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TITLE

EFFECT OF VACCINATION AGAINST GNRIF IN DIFFERENT PRODUCTION SYSTEMS: A PRACTICAL ALTERNATIVE TO PHYSICAL CASTRATION AND ENTIRE MALE PRODUCTION IN EUROPE

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CONTENT

Background and Objectives

Physical castration (PC) of male piglets is common practice to prevent boar taint in meat from entire males (EM), but is increasingly controversial. The European industry is looking for effective, practical, economical and acceptable alternatives to interest groups. Vaccination against gonadotropin releasing factor (GnRF) with Improvac®, Zoetis (IM) is a proven alternative to PC and EM production. The objective was to compare the performance of IM, PC and EM pigs using a meta-analysis approach.

Materials and Methods

Extensive literature review of Improvac® publications (305) found 46 studies suitable for inclusion, covering 11,889 pigs and reporting average daily gain (ADG), feed conversion ratio (FCR), and live weights at slaughter (LW). Analyses were grouped by hot carcass weights (light <90.9kg, medium 90.9-97.7kg, heavy >97.7kg) to reflect different pork production systems. Calculations were conducted with Comprehensive Meta-Analysis V. 2.2 (Biostat, Englewood, NJ)

Results

In comparison with PC, light, medium and heavy pigs, IM had significantly better ADG (32.43, 15.78 and 56.37 g/day), improved FCR (-0.232, -0.212 and -0.262 kg/kg), and higher LW (1.373, 2.138 and 2.618 kg – light difference not significant). Carcasses of IM and PC had similar very low risk for boar taint (androstenone and skatole, P>0.05). In comparison with EM, light and medium IM pigs (heavy EM data not available) had significantly better ADG (65.86 and 51.06 g/day), slightly worse FCR (0.067 and 0.065 kg/kg) and higher LW (2.623 and 8.076 kg). EM carcasses had a significantly higher risk of boar taint than IM (P<0.0001).

Conclusions

Male pigs managed with Improvac® perform better than PC and produce meat free of boar taint, without piglet mutilation. IM grow faster than EM with a low negative impact in feed efficiency, giving the opportunity to raise more profitable heavier pigs without risk of boar taint or use of PC.