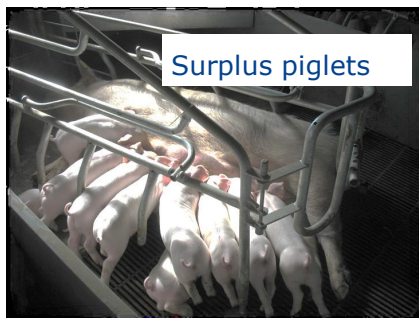


Welfare of nursing sows and their piglets - Results from a Danish cross-sectional study

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Department of Animal Science, Aarhus University



Artificial rearing
system

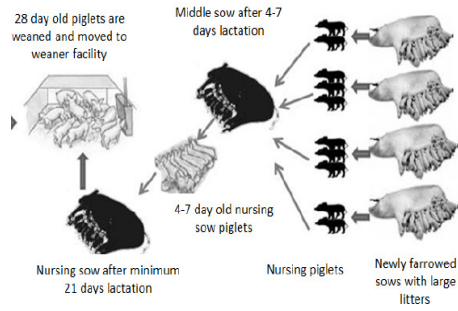
Split- Suckling

Litter equalisation
(standardisation,
sex and size
sorting, collecting
unthriving)

Nursing sows /
Split weaning

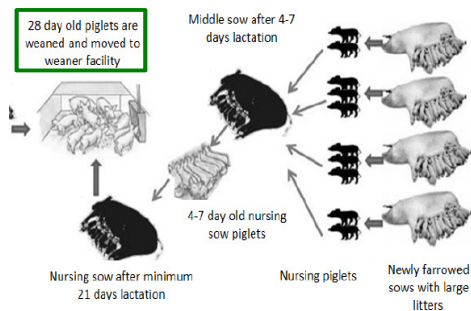
(Modified after Vidensenter for
Svineproduktion, Axelborg, 2
Denmark)

The two-step nursing sow system



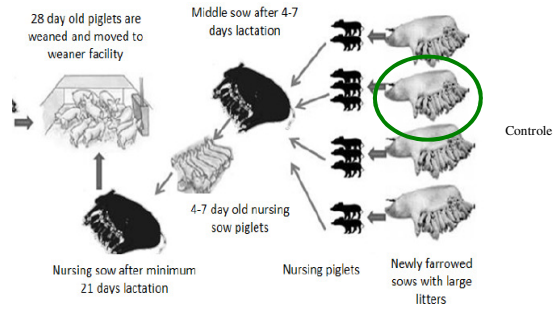
(Modified after Baxter, 2013) 3

The two-step nursing sow system



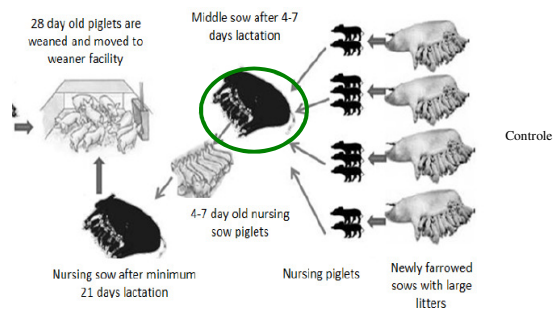
(Modified after Baxter, 2013) 4

The two-step nursing sow system



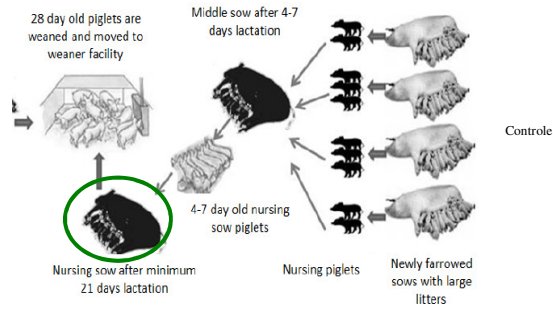
(Modified after Baxter, 2013) 5

The two-step nursing sow system



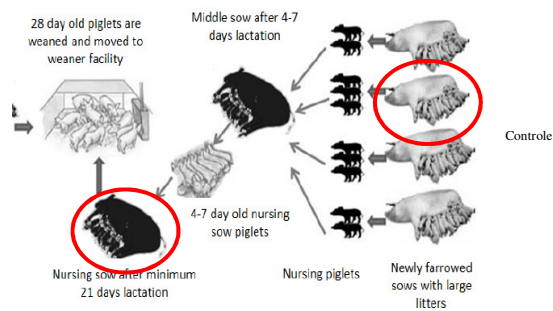
(Modified after Baxter, 2013) 6

The two-step nursing sow system



(Modified after Baxter, 2013) 7

The two-step nursing sow system



(Modified after Baxter, 2013) 8

Animal welfare concerns

Nursing sow

Prolonged fixation, lactation (+3 weeks)

Transfer of piglets (own and nursed)

Nursed piglets

Transfer



A cross-sectional study in 59 Danish Sow herds...

59 herds

Inclusion criteria herds: min. 200 sows, 2 step-nursing sow regime

714 nursing sows and 1020 control sows

Definition of 'control sow': same age litter as nursing sow
(parity is controlled for)

Data collection period: 1/10 2013 – 1/5 2014

Clinical examination of sows

Thin (BCS<2.5)

Udder wounds

Swollen joint

Poor skin hygiene

Shoulder lesions

Poor skin condition

Bi-claw wounds

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Odds ratio: 5+ vs 1-4 weeks stay in farrowing section

Thin (BCS<2.5)

Udder wounds

Swollen joint

Poor skin hygiene

Shoulder lesions

Poor skin condition

Bi-claw wounds

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Odds ratio: 5+ vs 1-4 weeks stay in farrowing section

Thin (BCS<2.5)	2.5	P=0.0005
Udder wounds	2.0	P<0.0001
Swollen joint	1.7	P=0.0019
Poor skin hygiene	1.2	P=0.0479
Shoulder lesions	1.3	P=0.1575
Poor skin condition	1.2	P=0.3345
Bi-claw wounds	1.2	P=0.0936

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Odds ratio: nursing sow vs. non-nursing sow status

Udder wounds	1.6	P=0.0006
Swollen joint	1.3	P=0.0384
Thin (BCS<2.5)	1.3	P=0.2179
Poor skin hygiene	1.1	P=0.6095
Shoulder lesions	0.8	P=0.3948
Poor skin condition	1.4	P=0.0898
Bi-claw wounds	1.2	P=0.1433

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Clinical examination of litter

**Piglets in the litter with
front knee abrasions**

Dirty piglets in the litter

Limping piglets in the litter

Litter is huddling

**Piglets in the litter with
wounds around snout**

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Odds ratio: nursing sow litter vs. non-nursing sow litter

Piglets in the litter with front knee abrasions	2.8	P=0.0242
Dirty piglets in the litter	1.2	P=0.0256
Limping piglets in the litter	1.4	P=0.0518
Litter is huddling	0.8	P=0.6392
Piglets in the litter with wounds around snout	1.1	P=0.4143

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Nursing sows...

- More often have joint swellings
- More often have udder wounds
- More often are thinner
- More often are more dirty

Nursed piglets...

- More often have abrasions on front legs
- More often are more dirty
- Tend to more often to be lame

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Animal welfare concerns....

Nursing sow

Prolonged fixation, lactation → Shoulder lesions,
Poor body condition
'Stress'

Transfer of piglets → 'Earlier weaning of own off
spring' / acceptance of nursed
piglets
'Disturbance'

Nursed piglets

Transfer → Re-establishment of teat order
'Acceptance' by nursing sow
Hunger

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