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SOW MANAGEMENT INTERVENTIONS TO IMPROVE PIGLET SURVIVAL

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IMPROVING PIGLET SURVIVAL



Can we reduce the risk of crushing?

> 50 % die from crushing

- Only at risk if:

- Close to the sow
- The sow is moving



- Attract the piglets away?
- Reduce sow movements?
 - Confine
 - Calm the sow? ✓



Keep it simple

FIRST STEP – TRIAL IN DENMARK



Treatments - classical music and/or scratching

- Two approaches that can easily be applied on farms
- Classical music
 - Has a proved beneficial for other species
 - Easy to implement
 - Works everyday – independent of weekday, weekend, holiday...
- Scratching
 - Contact with sow, walk in, scratch within 15 seconds
 - So for 1,200 sow unit – ~55-60 sows farrow each week – 15 min a day



PLAYING CLASSICAL MUSIC



POSITIVE HANDLING OF LOOSE SOWS



- No music (NM) vs. music (PM)
 - at section level

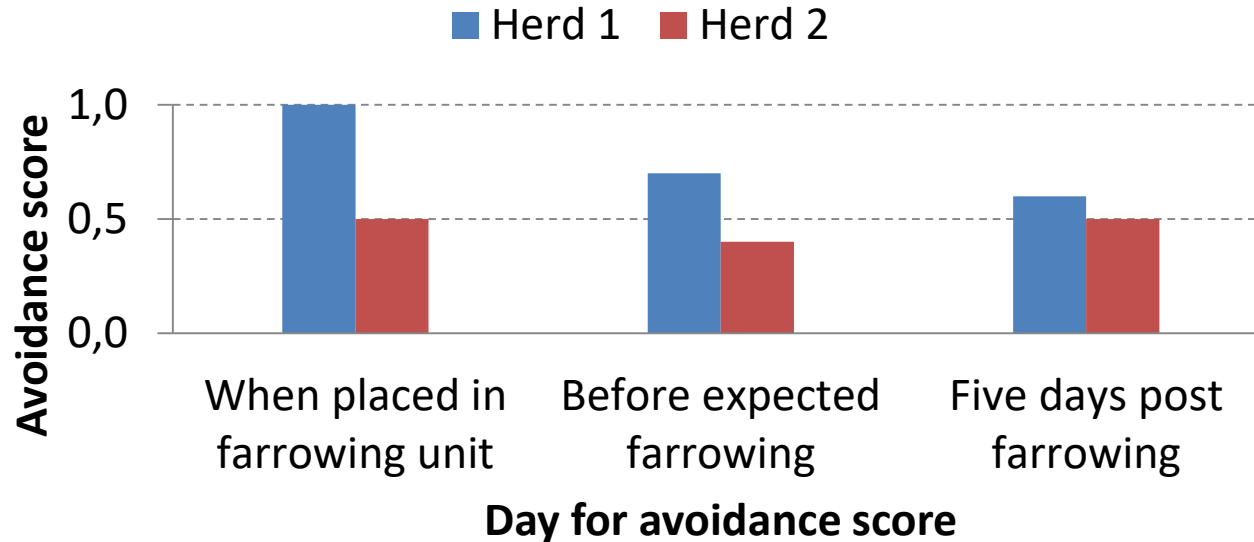
- No scratch (NS) vs. 15 sec. scratch per day (PM)
 - at sow level – within section



	Herd 1				Herd 2			
	NM ¹		PM ²		NM ¹		PM ²	
	NS ³	PS ⁴	NS ³	PS ⁴	NS ³	PS ⁴	NS ³	PS ⁴
Sows, no	57	58	58	57	54	54	54	54
Ave. parity	3.4	3.4	3.5	3.2	3.5	3.6	3.1	3.5
Total born, no/litter	19.0	20.2	18.8	18.7	17.3	18.5	17.3	16.8
Liveborn, no/litter⁵	17.4	17.9	16.7	16.9	15.3	15.9	15.5	14.5



IMPACT OF SCRATCHING ON AVOIDANCE SCORE



Avoidance score for scratched sows in the two herds. Score 0: Sows could be touched and did not withdraw; Score 1: Sows withdrew initially but could be touched within 15s; Score 2: Sows withdrew and could not be touched within 15s.

CHALLENGES FOR EVALUATION



- Many factors affect piglet mortality
 - Some are likely to ‘overrule’ positive handling
- High litter size – large variations in mortality
- Only some sows are ‘killer’ sows
 - Especially older sows / larger litters
 - We’re treating all sows – needs large sample
- Large litters mean a lot of litter equalisation and nurse sows
 - Can’t record mortality at sow level



COMMERCIAL TRIAL - BELGIUM



Objectives:

- To investigate the role of positive handling in the farrowing unit (crates) in order to improve maternal behaviour.
- To investigate the role of positive handling on the maternal behaviour of sows and piglet performance during the whole lactation period.
- To investigate the role of positive treatment on the piglets after weaning in the nursery.
- To make an assessment of any possible economic benefits of the interventions.

MATERIALS



- Music (commercial radio) was played daily between 6 am and 6 pm
- Daily backscratching for 15 seconds per sow in the farrowing rooms
 - (D1 until Farrowing)
- Three groups of treated sows (n=140) and 7 control groups (n= 314)
- Parity averaged 3.1-3.3

- Piglets from 3 groups of treated sows and 3 groups of non-treated sows
 - Each batch split in two:
 - half received positive treatment and the other half were controls



LACTATION RESULTS

	Control	Positive handling	P-value
Number litters	314	140	-
Prewean.mortality, %	11.9	9.8	< 0.05
Ave.weaning weight, kg@21d (1,296 piglets/treatment)	5.4	6.1	

POST WEANING



- Investigate the influence of pheromone (“Securpig ®” from semiokeys) use in nursery piglets on health and performance.
- Investigate the combined effect of positive handling of sows and pheromone use in piglets on health and performance of the piglets.
- Four groups
 - HP - Positive handling of sows and use of pheromone for weaners
 - HC - Positive handling of sows and no use of pheromone for weaners
 - CP - No positive handling of sows but use of pheromone for weaners
 - CC - No positive handling of sows and no use of pheromone for weaners



POST WEANING - RESULTS

	HP	HC	CP	CC	Sig H	Sig P
Feed conversion ratio	1.46	1.51	1.55	1.61	0.05	ns
ADG (g/d, corr for mortality)	308	294	290	284	0.01	0.05
Mortality (%)	5.2	3.4	5.9	5.5	ns	ns
Antibiotic use (DDD, abregister.be®)	13.8	13.9	16.2	16.3	ns	ns
Economic value (€/pig)	0	+0.09	-1.27	-1.65		

3-10 weeks of age



TAKE HOME MESSAGES



- Positive handling of sows prior to farrowing calmed sows and they were easier to handle by the staff
- Positive handling of sows gave a 2% reduction in piglet mortality in the lactation period.
- The combined effect of positive handling of the sows and piglets (with pheromones) after weaning, gave best results in terms of growth and feed conversion rate



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PROHEALTH final meetings Het PAND, Ghent Belgium, November 2018

See: <http://www.fp7-prohealth.eu/>

Industry Workshops: Tuesday 27 Nov

Scientific symposium: Wednesday 28 Nov

