate that pasture grazing has significant effects on nutrient contents of pork from Tibetan pig, but adding oil in basal diet has no significant difference. Different feeding modus can change the fatty acid compositions of pork from Tibetan pig, as well as the proportion of volatile compounds. [Chinese Journal of Animal Nutrition, 2011, 23 (4) : 686 -694]

Keywords: pork from Tibetan pigs; feeding systems; nutrient contents; fatty acid composition; volatile compounds

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