

ANIMAL SCIENCE

Title: Improved reproductive performance in 14d weaned sows by delaying return to estrus – **NPB #98-190**

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Abstract:

Segregated early weaning has been instituted to improve growth, efficiency, and health of weaned pigs. Increased length and variation of wean-to-estrus interval (WEI) and reduced subsequent litter size are common in sows weaned at 14 d or less. This study was designed to determine the effect of a single injection of progesterone (P_4) on WEI, return of pulsatility of luteinizing hormone (LH), and consistency of return to estrus in early-weaned sows. Thirty-eight sows were injected with either 400 mg of P_4 or 8 ml of sesame seed oil at weaning following lactations of 9 to 14 d. Sows were checked twice daily for return to estrus beginning d 3 post-weaning. The WEI ranged from 3 to 14 d with no difference ($P > 0.05$) between treatments. Two sows remained anestrous and were not included in the WEI analysis. The P_4 treated sows had higher ($P < 0.01$) levels of P_4 (4.77 verses 0.40 ng/ml) for approximately 30 h after weaning. The LH data were analyzed for mean LH, number of peaks in a 6 h period, average peak amplitude, and average baseline LH. There were no significant interactions between treatment and time. The single P_4 injection cleared the system too quickly to delay return to estrus. Although P_4 concentrations were elevated in the treated group, no significant change was observed in LH pulsatility or consistency of return to estrus. If this technique is to be effective in delaying return to estrus an alternative delivery system will need to be utilized.

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