Effect of gilts' breed and social experience on skin lesions at mixing into sow groups

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The transition from individually stalled to group housed gestation sows is an ongoing process within pig production in Europe. Group housing offers the sows freedom of movement and possibilities to display important species-specific behaviours. However experience in Sweden, where gestation sows have been group housed since the 1980-ies, shows that it also carries an increased risk of damaging behaviour. The aim of this study was to assess effects of gilts' breed and social experience on skin lesions at mixing into sow groups after weaning. We assessed 83 first parity sows of two lines of Yorkshire indirectly selected for single (Dutch Yorkshire, DY, 45 sows) or group housed systems (Swedish Yorkshire, SY, 38 sows). These sows, balanced across lines, were reared in two different social environments to give four different combinations of social experience (1) from 2 to 5 weeks of age – half of the litters had access to the piglets and sows in the neighbouring pen (access pen, 41 sows) (2) from 10 weeks to farrowing – half of the groups were mixed with two unfamiliar gilts (mixed groups, 41 sows). Lameness and the occurrence of skin lesions were recorded before and after a paired interaction test, performed just before mixing into the sow group, and then again 4 days after introduction to the sow group. Data was analysed using PROC GLIMMIX in SAS, using bin-distribution l and logit link. Preliminary results show an increase in proportion of gilts with skin lesions from the assessment before the paired interaction test (37.5±3.77%, LSM±STERR) to the assessment after (91.6±3.77%) followed by further increase after mixing into the sow group (99.0±4.01), $P<0.001$ for all. A higher proportion of SY gilts compared to DY gilts had skin lesions at the assessments before the paired interactions ($P<0.05$), but there were no breed differences at the assessments in the sow groups. Moreover, a higher proportion of SY than DY gilts were lame ($P<0.05$). These preliminary results indicate that breed differences in the prevalence of skin damages and lameness at mixing with unfamiliar sows exist, but that the social experiences of the gilts have less effect.