



SWINE SOLUTIONS

Considerations for split-sex feeding

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Split-sex feeding, the practice of feeding barrows and gilts differently, used to be a more common production practice. However, in recent years, fewer farms have implemented this feeding strategy. Kansas State University (KSU) recently published a review from 34 peer-reviewed articles spanning 22 years that summarized data from 16,000 pigs. The authors focused on the differences between barrows and gilts in terms of growth performance, carcass composition and cutout value. Their findings for production parameters, as shown in the table below, were similar to data from research completed by Hubbard Feeds.

Table 1. Effect of sex on the growth performance of finishing pigs

Barrow vs. gilt	Kansas State University	Hubbard Feeds
Barrow ADG	5.9% greater	8% greater
Barrow feed intake	11.4% greater	12% greater
Barrow feed efficiency	4.3% poorer	4% poorer

The KSU summary concluded that the decreased performance, carcass weight and cutout in a fixed time system resulted in a significant economic loss in value for the gilts. This review may renew the discussion about sorting barrows and gilts and feeding them separate diets that are formulated to try to recapture some or all of the decrease in value, as is outlined in the KSU article.

In addition to the parameters in Table 1, barrows tend to deposit muscle at a slower rate than their gilt counterparts from approximately 70 pounds body weight to market weight. Consequently, barrows can be fed diets with lower lysine levels than gilts. This reduces diet costs and nutrient excretion when compared to feeding all pigs in a weight group the same diet. While split-sex feeding may be economically feasible in theory, it needs to be considered as part of an entire system, which may explain why the practice is not widely utilized.

For those considering split-sex feeding, the following factors should be taken into consideration for their production system.

Production considerations

- **Additional labor:** For split-sex management, pigs are typically sorted coming out of the sow farm. This may be a minor factor, but it is an extra step for farms that have labor limitations.
- **Performance differences:** The growth and feed efficiency differences between barrows and gilts exist but are diminished compared to the past, which has led some systems to not formulate different diets for barrows and gilts. Understanding the operation's current performance and the opportunity for improvement can help determine the value of split-sex feeding.

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- Barn throughput: Optimizing barn throughput is a key parameter in any production system. Producers interested in split-sex feeding can try several different approaches, including:
 1. Filling an entire barn/site with either barrows or gilts and feeding them accordingly. However, this increases the time to fill the barn or site and may double the pig age, which increases pig management needs and barn emptying at marketing.
 2. Splitting barrows and gilts into separate pens within the same barn with two different feedlines. The offset for this is that doing so increases equipment costs and management time.
 3. Splitting barrows and gilts into separate pens within the same barn but managing the feed budget by feeding all pigs the same feed for one or two phases. The gilts will receive more of phase two while the barrows move on to phase three. For the rest of the finisher time, the gilts will be fed one diet behind the barrows. This means that the barrows would have an additional diet formulated to lower amino acid levels for their final phase at the end of the feed budget.
 4. Another consideration for split-sex housing is that pens of all gilts have more problems, with excessive urination in the feeders, which some farms report increases the labor needed to keep clean feed available in the feeders.

Feed mill considerations

- Feeding barrows and gilt separately may mean separate diets and feed budgets or the same diets with different budgets. If separate diets are used for barrows and gilts, the feed mill will have twice as many diets to manage. This decreases efficiency at the feed mill and increases the delivery time and costs by not being able to deliver full loads of the same diet to a group of bins. It can also increase the risk of getting the wrong feed in a bin and possibly increases biosecurity risks.
- Some diets for the same-sized barrows and gilts may be formulated to be so similar that the differences may not be enough to warrant having separate diets.
- If the same diets are used with different budgets for barrows and gilts, then the feed mill has fewer diets to manage. However, there are still milling, delivery and risk issues, because barrows and gilts will be receiving different diets based on their weight groups.

Marketing considerations

- Barrows grow faster and reach market weight sooner than gilts. If penned by sex, then marketing the first pull of barrows will be more efficient because only half of the pens would need to be sorted. Also, pens sorted by sex make the final clean-out of the barn or site more efficient.
- When market-weight pigs are pulled from a pen, space is increased for the remaining pigs, which respond with increased gains. Farms with mixed-sex housing experience this across the barn when the first barrows are pulled from all pens. In a split-sex feeding program, marketing will occur differently, and not all pens will have pigs marketing with additional space being created.

The opportunity to continually fine-tune your herd's nutrition generally results in improvements in performance, a reduction in nutrient excretion and savings in diet costs. Producers who can split-sex feed without having to devote significant time or money to the process may be able to recapture some of the losses outlined by KSU. However, the decision regarding split-sex feeding must consider all of the factors for the best economic return for the farm. If you are interested in more detailed evaluation of whether split-sex feeding could provide economic benefits for your farm, contact your [Hubbard Feeds representative](#).