

Systems with temporary crating



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Outline

- Why consider temporary crating?
- How is temporary crating 'practiced' in different countries?
 - Legislation
 - Pen design
- The Danish experiences
 - Production results
 - Pen design
 - Experiences
- The future
 - Loose - as much as possible



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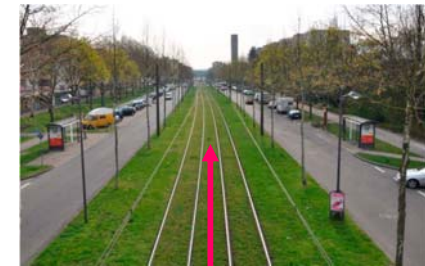
Housing of lactating sows

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- Baumgartner
 - Free farrowing – limited in most countries
 - And if legal requirement – production has decreased significantly
- So
 - We should learn from experience across countries
 - Ask the most important questions
- Housing of pigs
 - Two tracks
 - Crates
 - Loose farrowing
 - - or in between

Temporary crating



Why temporary crating?

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Why consider temporary crating?

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- 'Industrial' pig production
 - Global market
 - Denmark exports 90 pct. of the pork produced
 - Consumers (lack of) willingness to pay
- Today the majority of lactating sows in Europe are in crates
 - Pregnant sows loose from 1. January 2013 (?)
 - Farrowing and lactating sows next? – EFSA 2007
- Crates
 - Limits sow movement
- Loose farrowing
 - Challenge piglet survival
 - Increase costs



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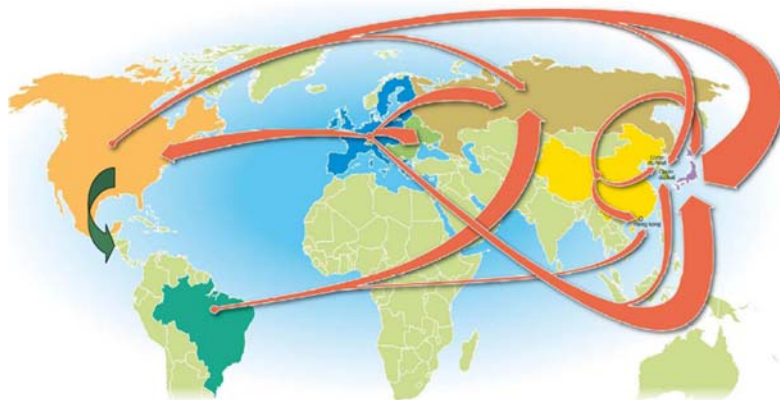


Why temporary crating?

Industrial pig production – not a niche

The global market for pork is app. 6.5 million tonne. The production is app. 100 mio tonne

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The global market – 6.5 mill ton (2011)

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Export		Import	
US	2.0	Japan	1.3
Canada	1.7	China	0.6
EU	1.6	US	0.9
Denmark	(0.6)	Russia	0.9
Brazil	0.6	South Korea	0.4
Total	5.9	Total	4.1

25 pct of the export is from EU
- So our production must be competitive

Why temporary crating?

Pregnant sows are loose – from 2013?
Lactating sows are next - EFSA

Loose housing of pregnant sows in selected EU countries

Country	Pct. loose 2010
Portugal	<5%
Italy	10%
Austria	10%
Spain	<15%
Germany	20-25%
Holland	60%
Denmark	65-70%



Why temporary crating?

Indoor farrowing accomodation – today
Crate vs. loose

Denmark Standard pen – crated sow



Dimensions



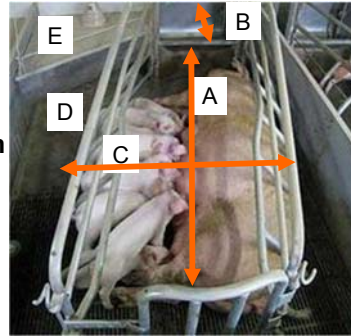
Sow:

- A. Crate length ≥ 210 cm
- B. Trough: 40 cm from front to back

Piglets:

- C. distance needed for suckling ≥ 125 cm
- D. ≥ 1 m² solid floor
- E. Covered creep area: 0,8 m²

- Pen length: ≥ 270 cm
- ≥ 15 cm from crate gate to pen gate



But the sows can't turn around!

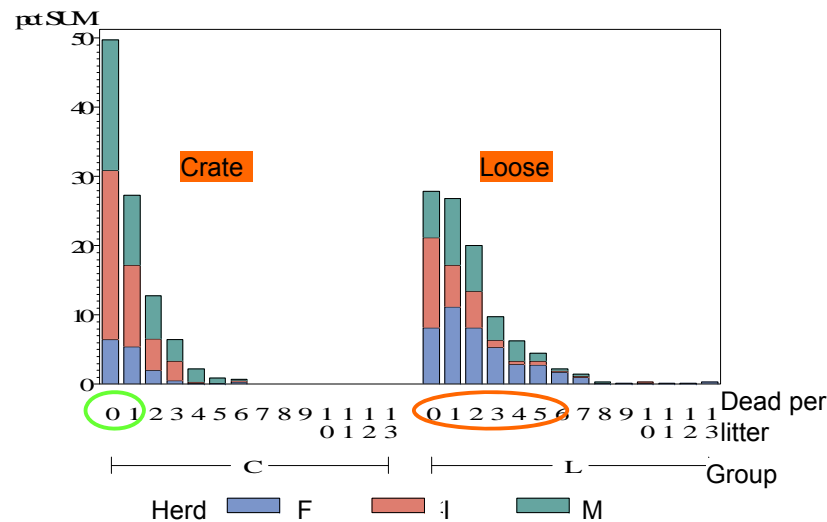
Denmark - Loose farrowing - joint project 08-10



- Research, development and practical experience
- Criteria
 - Sow
 - Neonatal piglets
 - Staff
- Project group
 - Jyden
 - Danish Animal Welf. Soc.
 - DJF - AU
 - SAAC
 - Skjold
 - Perstrup
 - Hedegaard
 - SKOV
 - Ergofloor
 - PRC



Across herds 2010-2011



'How' temporary crating?

- Thinking from
 - crate to loose or
 - from loose to crate?

Examples of different approaches in different countries – and within countries



Temporary crating - Norway

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Pen design

Legislation '§'

Use of crates are prohibited - however, if a sow is very restless it may be crated until seven days post partum



Temporary crating - Sweden

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Legislation

- The movement of the sow may be restricted within the first day after farrowing – if the sow is aggressive – or the piglets are at risk
- And at daily work routines – if the staff is at risk

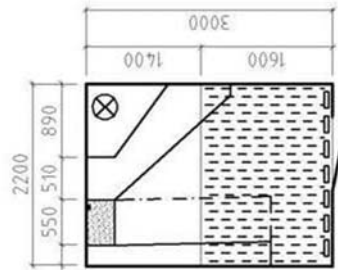
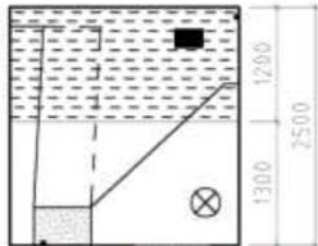


Welfare costs – so suggested subsidy of 127 € /sow/year

Suggpeng värd 440 miljoner på förslag

Temporary crating - Sweden

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Temporary crating - Denmark

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So far

- Crates are allowed
- if temporary crating
 - a farrowing crate that was opened
- However, bad hygiene - or slatted flooring

Dunging!



Temporary crating - US

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New pens



Temporary crating - Germany

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MANAGEMENT 2011

Ferkelerzeugung: Druck von allen Seiten

Deutschlands Ferkelerzeuger stecken in einer schweren Krise. Vier Sauenhalter berichten, wie ernst die Lage ist.

Nachdem Ferkelerzeuger, insbesondere Ferkelerzeuger, über längere Zeiträume hinweg, Notlage-Ärger und Verluste zu verzeichnen - von allen Seiten geraten. Durchfallende Ferkelerzeuger drücken unter Druck. Die Konsequenz: Die Stimmung ist im Keller, und der Preis steigt. Vor allem in Süddeutschland denken viele Sauenhalter am Abziehen. Aber auch im Norden ist die Lage derzeit alles andere als rosig.

Notwendig ist ein Sanierungsplan als 100, 100-Millionen und kein. Sie melden sich nur zu Wart, wenn es wirklich brennt. Und im Moment brennt es Schrecklich.

Das Agrar hat mit vier Ferkelerzeugern in Nord- und Süddeutschland über ihre Situation diskutiert. Wie stark sind sie von der Abwärtsentwicklung betroffen, wo denken ihnen die Schick, und was bedeutet sie?

Für einen bei im Abbruch befindlichen Ferkelerzeuger im 2017 nicht mehr gesteuert werden.

Temporary crating - Germany

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Tabelle 1: Abferkelbuchten im Vergleich (Haus Düsse 1993 – 1997, HOPPENBROCK 2000, persönliche Mitteilungen)

	Kastenstand	Vario-Fit	Ulrich 2000
Zahl der Würfe	563	149	145
Leb. geb. Ferkel/Wurf	11,5	11,5	11,6
Verluste (%)	14,4	17,6	17,7
Erdrückungsverluste (%)	4,8	9,2	6,5
Verluste durch Trittverletzungen (%)	0,03	1,8	0,7



+ Grouphousing –
But might increase total area which increase cost

Temporary crating - NL

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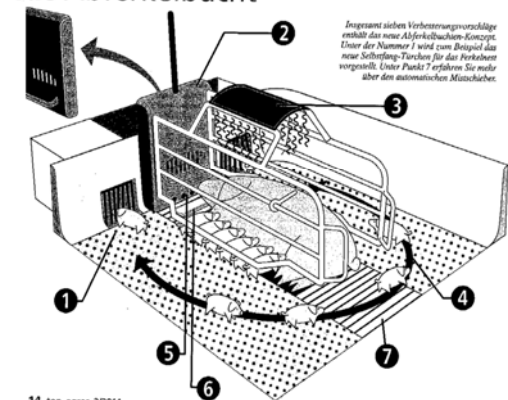
Landwirte entwickeln eine neue Abferkelbucht

Legislation:

Compulsory to have 40% solid floor but if you use another material than concrete it can 100% slatted.

Fully slatted – nest building material?

Production:
New projects
Pimco and ProDromi
– but few data available



14 top agrar 2/2011

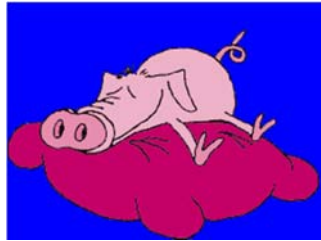
See
DLG Mitteilungen 11/2011

Temporary crating - UK

'360 degree', 20 pens
Martin Barker
Midland Pig Producers



Fully slatted – nest building material?

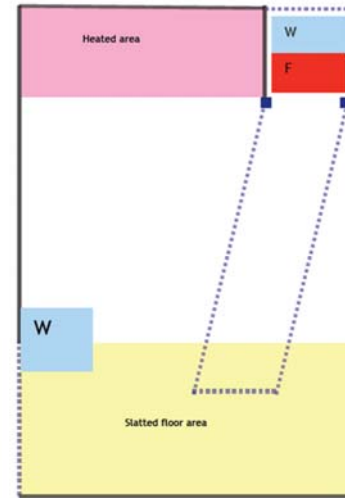


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Temporary crating - Austria

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Legislation

- Debate – intensified during 2011.....



Temporary crating - Switzerland

Legislation

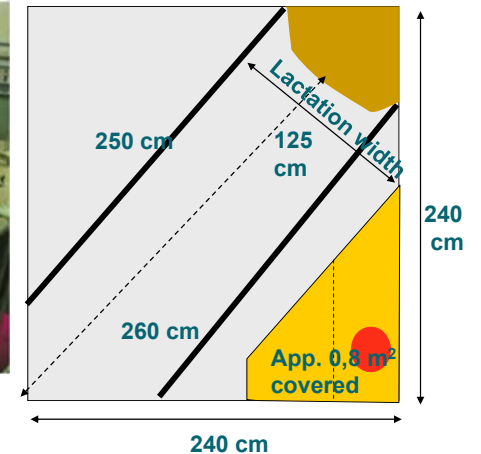
- Crating is forbidden
 - Barbara Zehnder will follow up this afternoon

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The pen – with an optional crate

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But fully slatted floor

Crushing – lying down and rolling behaviour

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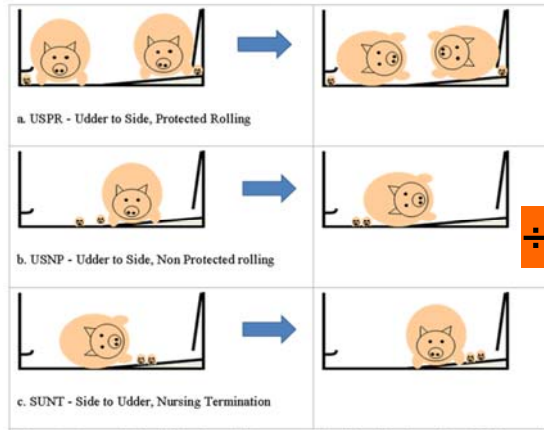
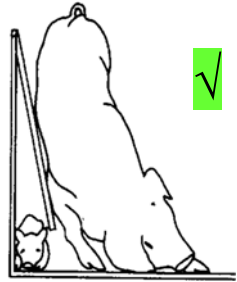


Figure 3: Categorization of the three different types of rolling behaviour with definitions and

Control sow movements Norway/Austria/Denmark

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Farrowing accommodation - challenges across (most) countries

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• Crate

- Limited movement by the sow ← Temporary crating

• Temporary

- Unsatisfactory level of hygiene or fully slatted
- Limited possibilities to nest build – if crated and/or slatted flooring

• Loose farrowing

- Unsatisfactory level of piglet survival ← Temporary crating
- Expensive pens
- No premium paid



In DK:
1 squaremeter
≈ 400 €

We need either:

- Two piglets more per litter
- Each piglet weighing 1.5 kg extra
- Increased maternal capacity of the sows – so less nursing sows

Why temporary crating?

The Danish experiences

- Production results – can we reduce neonatal mortality?
- Pen design – can we have solid flooring – and high level of hygiene
- then nestbuilding

First: Neonatal piglet mortality

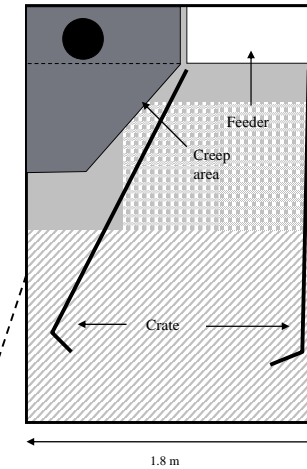
- The piglets are 'vulnerable' in the first few days after birth
- The majority of the mortality occurs within a few days post partum
- Can we reduce mortality by crating the sows for a few days?



33

Crate vs. non-crate

Experiment



- Metal floor, 10% opening
- Metal floor, 40% opening
- Solid floor, concrete
- Creep area
- Heat lamp



34

Crate vs. non-crate

Conclusions

- **Confinement before farrowing**
 - No impact on number of stillborn – but in stalls during gestation
- **Confinement after farrowing – for four or seven days**
 - Reduced neonatal mortality
 - Increased number piglets in the litter day 10

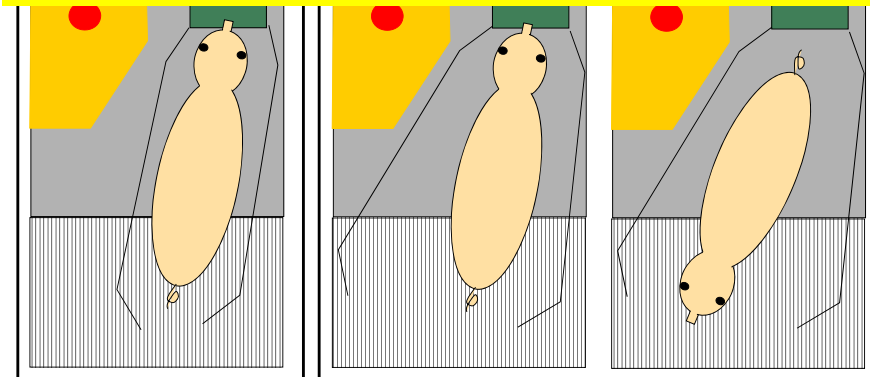


35

Second: Hygiene – solid floor

This pen is flexible regarding the use of the optional crate – **BUT** we need it to be flexible to in regard to

- **Floor/surface/slats**
- **Position of feed/trough**

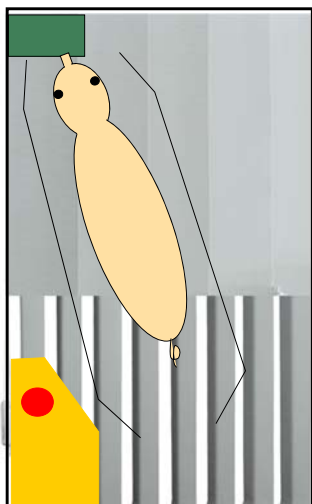


36

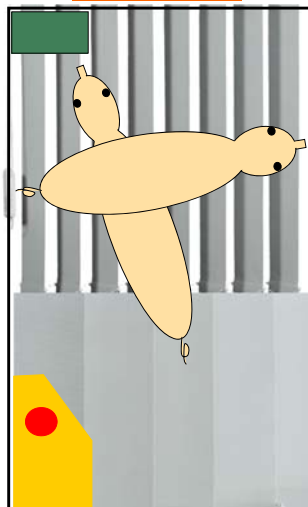
Idea - 1

- 'Flexible' flooring – like blinds

Before farrowing



After farrowing



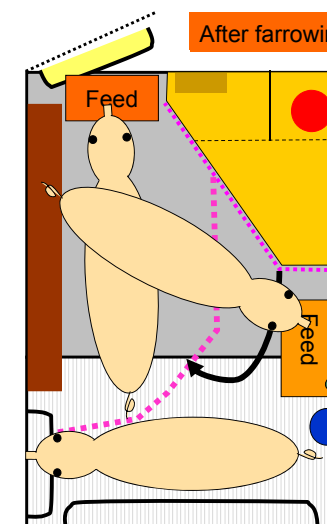
37

Idea - 2

- 'Flexible' feeding area



After farrowing



38

What is next?

How do we develop temporary crating ?

The sow is loose – as much as possible

- new project in collaboration with Copenhagen University – starts in 2012

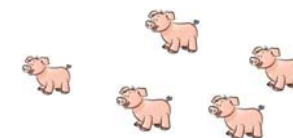
The potential impact of crate on the sow behaviour

- Change from loose to crate
- Stressmeasures
- Behaviour
- Farrowing



The impact on piglet survival of using a crate

- Stillborn
- Neonatal survival until weaning



The 'impact' on staff/work conditions of an optional crate

- Work conditions
- Strategy for when to use the crate



40

The sow is loose – as much as possible - 2016

- **Completed the project**
 - Impact of use of crate on sow
 - Documentation
 - Neonatal piglet survival
 - Same level as in crates
 - Piglet growth until weaning
 - As in loose housing
 - Penedesign
 - Nesting material
 - High level of hygiene
 - Recommended strategy for use of crate
 - Before farrowing
 - During farrowing
 - After farrowing



Loose lactating sows....

2012

2016

2020

No crate

Optional crate



New pen



Premium price

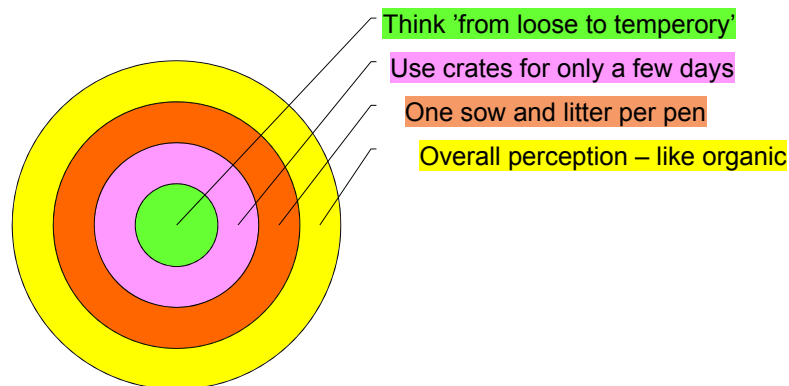
Competitive alternatives to crates

Production

Take home messages!

Targets:

- Sow welfare – as free as possible
- Piglet survival – as high as possible
- Farm economy – as good as possible
- Consumer perception – willing to pay premium



Take home messages!

How to obtain the targets:

- Sow welfare – as free as possible
- Piglet survival – as high as possible
- Farm economy – as good as possible
- Consumer perception – willing to pay premium



Acknowledgements

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Projects:

Farrowing pens for loose sows

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