



Pig Improver

PIC®

Developing Gilts Versus Market Hogs: Protect Your Genetic Investment

First article in a two-part series

Reviewing the basics and fine-tuning your swine management practices will help you raise the best replacement gilts possible. Unlike market pigs, replacement gilts are the future of your herd. Treat them right to ensure their well-being and allow them to express their full genetic potential.

When you consider the many factors that influence a sow's lifetime productivity, it's easy to overlook the importance of developing gilts. However, a proven gilt development program is crucial because it has a direct effect on reproductive performance and the overall success of the sow herd.

Gilts are the future of your swine herd, from both a genetic and financial standpoint. You've invested a lot in these animals, and there are no shortcuts to success. It's vital to ensure proper nutrition, plenty of water, adequate space requirements, and other basics (including feet and leg soundness) daily for successful gilt development. It's also important to do the right things from the start, rather than trying to intervene weeks or months later.

The reproductive system of gilts matures between 200 and 225 days of age, and healthy replacement gilts should weigh between 300 to 350 pounds when breeding. Therefore, proper gilt development starts by balancing gilts' growth needs with reproductive needs. PIC recommends a lifetime average rate of gain of 1.5 pounds per day, but not less than 1.3 pounds per day.

Using the color-coded PIC flank tape takes the guesswork out when determining the weight of gilts: Red = Gilt is too light to breed; Green = Gilt is in the correct weight range and is eligible to breed; and Yellow = Gilt is overweight, above 350 lb. Successful gilt development is directly influenced by gilts' surroundings. You can control many of the factors that create a healthy environment for gilts.

Barn design

Provide adequate space for gilts as they grow. PIC recommends:

- 12 to 60 lb: 2.8 ft²/gilt
- 60 to 260 lb: 7.5 ft²/gilt
- 260 to 300 lb: 8.5 ft²/gilt
- 300 to 350 lb (Boar exposure): 12 ft²/gilt
- Alley width: minimum of 36 inches, so animals can walk through the alley easily
- Gate height: 36 to 40 inches

Proper feed and water are also essential to raise high-quality replacement gilts.

Feeders

- Dry feeders: PIC recommends 1 inch/gilt on Nursery, and 2.0 to 2.1 inches/gilt, or 8 gilts per feeder hole.
- Wet-dry feeders: PIC recommends 1.25 inches/gilt, or 12 gilts per feeder hole. Consider adding a rubber mat at the base of a wet-dry feeder that ends at a slat gap. You don't want gilts' toes to slip into the slat, (due to slat wearing out) which can lead to injury.
- Hopper capacity should provide 24 hours of feed intake per pig. PIC recommends 8 pounds of feed per pig per day. Make sure you plan ahead to avoid out-of-feed events.
- Consider a feeder with solid divisions. This gives pigs adequate space to eat, without being pushed out of the way by other pigs. PIC doesn't recommend tube/round feeders.

Drinkers

- PIC recommends 10 gilts per drinker. Never have fewer than 2 drinkers per pen.
 - A minimum of 2 drinkers per pen is recommended as a risk management practice to ensure pigs always have water available
- Bowls or swing nipples are acceptable. Position bowl drinkers beside feeders. For swing nipples, check to make sure the area below the drinker is damp. If it's not, there may not be adequate water flow.
- Water flow
 - At least 0.5 liter per minute (for nursery pigs)
 - 12 seconds to fill a paint can lid
 - At least 1 liter per minute (in the growing stage)
 - 6 seconds to fill a paint can lid
- Adjust for proper drinker height.
 - Position swing nipples 2 to 3 inches above the smallest pig in the pen (shoulder level)
 - For bowls, the lip height should be just below pigs' shoulder (smallest pig) height (roughly 40% of shoulder level). If a bowl is positioned too low, pigs are more likely to defecate in it.

Climb inside the pens daily and ensure feeders and drinkers are working properly. These daily inspections also help pigs get used to human interaction. This is helpful when you want to use the flank tape, for example. It's easier to measure pigs that are more accustomed to human contact.

Ensure sound feet and legs

Pens with replacement gilts should be checked daily by climbing inside the pen, rather than the ally way. Ensuring that the pigs are comfortable with human interaction is a critical step in gilt development. This is helpful when utilizing the flank tape, for example. It is important that all the gilts stand up to check for lameness or open wounds for immediate treatment. Checking gilts inside the pen also provides an opportunity to check water flow and adequate feed. Going inside the pens also makes it easier to evaluate the pigs' feet and legs. Pigs need healthy feet and legs so they can stand up to eat and drink, and lay back down easily. Check barn flooring daily; make sure there are no sharp edges or any bolts sticking up that can injure pigs' feet or legs.

Provide proper ventilation

Finally, ensure the barn creates a healthy environment for the pigs, in terms of air flow and air temperature.

Minimum ventilation recommendations:

- Nursery: 2.0 cubic feet per minute (CFM)/weaned pig
- 60-pound pigs: 3.5 CFM/pig
- Pre-boar exposure: 14 to 15 CFM/gilt

General Ventilation Maintenance

- Dust off fan louvers everyday

- Check fan blades, louvers, blinds and frames

Provide extra care in hospital pen

Designate adequate space for extra pig care if replacement gilts get sick or injured. Provide a hospital pen that can accommodate 5% of the barn's pig population. This is in addition to pens dedicated to the 10-15% of small pigs that have been sorted off. Include extra heat sources and enough feeders and drinkers. Make it easy for pigs to eat, drink and rest so they have the best chance to regain their health.

Learn more

Check out these PIC podcasts to learn more about effective ways to select replacement gilts and stay tuned for upcoming episodes on gilt development:

- [Encore of Gilt Selection Part 1](#): This is part 1 of a 3-part series on gilt selection with Dr. Ken Stalder (Swine Genetics Specialist, Iowa State University), Malcolm Turley (PIC Gene Transfer Supply Account Manager), and Marlon Tafs (PIC Quality Assurance Manager). In this episode, the group discusses space, lighting, and training.
- [Encore of Gilt Selection Part 2](#): In episode 2 of this 3-part series, the group discusses common pitfalls and where people can go wrong.
- [Encore of Gilt Selection Part 3](#): In episode 3 of this 3-part series, the group discusses animal composition, selection criteria outcomes, and managing breeding animals versus production animals.