Abstract P158

The Effect of Sanitary Precautions during Non-Surgical Deep Intrauterine Transfer (nsET) of Vitrified Blastocysts to Meishan Gilts

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Piglets have been born after nsET of vitrified blastocysts in gilts (Cuello et al., 2005, Anim. Reprod. Sci. 83:275–286) but despite use of aseptic measures, some recipients showed vaginal discharges few days after nsET. The aim of this study was to evaluate the effects of environmental conditions at the time of nsET and to improve the gestation rate in recipient Meishan gilts. nsET was performed inside of a pigstycy in 2 different rooms: 1- In a specifically dedicated and clean room without pigs (19 recipients; control room, or 2- inside a gestation room among other reproductive females (28 recipients). All Pietrain x Lincolnshire White blastocysts used for transfers (20 per recipient) were vitrified and warmed as described by Cuello et al. (2005). When 18 out of 47 nsET had been done, samples of air (100 l) were collected in either room using a commercial device (air IDEAL®) and evaluated bacteriologically. For room 2, the number of colonies appearing 24 h after in vitro culture was around 10-fold higher than that of the control room (1,1760 vs 144 CFU). Pregnancy rate assessed by ultrasonography at 60 days post-estrus was 52.6% (10/19) for nsET in room 1 (control) and 14.3% (4/28) in room 2 (difference p = 0.01). Among the pregnant recipients, 9 out of 14 farrowed an average of 6 piglets. These preliminary results indicate that extra sanitary precautions are necessary around nsET and further investigations need to be done to establish the requirements for safe nsET procedures in sows.