



LENA RANGSTRUP-CHRISTENSEN PHD FELLOW

THE PROJECT

What? Identifying the risk factors of piglet mortality in Danish organic pig production.

- Why? An estimated pre weaning mortality between 25 and 40 % is unsustainable both from an economic and animal welfare point of view.
- How? 1. Detailed on farm registrations on the piglet mortality in 9 farms during one year
 Approximately 6000 farrowings
 - 2. Necropsies on a selection of the dead piglets from the 9 farms
 - > 100-125 piglets per farm per season ~ 4000 necropsies



STOCKMAN RECORDINGS FOR MORTALITY CALCULATIONS - METHODS

- A pocket sized booklet.
- Counting and registration of piglets four times during the seven week long pre weaning period; At birth, castration (or 3-5 days after birth), vaccination (or 14-21 days after birth) and at weaning.
- Registrations on the sows include: Parity, body condition, health status and functional teats on the gilts.
- Data collection from June 2014 until May 2015
- Registrations on approximately 6000 farrowings



STOCKMAN AND THEIR RECORDINGS DIFFERS

Hold:	So nr.	500	0	774	911	635	642	709
	Hytte	73	-	63	26	115	65	44
34	Læg nr	5	0.0	2	1	4	4	3
01	Fen nr/fælles fold		600					
Indent faromark	Dato	13/8		25/2	25/2	13/8	25/2	13/0
indsæt faremark	Halthed (0-1) + Huld (2-4)	3.		?	7	3	2	3
	Faring, dato	28/8		29/3	2.9/8	29/8	30/8	31/8
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ranng	Døde efter faring (S/A)		1 C. 4	15	15		3 5	
	Levendefødte	19	600	20	3	18	24	22
	Heraf små (max. 21 cm)			2			1	
Indtil kastrering	Kuldudjævning +/-	-1		-5	+9	-3	-6	
Gylte	Antal patter	14		14	14	14	14	15
	Kastrering dato	30/8		30/2	30/1	30/2	6/9	6/9
Vactoring	Antal grise v/start	14	600	14	12	14	17	13
Kastrenng	Afliv. efter optæl, antal	-					-	
	Evt. kuldudjævning +/-		(+3			-2	-2
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vaccination	Antal grise	13		13		10	12	13
Fravanning	Dato	30/10		30/10	16/10	30/10	30/10	30/11
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CROSS FOSTERING AND NURSING SOWS IS DIFFICULT

- Risk of double registrations when cross fostering piglets and using nursing sows
- Communication with the farmers and the employees in the farrowing unit
 - Have they changed their daily routines?
 - Are new employees being trained to do the registrations correctly?



NECROPSIES - METHODS

- Dead piglets from approximately 25 sows on each farm.
- 4 collection periods summer, autumn, winter and spring.
- Collection during the same 12 month period as the mortality registrations are performed.
- Dead piglets are kept frozen and necropsies are performed at the farms.
- Detailed information on body condition, stomach content etc. and a cause of death is noted for each piglet.

Necropsies on approximately 4000 piglets



NECROPSIES - A PICTURE IS WORTH A THOUSAND WORDS



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NECROPSIES - ISSUES

- Dystocia vs. crushed from what do the oedema originate?
- Intrauterine Growth Restriction (IUGR) is hard to evaluate
- Diagnoses on older piglets often in need of histology or other diagnostic tools
- Consistency in the use of diagnoses





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THE END PRODUCT OF THE STUDY

- A PhD thesis including three peer reviewed articles to be published in internationally recognised journals.
- Suggestions on how to combine the results from the necropsies and the detailed registrations in solid hypotheses



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HYPOTHESES – WORK IN PROGRESS

- A proportion of piglets that are diagnosed as crushed have other potential underlying predisposing factors such as poor nutritional state, low birth weight or infectious diseases.
- Poor health status, nutritional stage and high parity of the sow will increase the piglet mortality rates.
- There is a significant difference of pre weaning mortality and causes of death both regarding the temporal distribution and in the individual variations between the farms.



