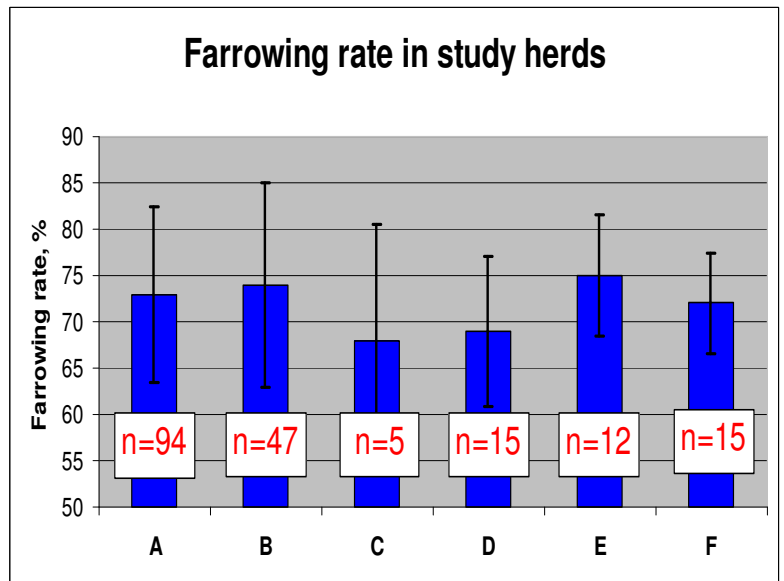


The objective of this retrospective cohort study was to clarify the effect of re-modelling the breeding unit on farrowing rate.

# Re-modelling the piggery breeding unit may not affect the farrowing rate



A = all herds

D = From cage to deep litter

B = all herds, before re-modelling

D = From cage to solid floor

C = From cage to cage

E = From cage to slatted floor



Deep litter breeding unit



Solid floor breeding unit

## MATERIAL AND METHODS

The original study population included 96 sow herds that participated in the Finnish herd surveillance system. In these herds, the breeding units were re-modelled between 1995 and 2002. Information about the production system and other herd data for the last year before and the second year after re-modelling were available for 47 herds.

Data were collected during one farm visit per herd. Initially, all herds had individual cages in their breeding units. The piggeries had either remodelled their cages or switched to a group housing system with deep-litter, solid or slatted (partly or totally) floors. Farrowing rates were gathered from the national database, and data were tested with a linear regression model.

## RESULTS

Re-modelling did not have a significant effect on farrowing rate. Farrowing rate was influenced by mean parity of sows and by proportion of sows culled due to leg problems. Farrowing rate increased by five percentage units per one unit increase in parity ( $p < 0.01$ ). When more than 10% of sows in the herd were culled due to leg problems, the farrowing rate was increased by five percentage units, compared with herds in which the culling rate due to leg problems was less than 10% ( $p = 0.01$ ).

## CONCLUSION

**The design of the breeding unit does not seem to have a profound impact on the fertility of the sow in the modern commercial production environment. Management factors, such as optimizing herd age structure and using effective culling strategies seem to be more important.**