

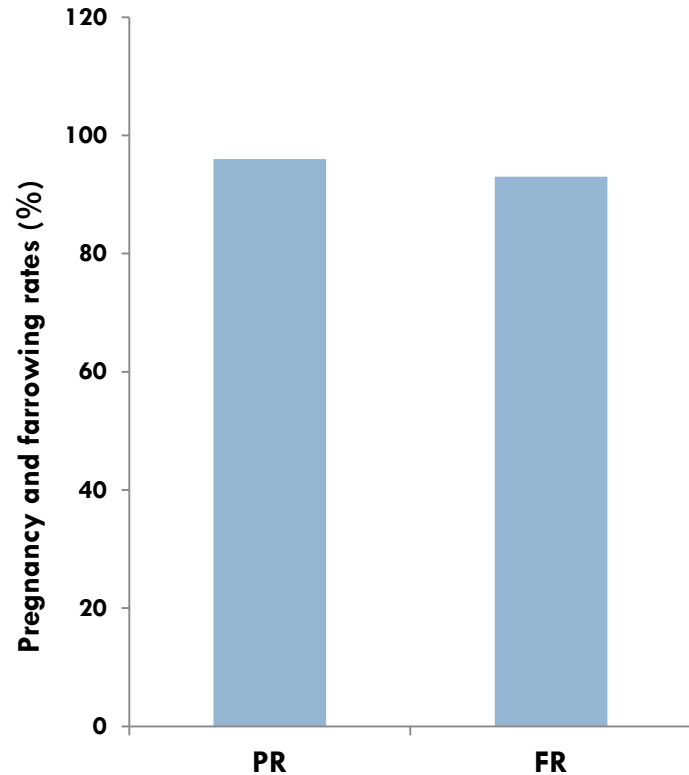
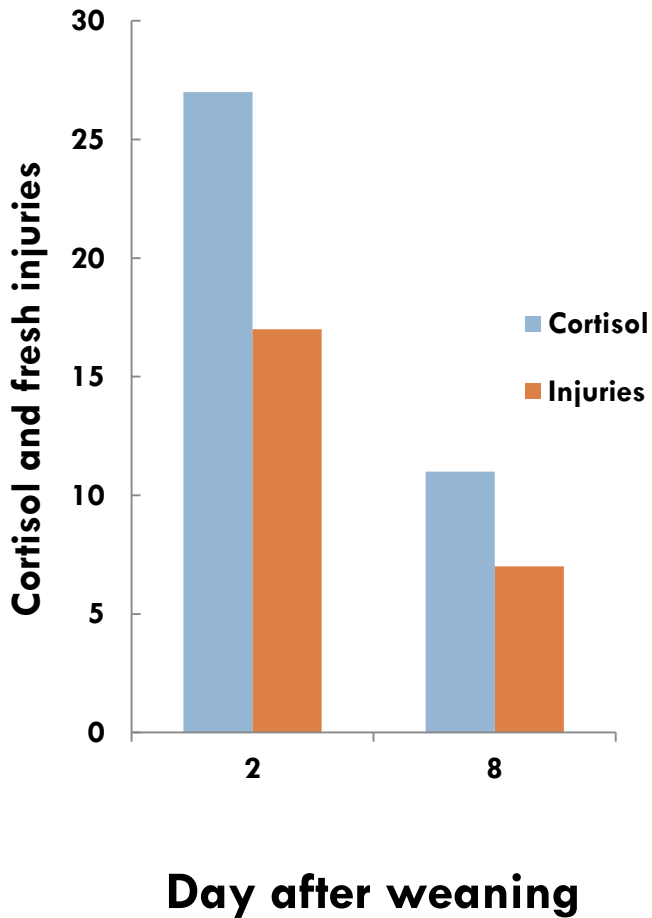
Grouping sows at weaning and after mating

- Lessons learned

Grouping sows in gestation

- ❑ **Regardless of when grouped**
 - ❖ Based on aggression and cortisol levels - Sows adapt quite rapidly to mixing and to reduced floor space
- ❑ **Factors affecting welfare and reproduction**
 - ❖ Experience of the sow and staff
 - ❖ Feed/nutrient availability at mixing and to day 28 of gestation
 - ❖ Space allowance especially at mixing especially for sows that have not been mixed previously

The welfare and performance of sows grouped at weaning – Jean -Loup Rault



Recent Canadian study

- Three treatments -254 sows
- ❖ Sows grouped at weaning
- ❖ Sows grouped day 28-35 of gestation
- ❖ Sows grouped for two days at weaning then penned and remixed at day 28-35 of gestation (Pre socialisation)
- Housed in groups of 14 in pens with free access stalls -2.2 square metres of floor space outside the stalls.

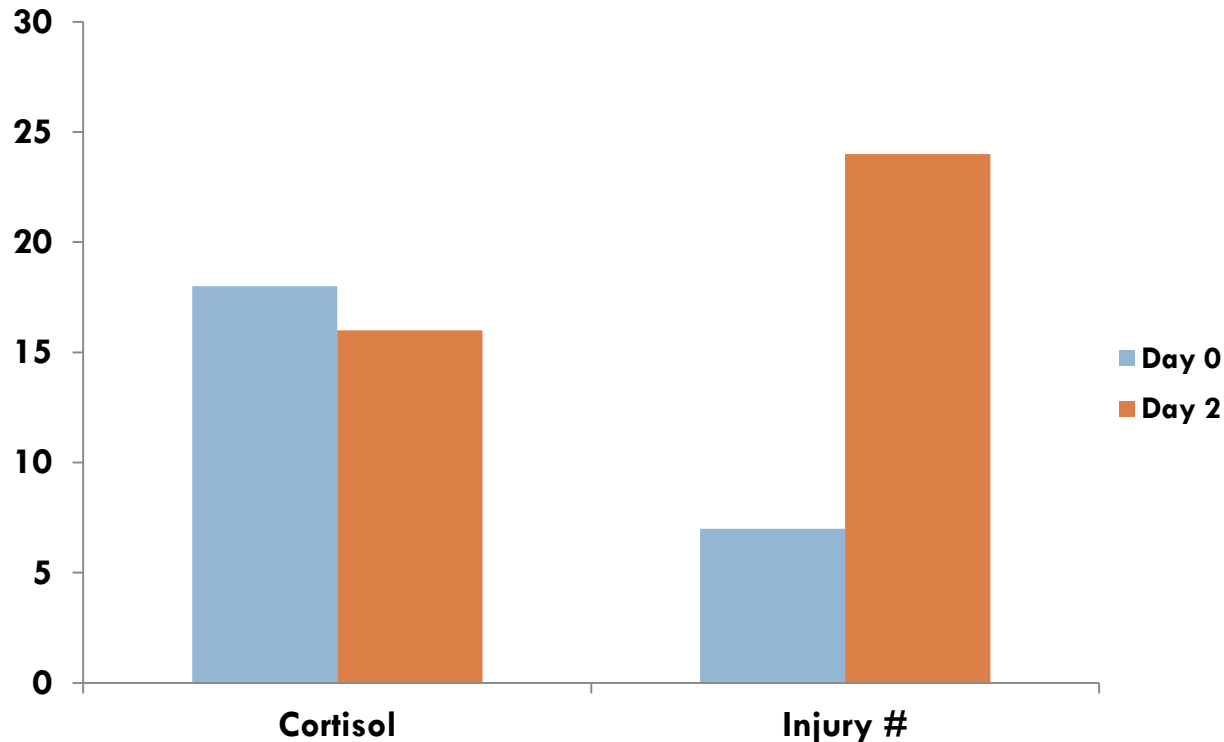
Results

Treatment	Mixed at weaning	Mixed at 28-35 days	Pre - socialisation
Conception rate (%)	98 a	87 b	94 a
Total born	15.2	15.6	15.5
Born Alive	13.7	13.3	13.2
Still born (per litter)	0.95 a	1.54 b	1.58 b
Change in injury score Pre and post mixing (Max score =6)	0.53 c	0.61 c	1 st 0.25 a 2 nd 0.43 b

Grouping after mating

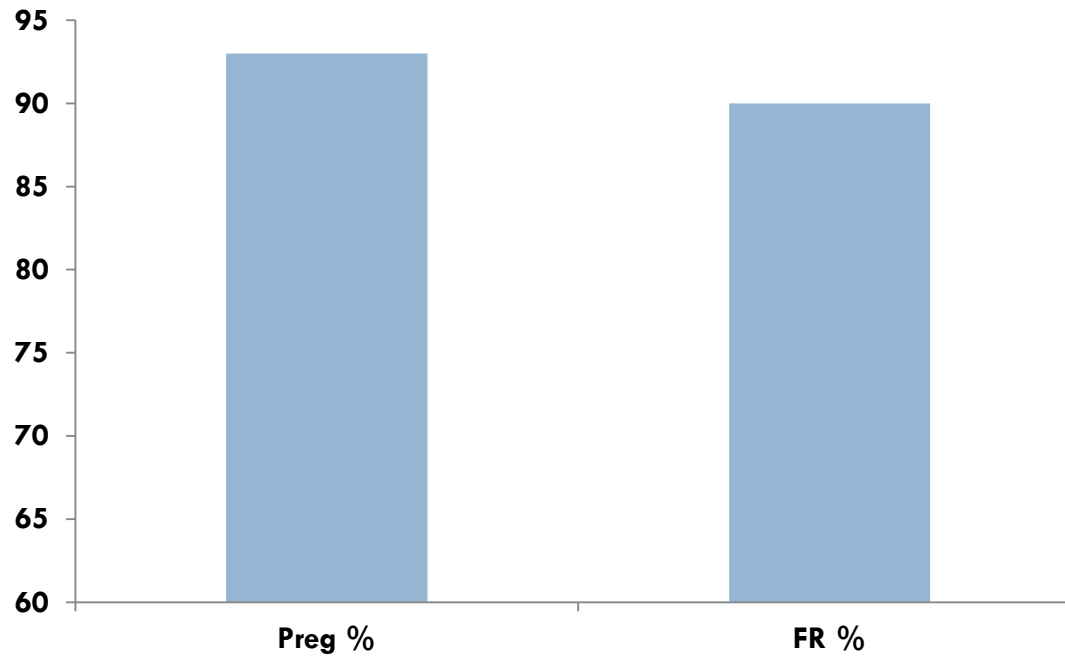
- Some results for sows mixed at 2.1 square metres within six days of weaning.
- Results of large space allowance study.

Effects of mixing sows within 2-3 days after mating on cortisol and injuries before and after mixing –Jean-Loup Rault



At day zero sows were in stalls. At day 2 (day after mixing) sows in groups of 7-9 with 2.1 square metres floor space

Effects on pregnancy (PR) and farrowing rates FR-%)



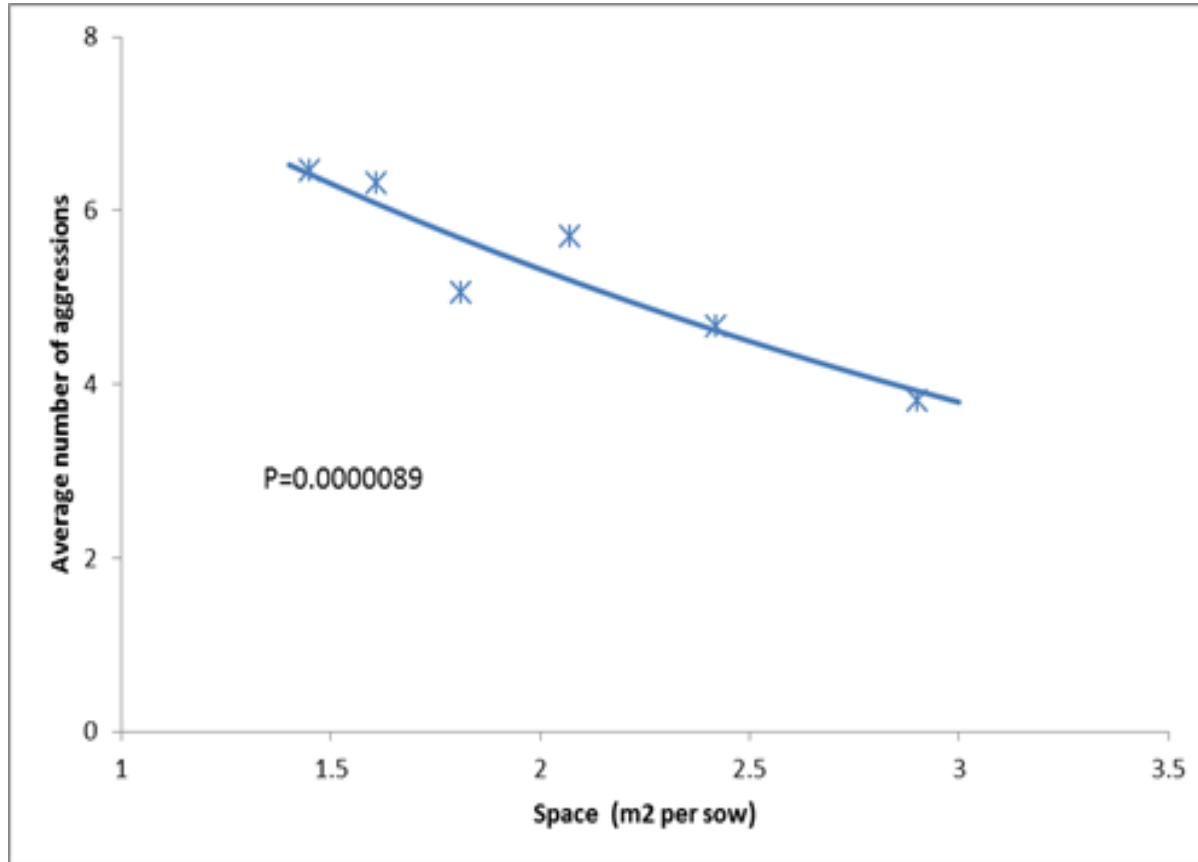
Effects of floor space on the welfare and performance of group housed sows

- ❑ Study involving 1,620 sows
- ❑ Grouped approximately four days after mating
- ❑ Six floor spaces
- ❖ 1.45, 1.61, 1.81, 2.07, 2.42 and 2.9 square metres
- ❑ Sows once confirmed pregnant were moved to group pens with 1.8 square metres floor space until farrowing.
- ❑ Aggression measured at day 2 and cortisol at days 2 and 26 after grouping.
- ❑ Sows floor fed (2.5 kg/d) four times daily.

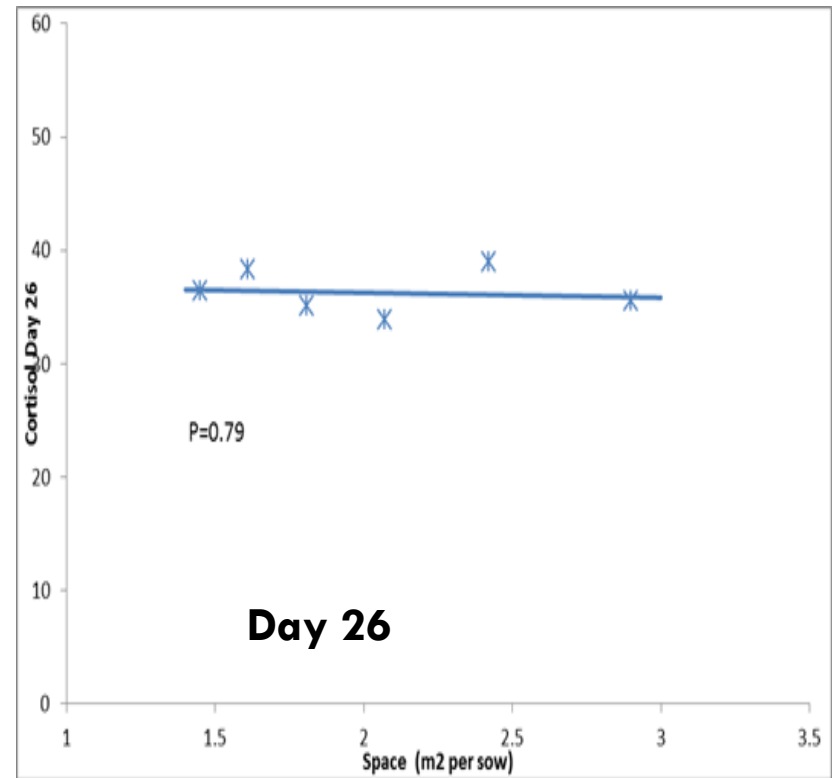
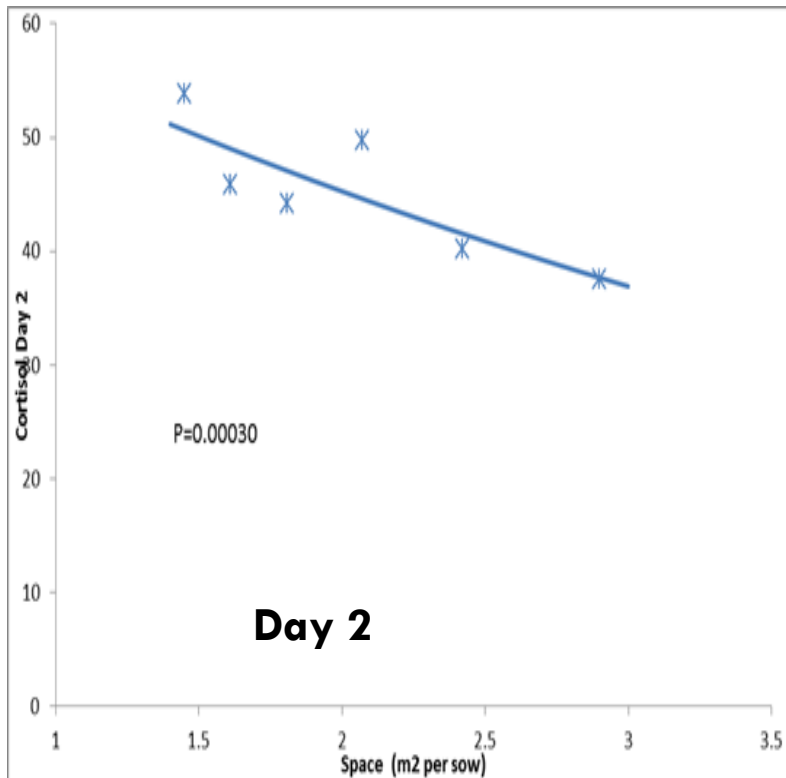
Aggression and cortisol



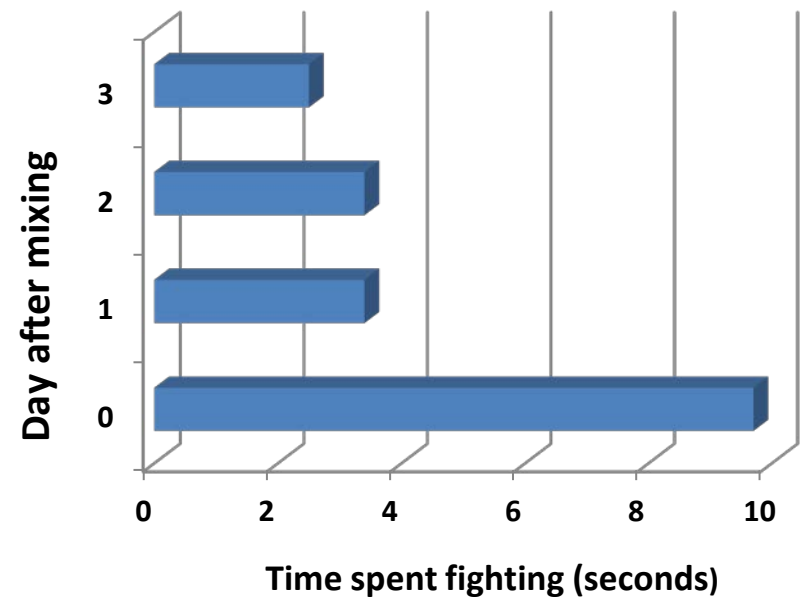
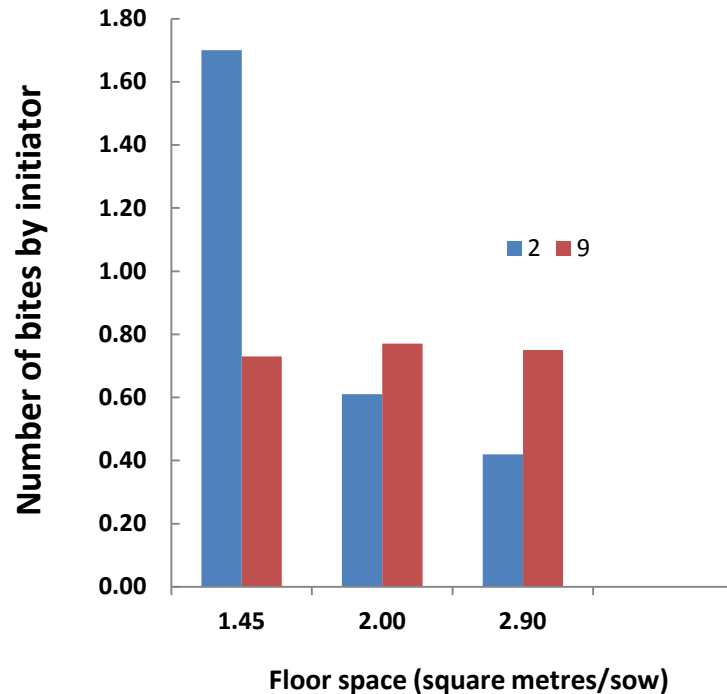
Average number of aggressions –day 2



Cortisol at days 2 and 26

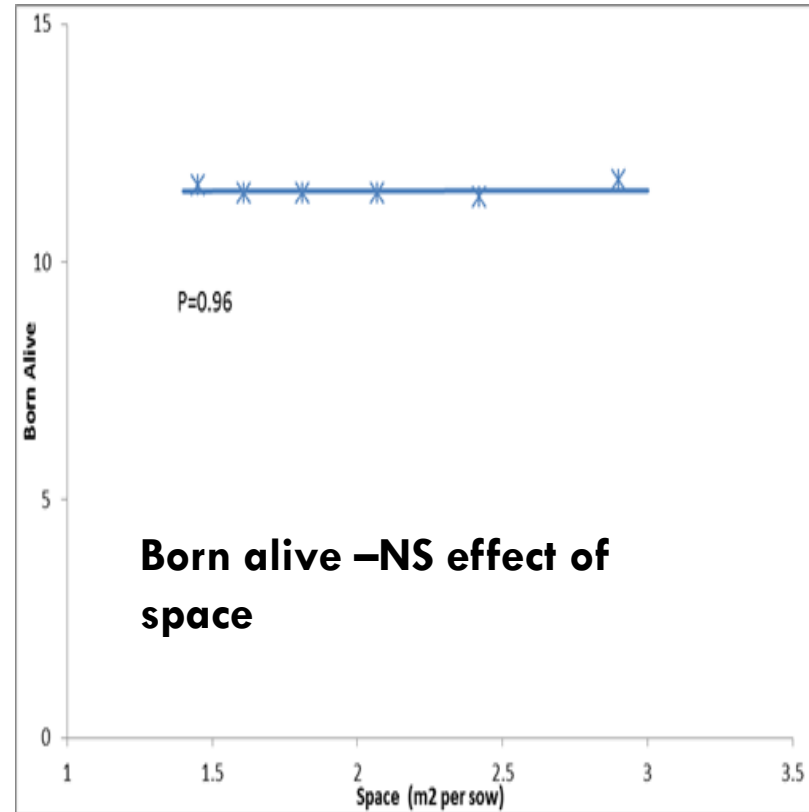
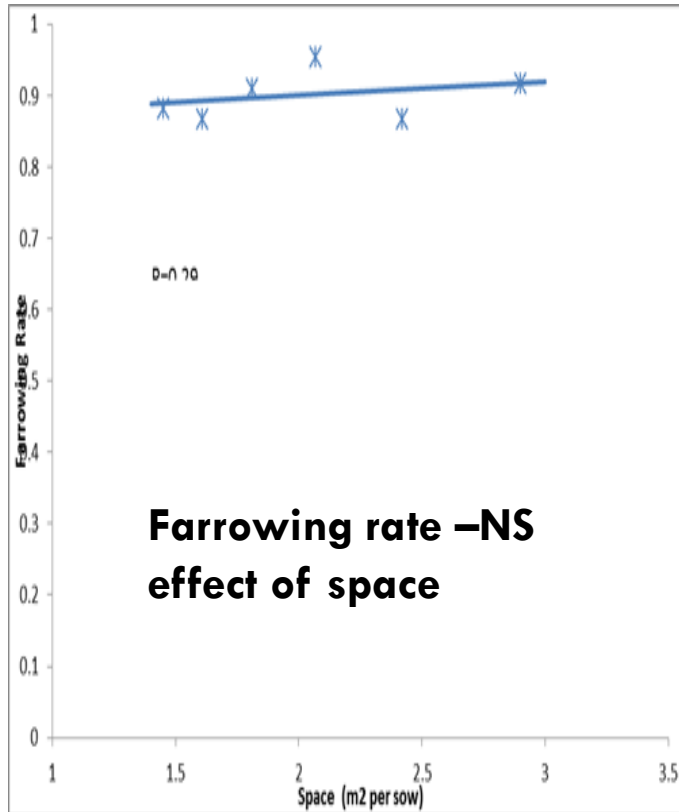


Effects of floor space and/or day after mixing on aggression in sows – Jean-Loup Rault and Tracey Muller



Results show that sows adapt quickly to mixing and to reduced floor space

Farrowing rate and BA



Neither farrowing rate nor born alive were affected by floor space at mixing

Sows removed for non reproductive reasons

	Space per sow (m ²)					
Space allowance	1.45	1.61	1.81	2.07	2.42	2.90
Sows removed (%)	6.1	6.5	3.8	5.2	3.7	5.6

Removal rate was not affected by floor space at mixing

Mixing different parities together

- Study to compare the welfare and performance of P1 sows grouped after weaning with older sows or with gilts
- Total of 180 sows in groups of 15 – six replicates
- In older groups – 11 older sows and 4 P1 sows
- In gilt groups -11 gilts and 4 P1 sows
- Trough fed with feed stalls

Effects of grouping Parity 1 (P1) sows with older sows or gilts after weaning on performance ,reproduction and welfare

P1 sows grouped with:	Older sows	Gilts	Significance P=
Weight gain (kg)	33	57	0.01
Farrowing rate (%)	67	94	0.03
Injury scores	12.8	8.0	0.03

Marked improvement in the welfare and reproduction of parity 1 sows if housed with gilts rather than older sows.

Secrets to success

- Amount and quality of space at grouping
- ❖ Producers achieving excellent results with floor space between 1.4-2.0 metres square. There is no minimal or optimum floor space for sows at mixing.
- ❖ Pork CRC participants “recommend” floor space between 1.8 and 2.0 square metres/sow.
- Plenty of feed available at mixing and higher feeding levels in early gestation (especially for younger sows).
- Housing younger parity sows (Gilts and P1) separate from older sows.
- Good stockman ship
- To watch
- ❖ Feeding level throughout gestation – evidence that sows getting bigger/fatter in group housing – lower maintenance requirement
- ❖ Over condition is associated with increased lameness –PCRC project
- ❖ Pay attention to oestrus stimulation and detection for sows grouped at weaning