

# Effect of the method of castration on growth performance and boar taint.

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## Objective:

The method of castration can affect growth performance, quality of pork meat and economic of pork production.

## Introduction:

Compared with barrows and gilts, fattening entire male pigs appears to be more profitable, mainly due to better growth efficiency due to improved feed conversion and improved carcass leanness. However, the occurrence of “boar taint” in pork of boars represents a significant problem. Boar taint can be eliminated for example, by surgical castration or immunocastration. The latter prevents the occurrence of boar taint while preserving the positive effects of testicular steroids and anabolic hormones occurring in males before second vaccination.

## Materials & Methods:

A total of 52 pigs of the D × (LW × L) crossbreed were assigned into 3 groups: **boars** ( $n = 18$ ); **immunocastrates** ( $n = 16$ ); **barrows** ( $n = 18$ ). Barrows were surgically castrated on day 3 of age. The immunocastrates were injected with Improvac® when they were 94 and 115 days old. The pigs were slaughtered at 154 days of age. All pigs were fed ad libitum a commercial diets.

Contents of androstenone and skatole in the fatty tissue were determined according to the methodology of high-performance liquid chromatography by Okrouhlá *et al.* (2013).

The following traits were monitored and calculated weekly: body weight (kg), daily feed intake (kg/d) and average daily gain (g/d), feed conversion ratio (kg/kg).

In addition, carcass weight (kg), lean meat (%) and backfat thickness (mm) were measured at slaughter. The data were analysed using the GLM procedure in SAS.

## Results:

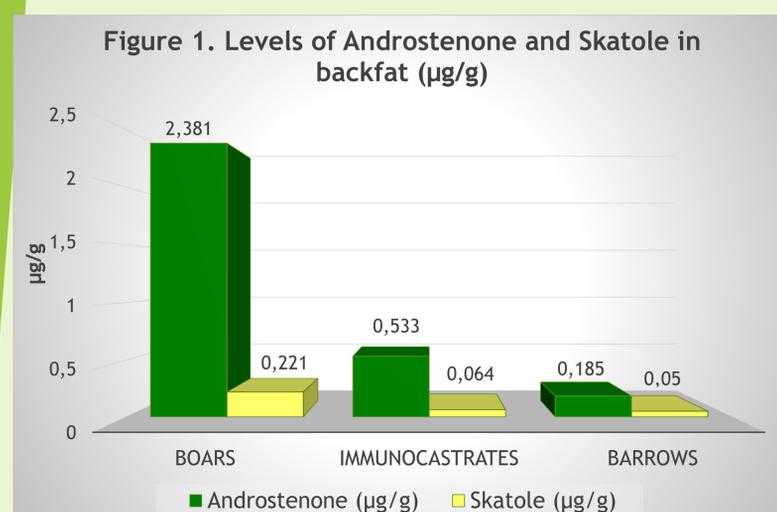


Table 1. Growth performance parameters and meat quality traits of boars, immunocastrates and barrows

Variable	Boars	Immunocastrates	Barrows	P
Body weight (kg)	106.2 <sup>a</sup>	106.99 <sup>a</sup>	105.9 <sup>a</sup>	NS
ADG (g/day)	1169 <sup>a</sup>	1181 <sup>a</sup>	1193 <sup>a</sup>	NS
Feed intake (kg/day)	2.62 <sup>a</sup>	2.68 <sup>a</sup>	2.83 <sup>b</sup>	*
Feed conversion ratio	2.29 <sup>a</sup>	2.23 <sup>a</sup>	2.38 <sup>a</sup>	NS
Carcass weight (kg)	79.2 <sup>a</sup>	80.7 <sup>a</sup>	81.8 <sup>a</sup>	NS
Lean meat (%)	60.3 <sup>a</sup>	59.5 <sup>a</sup>	58.5 <sup>b</sup>	*
Backfat thickness (mm)	11.5 <sup>a</sup>	12.6 <sup>a</sup>	17.1 <sup>b</sup>	*
IMF (%)	2.18 <sup>a</sup>	2.13 <sup>a</sup>	2.31 <sup>a</sup>	NS

<sup>ab</sup> P<0.05



## Conclusion:

- Overall growth performance did not differ between immunocastrates and boars.
- On the other hand, significant differences between barrows and the other groups were observed.
- The greatest backfat thickness, the lowest lean meat percentage and the greatest daily feed intake ( $P < 0.05$ ) were observed in barrows.