PLANNING FOR LOOSE HOUSING SUCCESS

by TOM STEIN

When shaping herd management practices, consider static groups and post-implantation groupings.

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Double side-by-side stations help to prevent sows from taking ownership of a station.

Group housing systems have five essential elements, says Dr. Lisbeth Ulrich Hansen of the Danish Pig Research Centre.

These components are

- sufficient space allowance and adequate hospital pens
- individual feeding
- stable groups of animals
- close daily inspection of the herd
- effective gilt management prior to first service

And, in terms of reproductive performance, individual feeding is the most important factor. The ability to feed sows individually improves farrowing rate and litter size compared with stanchion systems, free-stalls, long troughs and floor feeding, the Centre's research shows.

Static or dynamic groups?

In static systems, producers move groups of sows into pens at the same time. Farmers group the animals by projected farrowing dates and keep the herd intact (except for drop-outs) during gestation. Producers do not add new sows to the original groups.

This system makes it easier for farmers to manage the gestation barn.

It also allows sows easier access to the feed stations.

Static groups are better for sow welfare and produce lower levels of aggression than dynamic groups, advocates of such systems say. Avoiding the introduction of new sows enables the group to create a stable social structure (dominance hierarchy) more quickly. Since static groups are smaller than dynamic ones, aggression is reduced.

Hansen prefers static grouping systems. They are based on weekly breeding groups and are easier to manage. Producers with these systems do not need automatic separation facilities on the electronic sow feeder (ESF). As a result, the ESF station can be simpler and cheaper, and will not break down as easily as stations used in dynamic grouping systems.

Recent University of Pennsylvania research on 11 ESF sow farms by John Hurst, Meghann Pierdon and Thomas Parsons also supports the advantages of static group systems.

Comparing static and dynamic grouping systems, these scientists found:

- Sows in static group systems have improved measures of physical welfare, such as fewer scratches and less lameness.
- Animals in these systems established a more stable social hierarchy and had decreased aggression.
- Sows in static housing were less timid, as demonstrated by more contact with novel objects and higher human approach scores.
- Overall, no difference in productivity existed between static and dynamic housing systems.

Pre- or post-implantation groupings?

Most commonly, producers move their sows to group housing after pregnancy check. So, farmers keep their sows in individual stalls for the first trimester of pregnancy and then move the animals to group housing. Using this method, barn staff can individually feed sows, do heat checks, watch for returns, and do pregnancy checks in stalls.

And this management strategy aligns with recent research.

When they compared pre- and post-implantation mixing, the University of Pennsylvania researchers found:

- Sows mixed post-implantation had more positive human approach scores.
- No difference in sow productivity.

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Keeping sows in stalls until staff complete pregnancy checks simplifies the process.

Producer experiences

Joel Phelps, co-owner of Paragon Farms, a 20,000-sow production system in Ontario, is experienced with group sow housing. Indeed, he has converted his operation, as well as many others across North America, to ESF group housing. Phelps is now an ESF specialist for Maximum Ag Technologies.

Here are some of his recommendations for success based on those experiences:

Pre- versus post-implantation mixing: "Mixing sows right after breeding disrupts the pen and increases the barn size requirements. We want to keep them in stalls first and then form groups after they have had a positive pregnancy check."

Static grouping: "It is not necessary to separate animals in pens by size or parity. We fill pens by due date, we try avoid any sow from coming into heat in the pen and we try to reduce competition for feed. Filling pens by due date and mixing all parities after they are confirmed pregnant reduces the competition for feed and reduces stress levels. Following this approach, we found that gilts learn from older sows how and when to eat."

Feed station: "Being able to accurately feed sows individually can have the greatest impact on productivity. Sows must have the opportunity to eat at their own pace, in a safe and comfortable space.

"We use feed stations where sows and gilts back out after they are finished eating. We've had no problems with this and think it's one of the keys to the success of simple, mechanical feed station design.

"The feed stations should have a solid area at the bottom and an opening at the top so sows can see out. Pigs outside the station should not be able to contact the sow in the station. The feeding dispenser should be adjustable and easily set to accurately monitor and dispense feed."

Pen design: "In our experience, pen shape and layout have the biggest impacts on sow longevity. Sleeping areas should be separated from the feeding, drinking and dunging areas. Pens should be laid out so that sows can see into the entrance of the feeding stations from any point in the pen. Stations should be separated to avoid funneling all sows to one area at feeding time.

"We use double side-by-side stations to avoid sows taking ownership of a station. Water should be outside the feeding area to encourage sows to finish eating and exit the pen to drink. To keep sleeping areas dry and comfortable, water should not be in or around these sections. Sows should not be forced to walk through or by another sleeping bay to get to feed, water or the dunging area.

"The sleeping areas and pen separation gating should be solid at least one-third of the way up – this allows sows to exhibit normal behaviours and lay with their reproductive organs protected.

"Multiple pass-through gates are important, so caretakers can enter and exit the pens quietly and calmly. Climbing over gating or opening and closing gates can startle the sows and cause disruption in the pen."

"Plan for one hospital space per feed station to pull lame, injured or unthrifty sows from the group and allow for recovery." **BP**

Acting as Senior Strategic Adviser for Maximus, Dr. Tom Stein is the designer of the PigCHAMP software and co-founder of MetaFarms. He was named as one of the top 50 men and women who truly made a difference in the U.S. pork industry. The American Association of Swine Veterinarians recognized Stein for his outstanding contributions to swine production and health.