

Can Split-Weaning Protocols be Improved To Increase Fertility in Weaned Sows?

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Reproductive management of weaned sows is a major enigma. Although shorter lactations enhance the health and growth performance of the weaned pigs, early weaning may reduce sow fertility after weaning because of the inadequate recovery of the reproductive system from the latent effects of pregnancy. Also, in the first parity sow, inadequate lactation feed intake fails to meet the needs of milk production and sows invariably become catabolic, with negative consequences for fertility after weaning. Improved fertility resulting from skip-a-heat breeding after weaning the first litter (breeding at the second heat after weaning) results from improvements in metabolic state at second estrus. However, the negative economic impact of the extra 21 non-productive days is substantial. A management strategy that would marginally increase the weaning-to-estrus interval (WEI) at less cost, and still improve subsequent fertility, would be very attractive.

As the suckling activity of the piglets provides the primary cue for an inhibition of reproductive activity, a marginal decrease in this inhibitory input can be achieved through removal of a portion of the litter during late lactation. This split-weaning procedure is widely used in the industry to improve sow fertility and generally decreases the WEI.

In this poster we present the concepts behind new collaborative studies to determine the practicality of altering split-weaning protocols to marginally extend the WEI, thus further improving sow fertility by ovulating follicles undergoing final development in a less catabolic environment. This would increase ovulation rate, lower embryonic mortality and increase subsequent litter size.

Implications

Refinements in split-weaning protocols, based on a better understanding of ovarian follicular development in split-weaned sows, will further improve the fertility of weaned-first parity sows.