

Managing Developing Gilts from 180 lb to Breeding

The following information is a checklist of ideas and points to consider when managing replacement gilts in the late development period. These techniques are designed to increase selection rate, improve parity one and lifetime reproductive performance, and improve sow longevity.

1. Isolate/acclimate gilts to the health status of the recipient herd and include medication in the diet according to recommendations of the herd veterinarian.
2. Feed a developer diet specially formulated to prepare gilts for the metabolic demands of reproduction. This diet would include elevated levels of Ca and P to increase bone strength and mineral reserves, sow vitamins and trace minerals, and extra zinc, biotin, and vitamin E to aid hoof development and bolster the immune system.
3. Allow ad libitum consumption of feed and water from 180 lb to breeding (minimum of 210 d of age and 280 lb body weight). If excess body condition and/or size are a concern, fiber (soy hulls or wheat midds) should be added to the developer diet to help control weight gain.
4. Allow a minimum of 12-14 sq ft of floor space per gilt to help reduce feet and leg problems and increase selection rate.
5. Select only gilts with good foot and leg structure, as well as a minimum of twelve properly spaced, functional teats. Select against uneven toe size and splay legs. Gilts with extremely muscular hams may have more farrowing difficulties and eventual leg weakness, so avoid this characteristic when selecting replacements. Reject gilts with infantile vulvas.
6. Expose gilts to boars beginning at 150 days of age to decrease age at puberty, increase the percentage of gilts cycling by 210 d of age, and increase the number of gilts bred on the second or third estrus.
7. Record gilt ID numbers and dates of estrous cycles so matings can be planned ahead and to ensure that no gilts are bred at first estrus.
8. Breed gilts no earlier than the second, and preferably, the third estrus to take advantage of increased ovulation rates for second and third vs. first estrous cycles.
9. Exposure to boars should include direct physical contact with gilts, not simply across fence lines.

10. Full boar contact should be done at least once, and preferably twice daily, for a minimum of 10 and preferably 20 minutes at a time. Keep boars away from gilts when not checking heat so that when gilts are exposed to boars, the standing heat response is stronger.
11. Boars should be at least 1 yr of age and produce lots of foamy saliva, which is the primary source of stimulatory pheromones.
12. If possible, use vasectomized (V-) or epididymized (E-) boars and allow them to breed gilts occasionally to help maintain boar libido.
13. Ideally, gilts should be moved to boar pens for exposure.
14. At minimum, boars should be put into pens with gilts for heat checks.
15. Fence-line exposure to boars is not always effective either in stimulating onset of puberty or in observing standing heat in gilts.
16. If possible, rotate boars used for exposure so gilts do not become acclimated to them.
17. Gilts held for long periods of time after achieving puberty may go 'stale' and stop showing signs of standing heat. Consider the following strategies to keep gilts fresh:
 - a. Breed with V- or E-boars, AI with killed semen or seminal plasma, or breed with intact boars and abort so gilts are available to breed again when needed.
 - b. Mix anestrous gilts from different pens.
 - c. Mix cycling gilts or sows with anestrous gilts.
 - d. Transport gilts to another location.
18. If gilts appear anestrous but do not respond to PG600 or PMSG therapy, they may already be cycling and unable to respond to these hormonal therapies. Consider treating gilts with Lutalyse (follow label directions) to end the current cycle and start a new one.
19. Make sure gilts receive at least 12 hr of light per day.
20. Do not retain gilts that fail to achieve puberty after four to six weeks of thorough physical boar exposure. Also, cull gilts that do not cycle by 240 d of age. Research and field experience suggest these gilts are low fertility females that will have breeding problems and poor reproductive performance.

This list is designed to stimulate review and evaluation of current management procedures for gilts destined for the breeding herd. Gilts that are properly managed during late development lead longer, more productive lives, potentially increasing profit opportunities for producers by decreasing sow replacement rates and improving litter size.

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