

Carcass quality of Improvac™ treated boars raised in Germany

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Objective

Active immunization against gonadotrophin-releasing factor (GnRF) is an alternative to surgical castration especially from a welfare point of view. The objective of this study was to evaluate the effect of a GnRF-vaccine (Improvac™; Pfizer Animal Health) on carcass quality under commercial German production conditions.

Materials and Methods

Pigs (n=230) were randomly allocated to treatments (T1=surgically castrated; T2=Improvac treated) within the first week of life. Having spent 6 weeks in the nursery, 96 animals per treatment group were randomly selected and raised in single-sex fattening pens with 12 pigs in each. T2 animals received the first vaccination when allocated to the fattening unit at age 10 weeks and the second at age 21 weeks, 4-5 weeks prior to slaughtering. In addition 12 untreated males (intact boars) were included in the study (figure 2). Sensory analyses were performed by two independent veterinary authorities (Department of Meat Hygiene, Veterinary Office at Torgau/Oschatz and the Center for Veterinary Public Health, University of Leipzig).

Results

Carcasses of the treatment groups differed significantly in favour of Improvac treated animals (table 1).

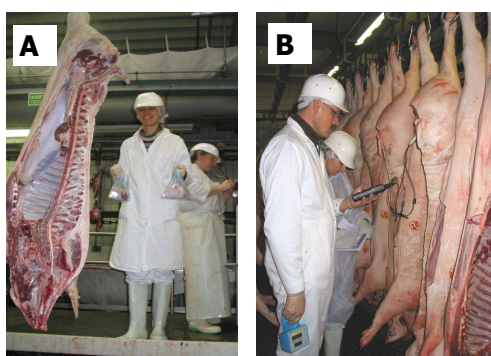


Fig. 1: Sample collection for sensory analysis (A) and carcass quality evaluation (B).

Table 1: Carcass parameters (arithmetic means and $\pm$ standard deviation) in T1 and T2 animals

criteria	surgical castrates (T1)	Improvac boars (T2)
carcass weight kg	94.8 $\pm$ 8.90	97.7 $\pm$ 8.00
lean meat %	54.2 $\pm$ 3.44	56.6 $\pm$ 2.60
loin muscle mm	57.3 $\pm$ 5.18	59.1 $\pm$ 4.25
back fat mm	18.0 $\pm$ 3.90	15.6 $\pm$ 2.00

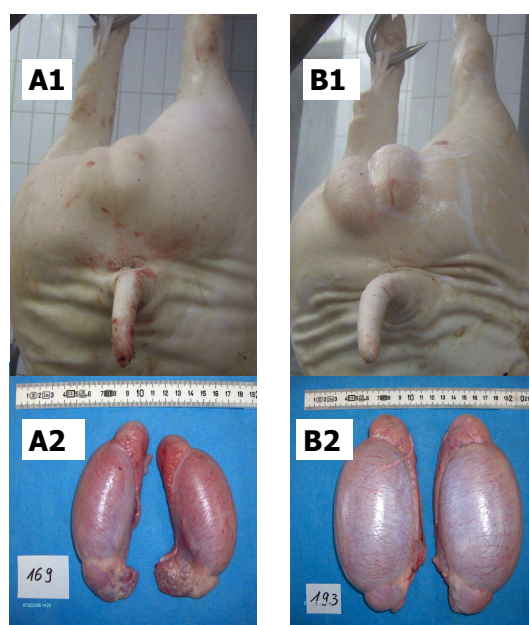


Fig. 2: Testes in Improvac treated animals (Fig. A1, A2) and intact boars (Fig. B1, B2).

Organoleptic anomalies, particularly pronounced sexual odour, as assessed in a blinded examination by the two independent veterinary authorities were not detected in any of the carcasses.

Conclusion

Our results demonstrate the prevention of boar taint and the improvement of carcass quality by the use of Improvac under commercial German pig fattening management.