Immunocastration in heavy pig production: growth performance and carcass characteristics

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Immunocastration is an effective method to prevent boar taint, avoiding pain and stress due to surgical castration. Immunocastration maintains good productive performances, with faster growth rate and better feed conversion than barrows. Also, it is associated to heavier carcasses, higher percentage of lean meat and lower fat thickness. Few studies evaluated these aspects in heavy pig production: our aim is to compare growth performance and carcass characteristics in immunocastrated and surgically castrated pigs, raised for heavy pig production.

166 commercial-hybrid male pigs were randomly allocated to two treatment groups: Immunocastration (IC; N=83), pigs receiving 4 doses of Improvac® at 15, 22, 32, and 36 weeks of age; Surgical Castration (SC; N=83), pigs surgically castrated at 4 days of age. Animals were kept under the same feed and housing conditions, in compliance with Dir. 2008/120/EC. IC and SC pigs were slaughtered respectively at 40 and 41 weeks of age. Carcass classification was made accordingly to Decision 38/2014/EC using the Fat-O-Meter system. The average daily gain was 1,020 g in IC and 770 g in SC pigs. Despite the slightly shorter fattening period, IC pigs were significantly heavier (T-Test; P=0.007), with a mean weight of 180.99±14.54 kg, while SC pigs weighted 171.32±12.52 kg. Hot carcass weight also resulted significantly higher for immunocastrated pigs (T-Test; P=0.007): 150.54±12.48 kg for IC and 145.10±10.75 kg for SC. The lower mean fat and muscle thickness of IC (30.38±4.94 mm and 55.34±8.94 mm, respectively) resulted in a higher mean lean meat content (51,67%). Our results confirm that immunocastration is an interesting alternative to surgical castration in heavy pigs, as neither performance nor productive quality are negatively influenced. Further studies are required to evaluate sustainability in terms of animal welfare and economic impact in this production system.