Considerations for Providing Quality Space for Loose Housed Sows

Yolande Seddon
Prairie Swine Centre, Box 21057, 2015 8th Street East
Saskatoon, Saskatchewan S7H 5N9, Canada

Introduction
Loose housing is a husbandry system that provides sows with greater behavioural freedom than stalls, and is thus intended to improve sow welfare. Many variations on loose housing exist, differing primarily by the type of feeding system and group size. To ensure good sow welfare and productivity, every loose housing system must be designed and managed such that each sow can obtain sufficient resources (feed and water), that sows are given sufficient space, and do not have to cope with undue aggression. However, often overlooked are considerations for the quality of the pen environment over and above the basic requirements of feed, water and floor space. Positive pen features should promote optimal sow welfare, while allowing for good production and ease of management. This paper discusses some positive pen features for sows:

Quality Flooring and Comfortable Rest Areas
Pen features that promote sow comfort are an important consideration, and one that affects the well-being of the animals. Good quality flooring, with non-slip surfaces are essential to prevent injury and provide stable footing on which sows can easily manoeuvre. The comfort of the lying area is worth considering. Indoor sows are known to spend up to 80% of their day lying down. Given a choice, under thermo neutral conditions, sows show a preference for flooring characteristics that promote physical comfort; such as rubber flooring. The provision of bedding provides sows with a greater ability to control their microclimate (burying under the straw, lying on top of it, or choosing to not lie on it). Bedding is being successfully incorporated into part slatted systems by European producers through use of a lowered or raised section to contain the bedding within a designated area of the pen. This gives the benefit of bedding while maintaining liquid manure management. For unbedded systems, solid flooring appears to be preferred by sows over slats. Dominant sows have been observed occupying the solid resting areas, with gilts resting in the least preferred, slatted dunging area. In addition to providing comfortable lying areas, solid or bedded areas give sows a break from slatted floors and can be beneficial for hoof and leg health, helping to reduce lameness. EU legislation requires an established minimum amount of solid floor be provided for gestating sows, which emphasises the importance of this feature.

Pen Design
Sows in a group regularly interact yet also perform subtle avoidance behaviours, and the design of the pen should provide sufficient space to accommodate this behaviour. Problems can arise when lack of space hinders the sow’s ability to avoid an antagonistic interaction. With medium to large group sizes, the provision of barriers can help sows to distance themselves from individuals within the group when needed. Pigs are thigmotactic and thus have a tendency to remain in close physical contact with another animal or vertical wall. The addition of physical barriers gives pigs the opportunity to express this behaviour, and also promotes lying in groups, promoting the formation of social sub-
There is no information available on whether solid barriers work best, or if spindle penning can provide the same effect.

**Enrichment**

Pigs have a strong motivation to perform species specific exploratory behaviour, such as rooting. Most modern production facilities do not provide an outlet for this behaviour, but provision of suitable enrichment can help, providing sows with daily stimulation. Straw is one of the best enrichments for pigs, being chewable and deformable, and every new addition of straw brings novelty. With gestating sows being feed restricted, the provision of straw also helps improve gut fill and satiety. Enrichments need not be expensive or cumbersome, and many satisfactory enrichments can be made on farm using low cost materials. For systems managing liquid manure, straw can be provided successfully in a rack. Examples of enrichments will be given in the talk.

**Conclusion**

In addition to the basic requirements necessary for successful group housing, including sufficient resources (feed and water), space allowance, and not having to cope with undue aggression, considerations for pen design that promote sow comfort and the expression of natural sow behaviour can help to create a group environment that brings further positive benefits for the welfare of the sow.

**References**