

Gestating Sow Housing – Options and Considerations Related to Feeding

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Consumer interest and concern in sow housing is becoming an important and emerging issue in the United States. Consumers and the general public are perceiving use of gestation stalls as a welfare problem, as has been demonstrated by the implementation of gestation stall bans in Florida and Arizona. Recently, both Smithfield and Maple Leaf Foods have announced plans to eliminate gestation stall housing over the next ten years. Welfare concerns regarding individual gestation stalls include limited freedom of movement and minimal interaction with other sows. However, industry movement to individual gestation stalls over the past 40 years has occurred because these systems reduce aggression and subsequent injuries among sows, and allow for more individualized observation and management, including health monitoring and feeding.

What feeding systems are available in group housing systems?

- (1) Electronic sow feeding (ESF) system: Groups of 40 – 65 sows can be fed by one computer. Individual sow feeding occurs and aggressive physical acts are reduced some, although vulva biting is a common occurrence while sows are waiting their turn into the feeder. Keeping sows in static groups, rather than constantly adding and removing sows from a group (dynamic) is preferred.
- (2) Feeding stalls: A lower-tech but effective method of feeding. Sows are allowed to roam freely in their group pen, but are fed within feeding stalls that reduce competition and aggression during feeding. Feeding stalls may be locking (self-locking or manually locking) or unlocking, and may span the length of the sows body or just be shoulder length. Feeding stalls may be contained within each sow pen, or a separate feeding stall area may be used by several groups of sows, involving greater labor to move the sows to and from the area. Additionally, feed may be delivered within stalls at one time or be trickled over a 15 – 30 minute time period, further reducing aggression in non-locking stalls.
- (3) Floor feeding: This feeding system results in the greatest incidence of aggression and injuries. Larger and more dominant sows quickly push out subordinate sows, eating proportionally greater amounts of feed that results in greater variation and range in body condition throughout the pen. Distributing the feed over several locations within the pen helps, but does not eliminate the problem.
- (4) Trough feeding: Use of several feed drops into troughs also results in aggression and injuries when feeding space is limited. Similar to floor feeding, dominant sows push out subordinate sows.

Are nutrient requirements different when sows are group housed vs. individually housed? Certainly requirements differ when sows are housed outside in groups, as environmental conditions must be factored in when determining nutrient needs, but ambient and

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effective temperature become less of an issue when sows are housed indoors, regardless of housing system. In extremely hot weather, sows in group pens with minimal space will become heat stressed earlier, while sows in individual stalls are more susceptible to very cold weather. In general, pigs will adjust their feed intake to account for changes in energy needs. However, in limit fed situations, this means the operator must account for these temperature extremes by adjusting feed intake and/or caloric density of the diet. Do nutrient requirements differ between housing systems when environmental conditions are similar? Very little is known. One would expect a slight increase in nutrient needs to account for additional activity in group housing systems, but exactly how much has not been well documented.

The sow housing issue is not going to be going away anytime soon, and will certainly challenge our ability to understand the management and economic differences in different housing options. It is apparent that design and management of the feeding system will be a very important piece in determining success, regardless of system. Understanding our best options and areas to focus on will better aid us in adapting to different sow housing systems if needed or desired.