

动物科学

## 杂交改良对撒坝猪肌肉品质的影响——肌肉化学成分分析

贾俊静<sup>1</sup>, 刘勇<sup>1</sup>, 陈克麟<sup>1</sup>, 李青<sup>1</sup>, 戴志明<sup>1</sup>, Mark Jois<sup>2</sup>, Graham H McDowell<sup>2</sup>

( 1.云南农业大学,云南省动物营养与饲料重点实验室, 云南 昆明 650201;  
2.澳大利亚拉筹伯大学, 维多利亚 墨尔本 3086 )

收稿日期 2005-3-10 修回日期

**摘要** 选用24kg左右的去势撒坝猪及其约长撒三元杂交猪各7头, 根据基因型分成2组, 按活重变化分为3个试验期 (前期20~35kg, 中期35~60kg和后期60~90kg), 在同一试验期内饲喂同样的日粮进行饲养试验, 当活重达90kg进行屠宰试验, 研究杂交改良对云南省本地猪种撒坝猪肌肉化学成分的影响。撒坝猪通过杂交改良后, 生长速度和瘦肉率显著提高, 但其肉品质均有不同程度的下降。杂交后代鲜肉的总氨基酸含量有降低的趋势, 但统计学差异不显著 ( $P>0.05$ ); 撒坝猪鲜肉的赖氨酸含量显著地比杂交猪的高 ( $P<0.05$ ), 在干肉样中, 二者的差异不显著 ( $P>0.05$ ); 然而, 撒坝猪的组氨酸含量在鲜样和干样中都显著地比杂交猪的高 ( $P<0.01$ )。肌肉中脂肪酸的测定结果显示, 撒坝猪肌肉中的油酸 ( $C_{18:1}$ ) 和亚麻酸 ( $C_{18:3}$ ) 的含量显著地比杂交猪的高 ( $P<0.05$ ); 尽管统计学的差异不显著, 撒坝猪肌肉中的豆蔻酸 ( $C_{14:1}$ ), 和棕榈油酸 ( $C_{16:1}$ ) 显示了比杂交猪的高趋势 ( $P>0.05$ ); 然而, 杂交猪肌肉中亚油酸 ( $C_{18:2}$ ) 的含量显著地比撒坝猪中的高 ( $P<0.05$ ); 两个组的棕榈酸 ( $C_{16:0}$ ), 硬脂酸 ( $C_{18:0}$ ) 和花生酸 ( $C_{20:0}$ ) 含量相同 ( $P>0.05$ )。

**关键词** [撒坝猪](#); [肌肉品质](#); [氨基酸](#); [脂肪酸](#)

分类号 [S 828.1](#)

## Effect of Crossbred (Genotype) Selection on the Meat Quality in Saba Pigs— Amino acid and Fatty Acid Composition of the Lipid in Lean Muscle

JIA Jun-jing<sup>1</sup>, LIU Yong<sup>1</sup>, CHEN Ke-ling<sup>1</sup>, LI Qing<sup>1</sup>, DAI Zhi-ming<sup>1</sup>, MARK Jois<sup>2</sup>, Graham H McDowell<sup>2</sup>

(1.Key Laboratory of Animal Nutrition and Feed of Yunnan Province, Y A U, Kunming 650201, China;  
2.La Trobe University, Australia, Vic 3086 )

### Abstract

Seven Saba barrows and commercial hybrid barrows [Yorkshire ♂ × ♀ (Large White ♂ × Saba ♀) ] weighing about 24 kg were fed ad libitum the same feed during each experimental periods when pigs had LW in the ranges 20~35kg (Period I) , 35~60kg (Period II) and 60~90kg (Period III) to investigate the effect of crossbred (genotype) selection on amino acid and fatty acid composition of the lipid in lean muscle (*L. dorsi*) . Lysine content of fresh muscle in the Saba pigs was significantly higher ( $P<0.05$ ) than for the hybrid pigs but there was no significant difference for lysine content in the dried sample ( $P>0.05$ ) . The only other significant difference measured was for histidine, which was significantly higher ( $P<0.01$ ) for the Saba pigs than the hybrid pigs in both fresh and dried tissue. Saba pigs had significantly higher ( $P<0.05$ ) levels of oleic ( $C_{18:1}$ ) acid and linolenic acid ( $C_{18:3}$ ) than the hybrid pigs. The myristic ( $C_{14:0}$ ) and palmitoleic ( $C_{16:1}$ ) levels tended to be higher in the Saba pigs but linoleic acid ( $C_{18:2}$ ) levels was significantly higher in the hybrid pigs than the Saba pigs ( $P<0.05$ ) . Palmitic ( $C_{16:0}$ ) , stearic ( $C_{18:0}$ ) and eicosanoic ( $C_{20:0}$ ) acid contents were similar for the two genotypes ( $P>0.05$ ) .

**Key words** [Saba pigs](#); [meat quality](#); [amino acid](#); [fatty acid](#)

DOI:

### 扩展功能

#### 本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(197KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

#### 服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

#### 相关信息

- ▶ [本刊中 包含“撒坝猪; 肌肉品质; 氨基酸; 脂肪酸” 的相关文章](#)
- ▶ 本文作者相关文章

- [贾俊静](#)
- [刘勇](#)
- [陈克麟](#)
- [李青](#)
- [戴志明](#)
- [Mark Jois](#)
- [Graham H McDowell](#)

