BREEDING OF SOWS DURING LACTATIONAL ANOESTRUS

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One significant way of increasing sow productivity is to decrease the length of the lactational anoestrus. A successful procedure for breeding sows during lactation has been demonstrated by Hausler *et al* (a980), and similar work has been repeated here in Australia.

A field trial was conducted in a large commercial piggery where weaning occurred at 4 weeks. One hundred and five sows were randomly allocated to five groups. Groups I, II and III were given 1,500 i.u. PMSG (Pregnant Mare Serum Gonadotrophin) subcutaneously at 10, 15 or 20 days post-partum respectively. Ninety-six hours later they were given 1,000 i.u. HCG (Human Chorionic Gonadotrophin) intramuscularly, and then inseminated at 24, and 36 to 42 hours post-HCG without detection of oestrus. Fresh boar semen was collected and examined microscopically for motility and concentration. Beltsville diluent was added to aliquots of 5 x 10^9 sperm to provide about 60 ml per insemination. On some days semen for Group I, II and III sows was collected from young boars of unproven fertility because no mature boars were available. Groups IV and V acted as untreated controls, with Group IV sows being artificially inseminated on the first and second mornings of their first oestrus after weaning their piglets. Only mature boars were used for Groups IV and V.

Results

Conception rates were lower in the treated sows (Table 1). This may have been due, in part, to the use of young boars for semen collection since on some days the conception rate was as low as 25%, and zero in one case. Work is continuing to improve this conception rate following treatment.

All sows which returned to oestrus were remated with final conception rates of 81% to 90% (Table 2). Six of the 10 sows in Group I which returned to oestrus did so between 4 and 8 days after weaning. Group I sows then averaged 27.2 days for their farrowing to conception interval, compared with 32.6 days for Group V. If the conception rate for sows becoming pregnant at 15 days after farrowing can be improved to the herd average, then an extra 3 or 4 piglets can be produced per sow per year.

Reference

Hausler, C.L., Hodson, H.H.Jr., Kuo, D.C., Kinney, T.J., Rauwolf, V.A. and Strack, L.E. J. Anim. Sci. 50 : 773-778 (1980).

TABLE 1 Sows Pregnant to First Mating : Reproductive Indices

Group	Pregnant % (x/n)	Farrow to Conception*	Inter-Farrow Interval*	Gestation Length*	Piglets Born Alive	Piglets Born Dead
I	43%(9/21)	15.0(9)**	129.0(9)	114.2(6)	9.5	0.8(6)
II	55%(11/20)	20.0(11)	134.7(9)	114.6(9)	9.9	0.9(9)
III	57%(12/21)	25.0(12)	139.6(11)	115.5(11)	9.0	1.6(11)
IV	77%(17/22)	32.1(17)	145.2(11)	114.4(11)	10.9	0.9(11)+
					10.0	{1.0(10)}†
V	81%(17/21)	32.6(9)	147.4(8)	114.9(16)	10.1	0.4(16)

* Days
** Number of animals providing data
\+ These values include one sow which had 20 piglets born alive. Nine were fostered off and she weaned 11
† These values exclude the above sow

TABLE 2 Effect of early breeding of Sows on Reproductive Indices

Group	Pregnant % (x/n)	Farrow to Conception*	Inter-Farrow Interval*	Gestation Length*	Piglets Born Alive	Piglets Born Dead
I	81%(17/21)	27.2*(17)**	144.0(14)	114.2(14)	9.2	0.4(14)
II	90%(18/20)	30.6 (18)	146.4(16)	114.5(16)	10.3	0.7(14)
III	90%(19/21)	34.7 (19)	149.4(18)	114.2(18)	10.3	1.2(17)
IV	82%(18/22)	33.8 (18)	147.9(12)	114.3(12)	10.6	0.9(12)+
					{ 9.7	0.9(11)†}
V	81%(17/21)	32.6 (9)	147.4(8)	114.9(16)	10.0	0.4(16)

* Days
** Number of animals providing data
\+ These values include one sow which had 20 piglets born alive. Nine were fostered off and she weaned 11
† These values exclude the above sow