

# The future

VSP.LF.DK  
VSP-INFO@LF.DK

Senior Project Manager

Vivi Aarestrup Moustsen, PhD Animal Science  
Housing and Environment

VAM@LF.DK

Pig Research Centre,  
Danish Agriculture and Food Council



PIG RESEARCH  
CENTRE

# Future of the Danish pig industry

- Long term commitment to research and development
- Clear objectives and strategy
- Passion for pigs



# Strategies for the Danish pig industry

Focus on piglet production

Focus on new technology



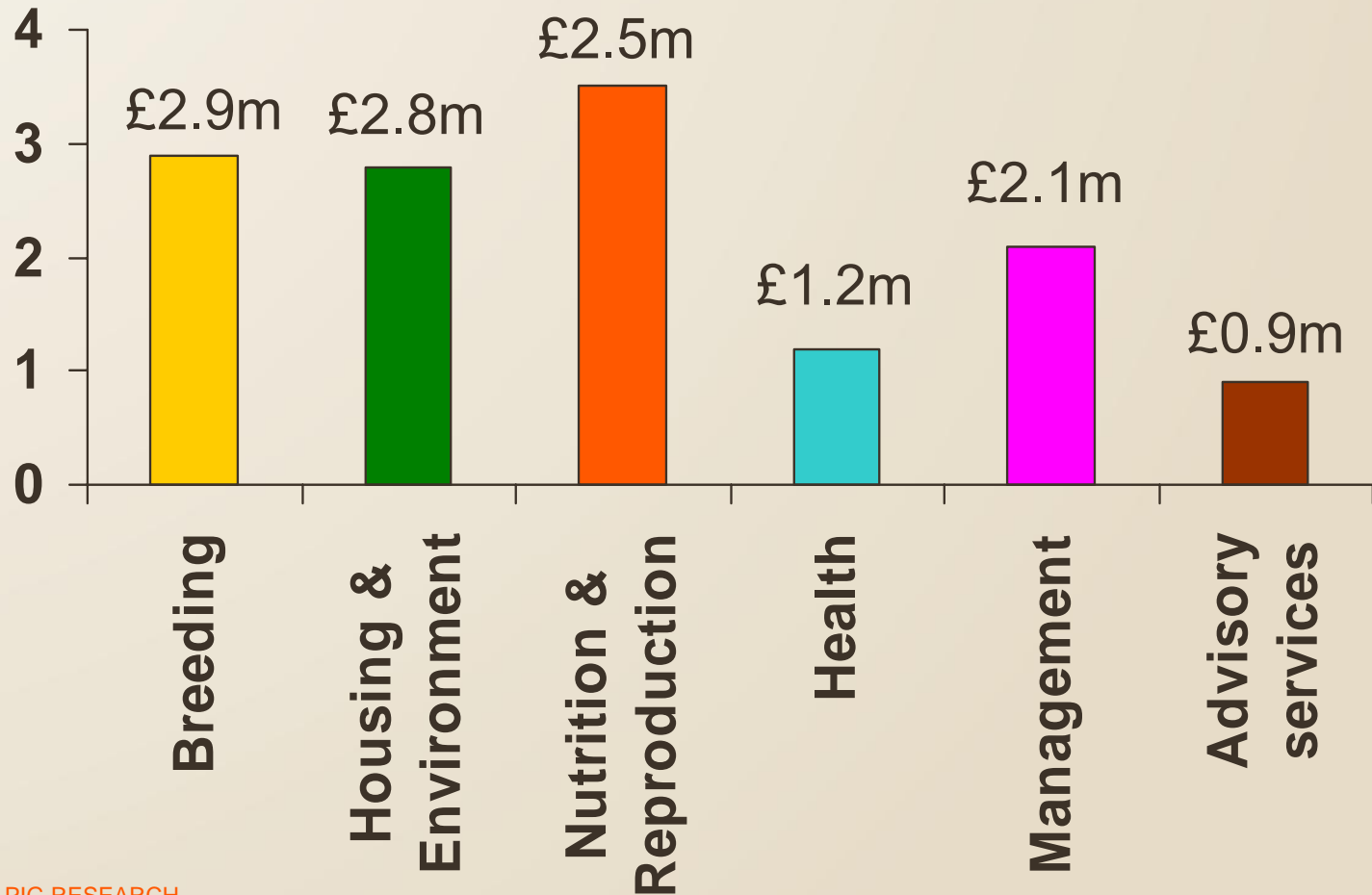
High value production and breeding animals



PIG RESEARCH CENTRE

# VSP Key Research Areas

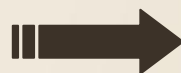
Total £12.4m



PIG RESEARCH  
CENTRE

# TRIALS – PRODUCTION HERD

WWW.VSP.LF.DK



# IMPLEMENTATION



# ADVISORY SERVICE

## Pain relief during castration

- Treatment is administered via injection in the back of the neck (behind the ear)
- The injection is given simultaneously with the castration or before the castration (max. 60 min-utes before)
- The vet must provide written instructions for how to perform the treatment.



## Drugs and dosage

There are three different pain-relieving drugs to choose between (as of April 2009) that must be prescribed by the practising vet.



PIG RESEARCH CENTRE

# Sow Productivity 2008



	Average	Top 25 %	Top 5%
Weaned pigs / sow / year	27.3	29.9	31.2
Litters / sow / year	2.25	2.32	2.4
Liveborn / litter	14.0	14.5	14.7
Stillborn / litter	1.8	1.8	1.7
Weaned / litter	12.1	12.9	13.8
Total mortality / litter (%) (including stillborn)	23.4	20.9	15.9

# Weaner/Finisher Productivity 2008

	Average	Top 25%
<b><u>Weaners</u></b>		
Daily weight gain (g)	469	539
Feedconversion (FE/kg)	1.97	1.83
<b><u>Finishers</u></b>		
Daily weight gain (g)	904	994
Feed conversion (FE/kg)	2.8	2.7
Average meat content (%)	60.4	60.4



# Key Focus Areas

- Reduction of environmental impact
- Welfare improvements
- Productivity



# Environmental goals

- Nitrogen in pig slurry reduced 18% by 2015 (from 5,1 to 4,3 kg)
- Emission of ammonia reduced 40% by 2015
- Emission of phosphorous reduced 25% by 2009 (from 33 kg/ha to 24,8 kg/ha)
- Odour nuisance to be reduced to a minimum
- Development of eco-efficient technology



# Life Cycle Assessment – Danish pork



# Pig Welfare

- Total expenditure £3m approx.
- Information campaigns
- Research projects
- Manuals
- Check lists
- Database



# Pig Welfare Activities 2009/10

- Alternatives to castration (£0.3m)
- Tail biting (£0.2m)
- Rooting and manipulable materials (£0.2m)
- Sow management (£1.2m)
- Loose housed farrowing sows (£0.4m)
- Organic pig production (£0.1m)
- Participation in other welfare projects (£0.4m)
- European research projects



# Sow welfare during pregnancy

- 70-75% of sows in loose systems
- 'UK Contract' excludes confinement from service to seven days before farrowing (compatible with UK legislation)
- EU and Danish legislation allows confinement for four weeks after service (welfare benefit for gilts and 'weaker' sows)



# Loose housing of pregnant sows in selected EU countries

Country	
Portugal	<5%
Italy	10%
Austria	10%
Spain	<15%
Germany	20-25%
Holland	60%



# Rooting and manipulable materials - Future research partnership with Aarhus University (DJF)

## → To test the effects on pig behaviour

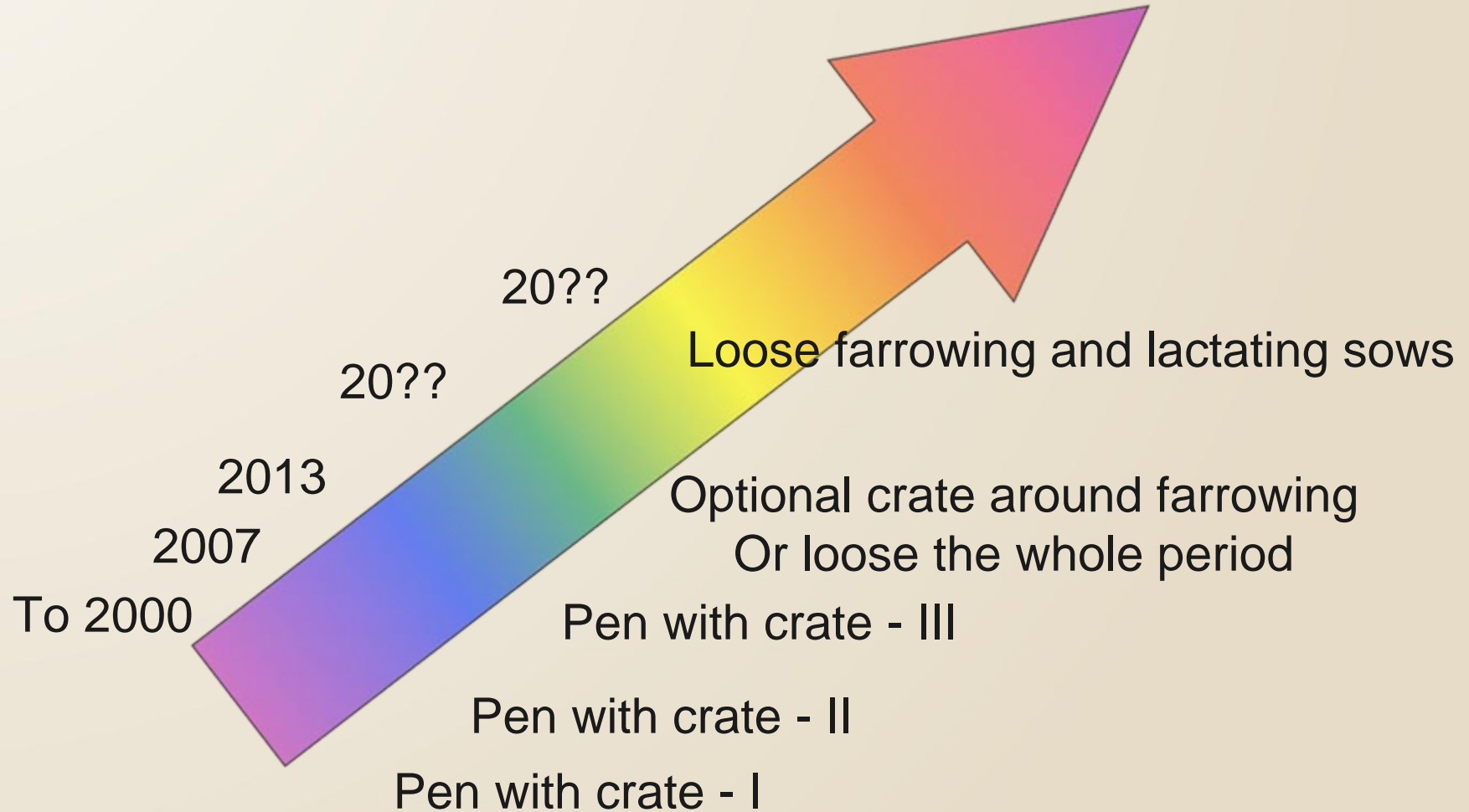
- Variations in amounts of straw
- variations in the frequency
- variation in timing of allocation

## → To test the effects of straw

- on pigs' interest and
- occurrence of abnormal behaviours



# The farrowing unit of the future



# Benefits of loose housing of farrowing SOWS

- Improved welfare for sows
- Increased milk uptake for piglets
- More uniform weights at weaning
- Better motivation of staff
- Improvement of public image

**Key success factor:  
Enable the sow to take  
better care of her own  
piglets**

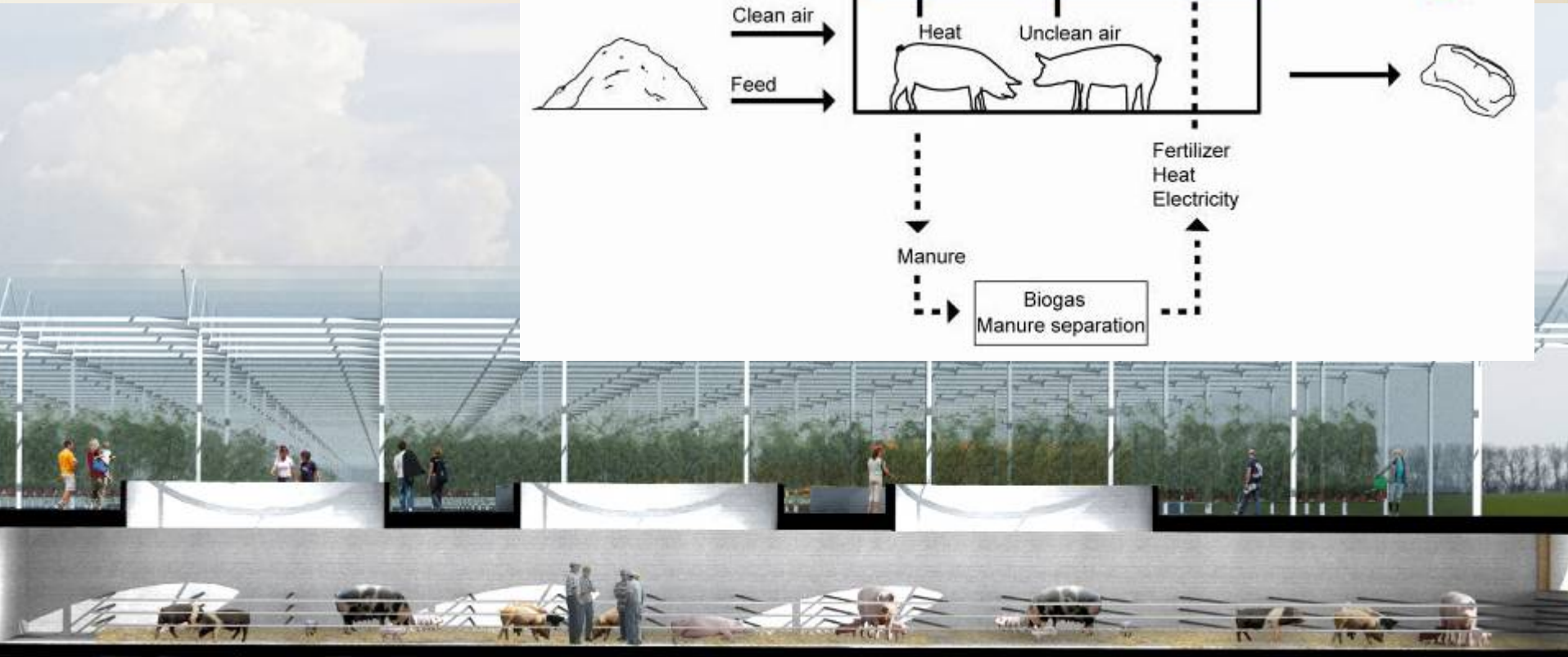
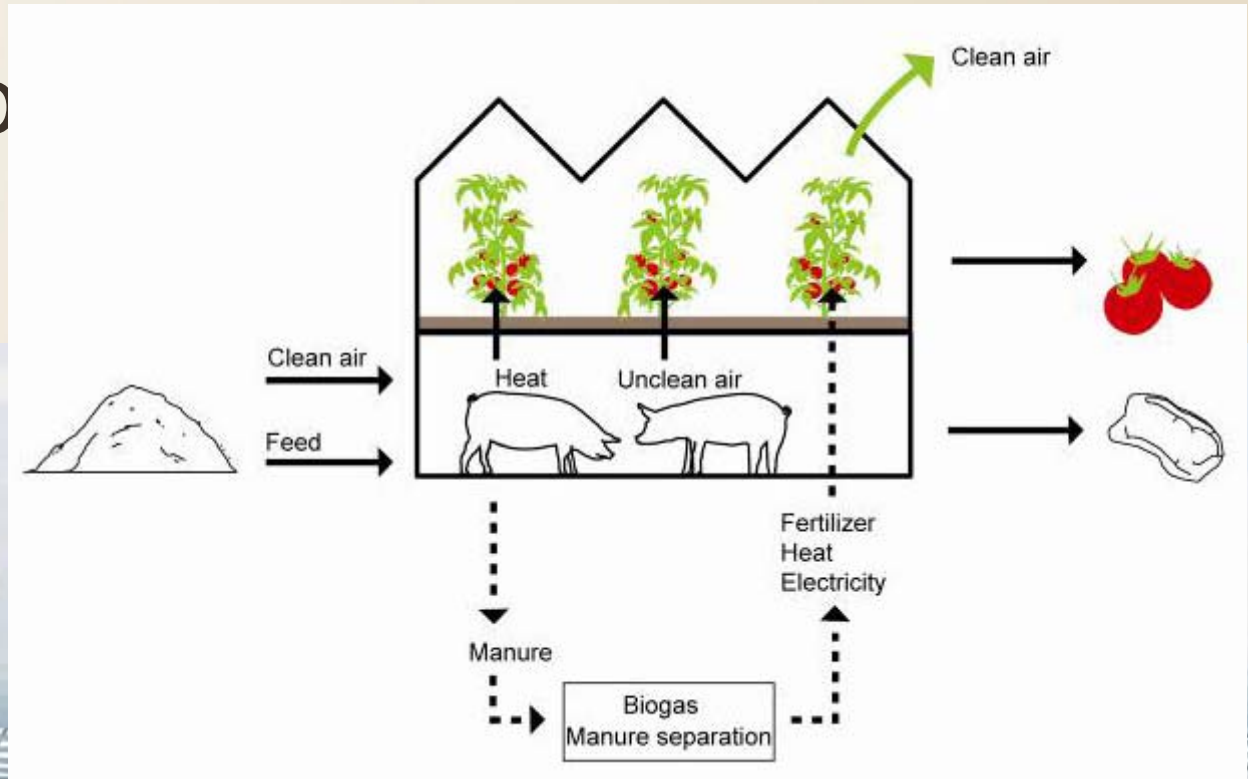


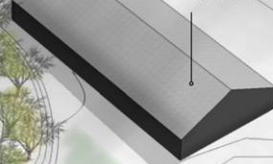
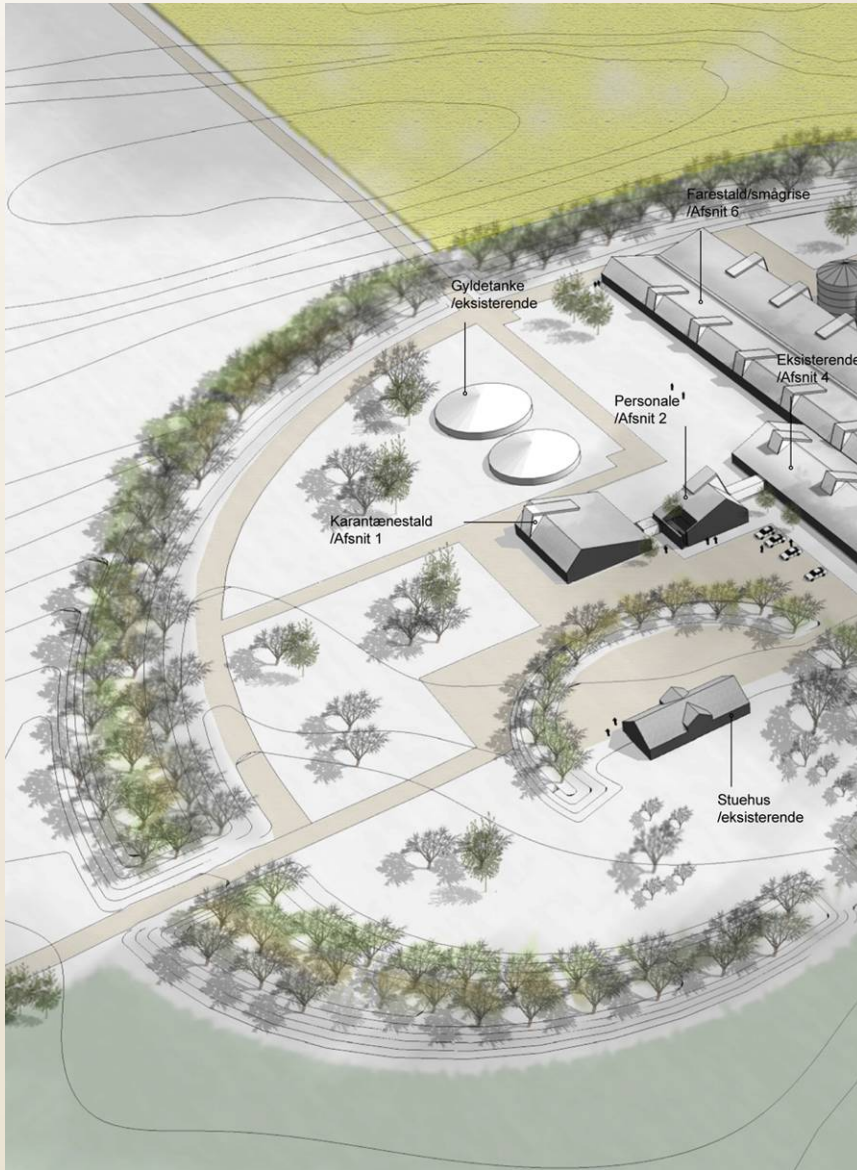
# Challenges of loose housing of farrowing SOWS

- Piglet mortality
  - *All sows/ few sows*
- Size of pens
- Hygiene – with partly solid floor
- Staff safety
- Staff motivation
- Education of staff
- Increasing herd sizes



# Future develop





// SITUATIONSVIEW



PIG RESEARCH  
CENTRE

# The Danish passion for pigs

- Dynamic development
- Testing in commercial herds
- Focus on competitiveness
- Key areas
  - Production efficiency
  - Animal welfare
  - Environmental impact
  - Integrated production chain
- Willingness to change and adapt to market environment



