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# Perspectives of loose housing of lactating sows

## Welfare in pig production: UK, EU & Global perspectives

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# Content

- Welfare issues for pigs in commercial production
- Importance of loose housing for lactating sows
  - opinion on access to nesting material; part solid floor; option for temporary confinement
- Role of Compassion In World Farming in driving change
- Role of other stakeholders to influence change

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# Raising baseline standards for animal welfare via:

GOOD FARM ANIMAL WELFARE AWARDS 2015


BBFAW
Business Benchmark on Farm Animal Welfare

Advisory/projects – strategic & technical

Cracking News

Marketing & communications support

Collaborative projects & events

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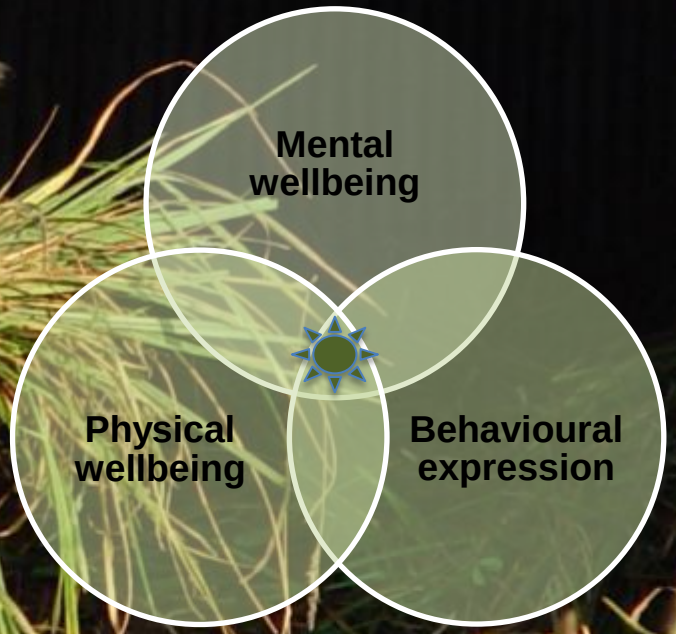
# Animal Welfare in its Holistic form

Animal welfare is not just about the absence of suffering, but about providing animals with a GOOD QUALITY OF LIFE, that meets:




- Provides a net balance of positive experiences
- Gives animals what they want & need

# Good welfare is underpinned by: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# Welfare Issues in Sows

## Physical wellbeing

| Welfare issue | Problem | Solution |
|---|---|---|
| Confinement - sow stalls, farrowing crates, tethering | Shoulder sores, weak muscles and bones, cardio-vascular problems, dystocia, urinary infections | Group house sows throughout service, pregnancy and farrowing |
| Lameness - typical rates of 18% lame | Poor flooring, especially fully slatted; wet and slippery floors | Straw bedding for lying areas and rubber matting for standing areas; good drainage |
| Poor body condition | Competition at feeder, inappropriate diet | Provide sufficient space at the feeder for all sows to feed simultaneously; distribute feed over a large area for on-floor feeding; provide an appropriate number of individual stations in automatic systems |
| Poor sow comfort | No bedding material; low space allowance | Provide deep straw bedding and sufficient space, calculated with the allometric curve |
| Poor thermal comfort | Heat or cold stress indoors<br><br>Sunburn if kept outdoors | Provide adequate ventilation & temperature control<br>Provide shelter, shade and wallows outdoors to cool and protect skin |
| Mastitis, metritis, agalactia | Bacterial infection of mammary glands and uterus; loss of milk supply leads to high piglet mortality and poor weaning weights | Keep farrowing pens clean and dry; ensure sow has exercise before farrowing and in early lactation; provide plenty of water at all times; avoid over fat sows |
| Damage to sows' teats | Competition between new born piglets for sufficient milk supply; inadequate numbers of functioning teats | Breed sows for sustainable litter sizes and good sow condition. Ensure good sow nutrition and provide supplementary feed for piglets. Manually introduce new-born piglets to teats during suckling. Provide sows space for movement to increase milk production |
| Health monitoring | All health and disease issues – if they're not measured they can't be improved | Develop a herd health plan to monitor disease and welfare performance; set targets and plan action to reduce incidence rates |

## Mental wellbeing

| Welfare issue | Problem | Solution |
|---|---|---|
| Confinement - sow stalls, farrowing crates, tethering | Boredom, frustration, depression | Group house sows throughout pregnancy and use free-farrowing systems during lactation |
| Barren environments | Boredom, aggression, stereotypy | Provide complex, edible, destructible substrates (e.g. straw, rice hulls), and a varied environment throughout life |
| Fear | Low-ranking individuals in the social hierarchy are afraid of joining the group and dominant individuals<br><br>Flighty behaviour due to fear of humans | Provide barriers and areas of refuge, so sows can escape aggressors. Keep sow stable groups stable and avoid mixing<br><br>Ensure positive human-animal interactions– use pig boards/flags for handling, do not use electric goads, act in a calm, predictable way |
| Hunger | Feed restriction in early to mid-pregnancy to avoid excess weight gain – leads to aggression | Provide a high fibre diet with *ad libitum* roughage for satiety (feeling 'full') |
| Nose rings in outdoor sows | Inability to express rooting behaviour, pain caused by ring | Avoid nose ringing. Provide frequent pasture rotation, large land availability |

## Natural behaviour

| Welfare issue | Problem | Solution |
|---|---|---|
| Abnormal behaviours | Stereotypic bar biting / chewing, during confinement | Group house sows; provide complex, edible, destructible substrates (e.g. straw, rice hulls), and a varied environment |
| Aggression | Skin lesions and lameness | During mixing, provide plenty of space, soft bedding, and barriers to hide from aggressive sows; feed *ad libitum*. Preferably keep sows in stable groups |
| Restriction of species-specific behavioural expression | Lack of space for development of functional areas indoors<br><br>Inability to express nest building behaviour<br><br>Inability to express maternal behaviour | Calculate space allowance using the allometric curve. Provide separate functional areas for eating, dunging, rest and activity.<br><br>Provide nesting material before and during farrowing<br><br>Use free-farrowing systems |



# Welfare Issues in Meat Pigs

## Physical wellbeing

| Welfare issue | Problem | Solution |
|---|---|---|
| Close confinement | Low space allowance, only allows for sternal lying | Follow the space requirements according to the allometric curve and activity requirements |
| Facial damage to piglets | Competition between new born piglets for sufficient milk supply and functioning teats | Breed sows for sustainable litter sizes and good sow condition. Ensure good sow nutrition and provide supplementary feed for piglets. Manually introduce new-born piglets to teats during suckling. Provide sows space for movement to increase milk production |
| Tail bitten | Lesions and infection in tail, spine, internal organs; leads to mortality | Provide complex, edible, destructible substrates to occupy pigs for 15 to 20% of their time; assess and resolve multi-factorial risk factors. Use breeds which are less inclined to tail-bite |
| Lameness - typical rates of 20% lame | Poor flooring, especially fully slatted; wet and slippery floors | Provide straw bedding (or similar) for lying areas and rubber matting for standing areas; ensure good drainage |
| Physical comfort | No bedding material; low space allowance | Provide suitable bedding and adequate space |
| Thermal comfort | Heat/cold stress indoors, ammonia<br><br>Sunburn if kept outdoors | Provide adequate ventilation & temperature control<br><br>Provide shelter, shade and wallows outdoors for pigs to cool and protect their skin. Use breeds adapted to their environment |
| Selection for high growth rate | Lameness, cardio vascular problems | Include welfare traits in selection programme or use breeds with better health / welfare performance |
| Health monitoring | All health and disease issues – if they're not measured they can't be improved or split into | Develop a herd health plan to monitor disease and welfare performance; set targets and plan action to reduce incidence rates |

## Mental wellbeing

| Welfare issue | Problem | Solution |
|---|---|---|
| Barren environments | Boredom, aggression, tail and ear biting | Provide complex, edible, destructible substrates, and a varied environment to occupy the pigs throughout life |
| Fear | Lower ranked individuals in social dominance hierarchy are afraid of joining the group<br><br>Flighty behaviour due to fear of humans | Provide barriers or areas of refuge, where pigs can escape aggressors<br><br>Ensure positive human-animal interactions– use pig boards/ flags for handling, do not use electric goads, act in a calm, predictable way |
| Mutilations - cause pain & stress | Teeth-clipping, tail docking, and castration shortly after birth | Avoid mutilations by providing an environment which suits the animal's needs. Slaughter pre-puberty; detect boar taint via electronic nose; or eliminate boar taint via vaccination to delay puberty. |

## Natural behaviour

| Welfare issue | Problem | Solution |
|---|---|---|
| Abnormal behaviours | Tail and ear biting; biting fixtures & fittings | Provide complex, edible, destructible substrates, and a varied environment to occupy the pigs throughout life |
| Aggression | Skin lesions and lameness | Provide plenty of space if mixing groups, with soft bedding, and barriers to hide from aggressive pigs. Preferably keep pigs in stable groups (avoid mixing) |
| Mounting behaviour | Lesions and stress | Segregate males and females. Use vaccination to delay puberty and reduce sexual behaviour |
| Restriction of species-specific behavioural expression | Lack of foraging material to keep piglets occupied<br><br>Lack of space for development of functional areas indoors<br><br>Nursing and suckling behaviour restricted in farrowing crates | Provide complex, edible, destructible substrates, and a varied environment to occupy the pigs throughout life<br><br>Calculate space allowance using the allometric curve. Provide separate functional areas for eating, dunging, rest and activity<br><br>Use free-farrowing systems |

# Key welfare issues in commercial production

- Confinement
  - Stalls, farrowing crates, lack of space provision in loose housing
- Lack of stimulating environment
  - Provide substrate – edible, destructible, investigable, manipulable
- Lack of comfortable environment
  - Provide bedding, cooling, no draughts, thermal comfort
- Routine mutilations
  - Tail docking, teeth-clipping, castration
- Breeding for high prolificacy & growth rate
- Poor welfare outcomes
  - Lameness, poor body condition, skin lesions, tail bite incidence

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# Group housing in the dry period



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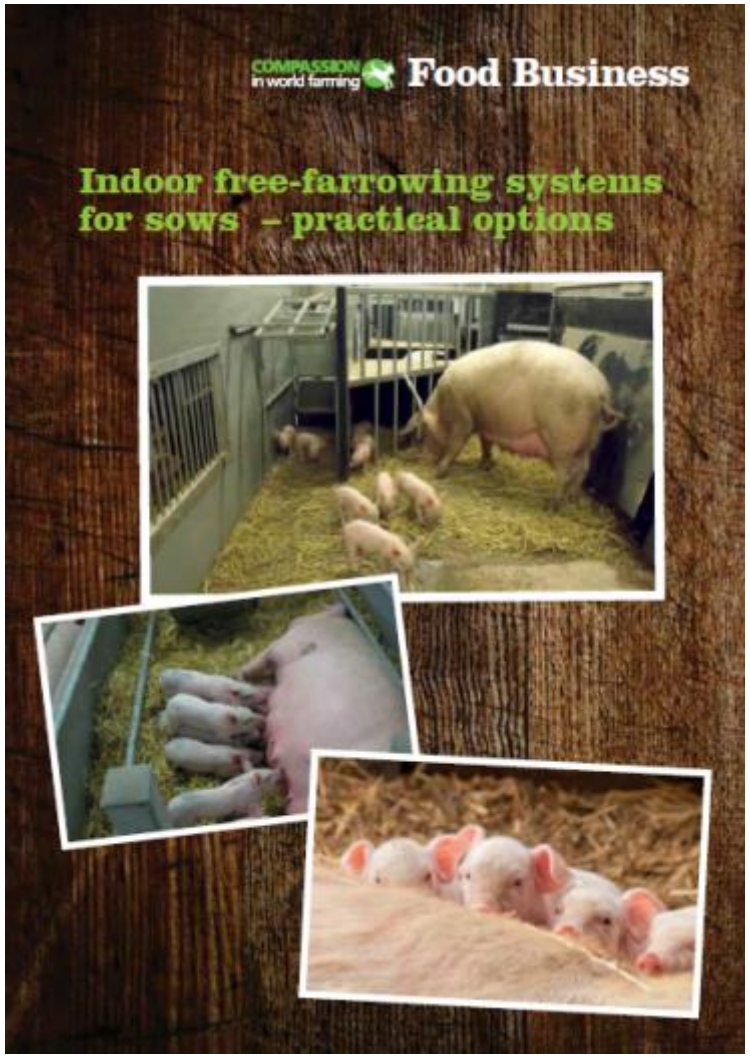
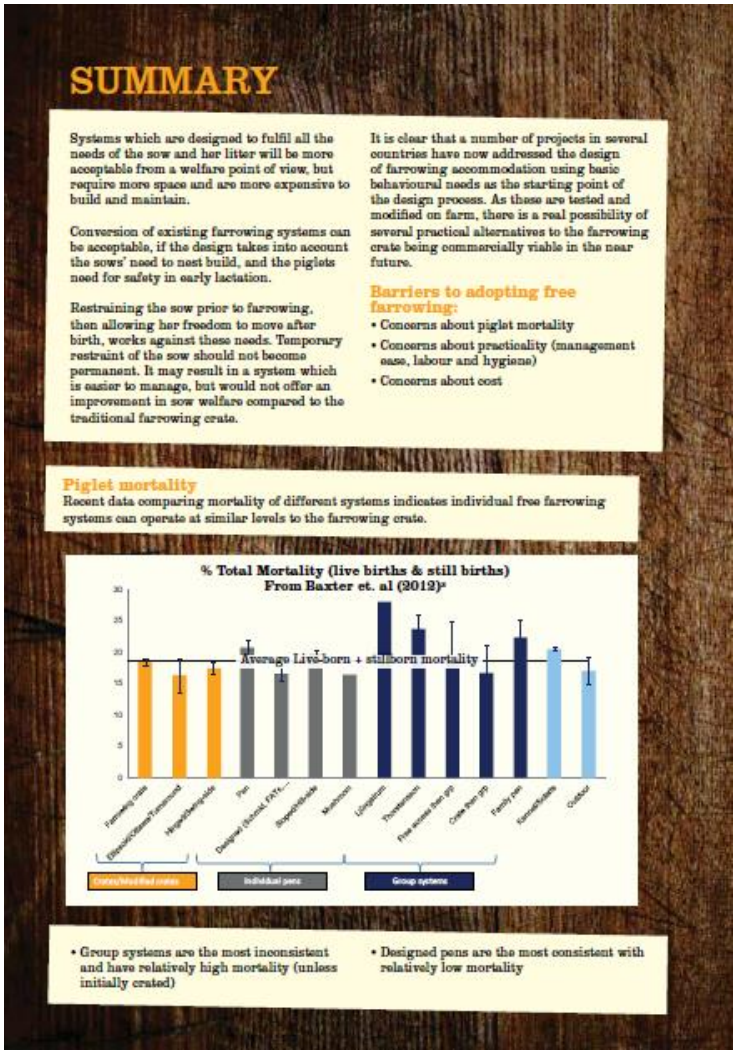
# Free-farrowing

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Free Farrowing

Text only | Site map

Search

Home | Why Free Farrowing? | Farrowing Systems | Research | Know the Rules | Farmer Resources | Contact

## Welcome to FreeFarrowing.org

Freefarrowing.org is an information resource primarily for pig farmers who want to know more about any aspect of free farrowing and lactation systems.

Find out more about the different high welfare options available for keeping sows loose during farrowing and lactation, the design details for building these systems and any research conducted on them.

We also describe partial crating options and highlight what you need to know in terms of welfare legislation, regulations and different assurance schemes.

### Why Free Farrowing?

Provides the background information to why free farrowing is important.

### Farrowing Systems

Information on different pen designs including individual pens, group and outdoor systems and temporary crating options.

### Farrowing Research

Latest on research in welfare, system performance, piglet survival and more.

### Know the Rules

Find out what you need to know on legislation and regulations for farrowing and lactation systems and requirements for Assurance Schemes.

### Farmer Resources

Latest information on free farrowing economics, grant opportunities, SOPs on management in free farrowing systems and more.

## Contact Us

For further information feel free to get in touch.

Emma.Baxter@sruc.ac.uk

www.freefarrowing.org

# Free farrowing options: great diversity

- Modified crates
  - Swing side
  - 360 farrower
- Pens
  - Simple
  - Designed
- Group systems
  - Group farrowing
  - Group lactation
- Outdoor
  - Hut and run
  - Field





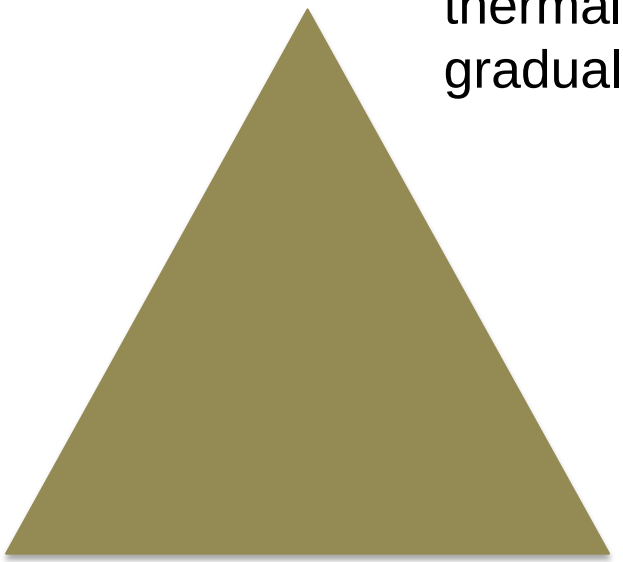






# Satisfying needs – key criteria

SOW – nest build; undisturbed; thermal & udder comfort; space to gradually reduce contact with piglets



STOCKPERSON
good piglet survival;
well trained; open mind;
cost effective, efficient & safe environment

PIGLET –
thermal comfort; easy access to udder; protection; enrichment; social integration

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# Free farrowing – key features to satisfy needs

- Space - >7$m^2$/pen
- Nesting material, substrate provision to promote nest building
- Thermal & physical comfort (suit local climate)
- Sow (18-23$^o$C); newborn piglets (34-35$^o$C)
- Design features - details matter!
  - Seclusion & functional areas
  - 'Enclosed' nesting area
  - Separate creep area (1$m^2$) – heated / attractive
  - Sloped walls -pig protection
  - Comfortable flooring suitable for hygiene maintenance
  - Access points, clean thoroughly
  - Slurry system able to cope with substrate

- Good stockmanship / attitude
- Good breeding for maternal behaviour / appropriate litter size

# Temporary restraint crate: ‘better’ model

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# Designed individual pen: ‘best’ model

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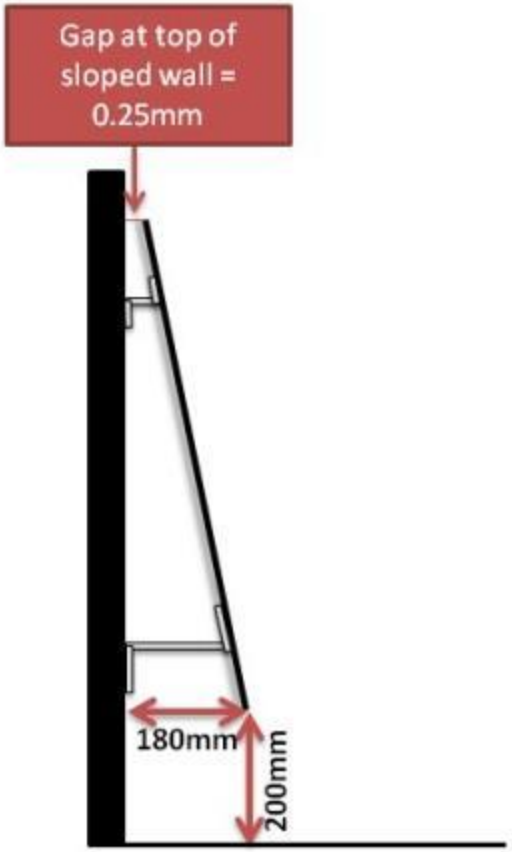
# Sloped wall dimensions – very specific

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# China examples: Free farrowing

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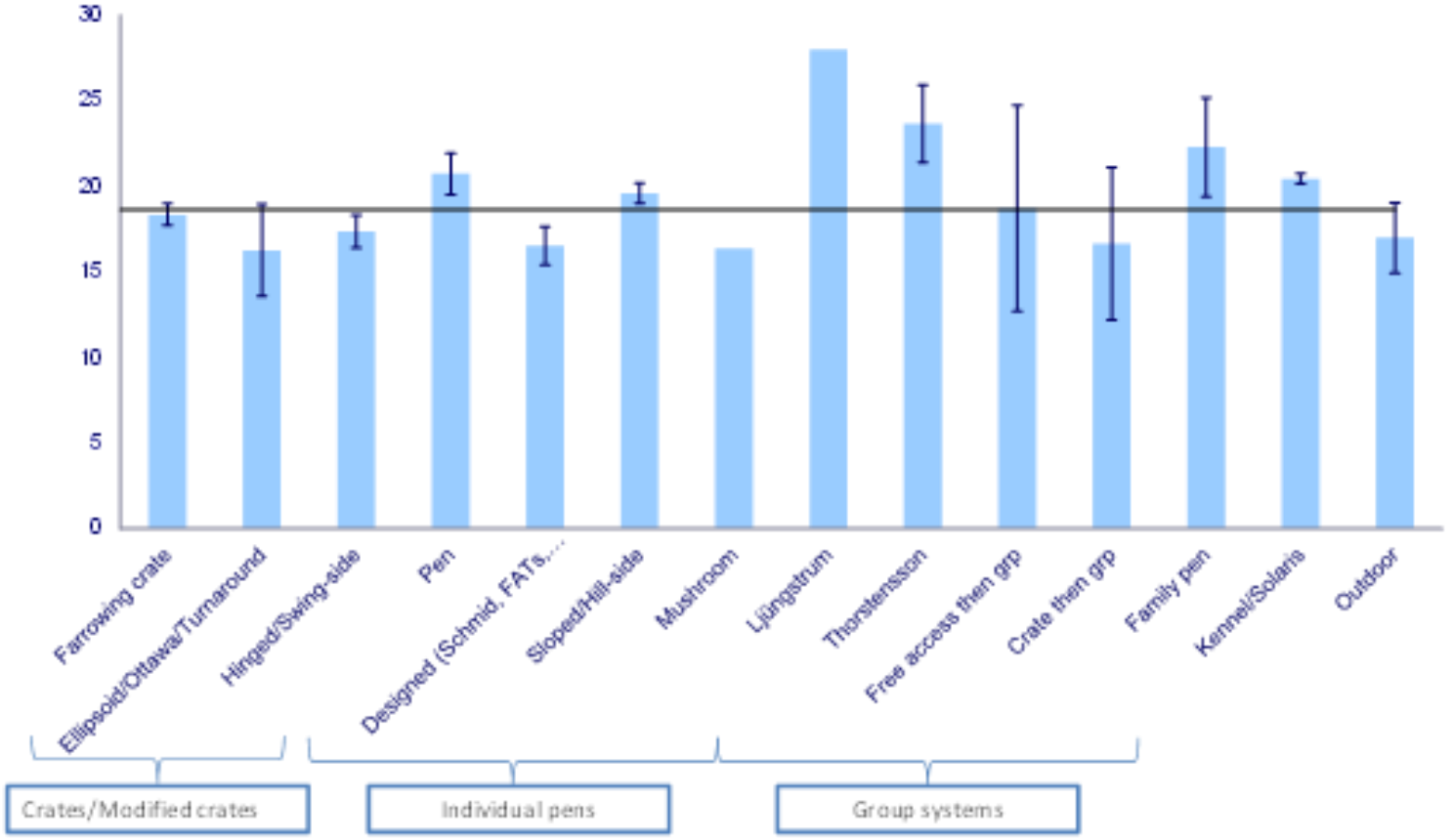
# Perceived barrier: mortality rate (live & stillborn)

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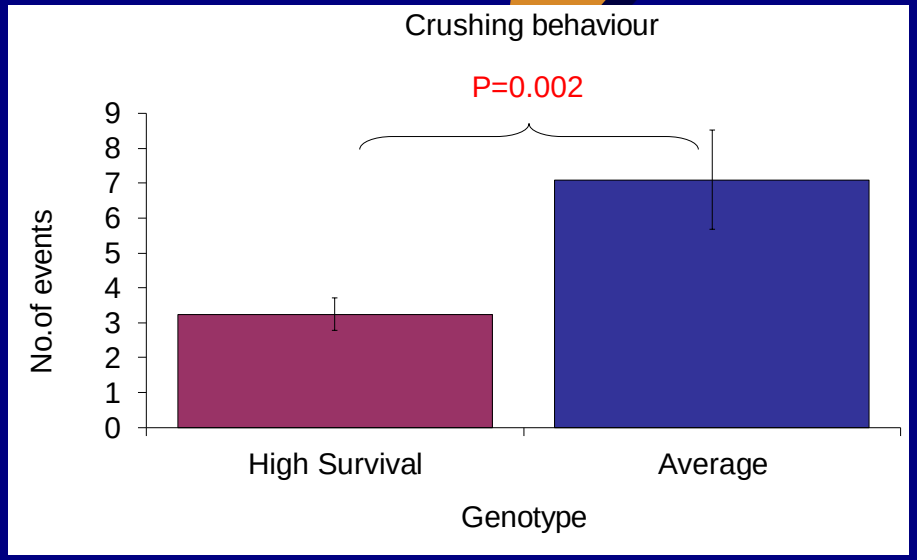
Baxter *et a*l 2012

# Need to select the right sows for free farrowing

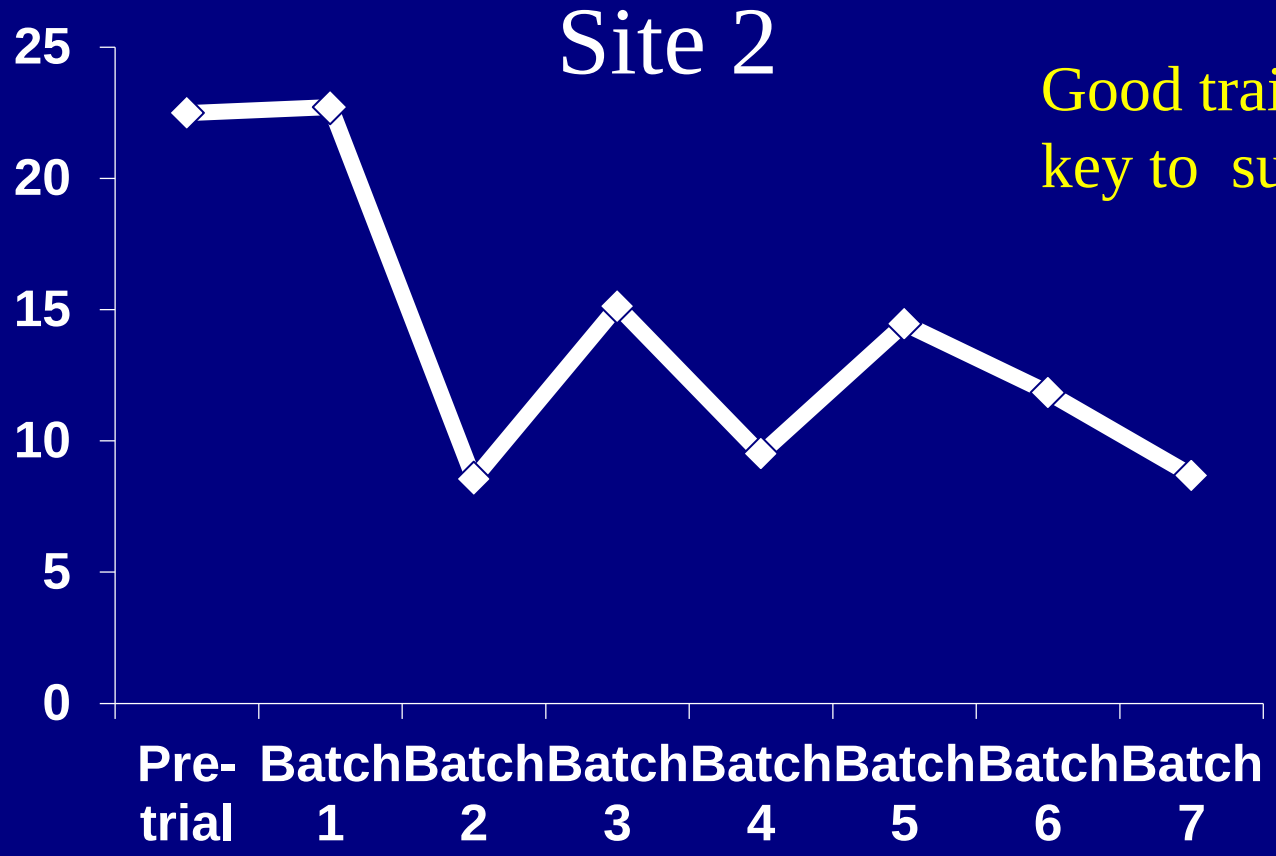
- Large genetic selection experiment
  - Survival was improved in selection line outdoor pigs

  - High Survival gilts were more careful with **less crushing behaviour** during farrowing

Total mortality:
High Survival lines: 12%
Normal lines: 18%



# Need to train staff & have a positive attitude to free-farrowing for success




Good training is key to success

# Need access to capital investment & market premiums to kick-start adoption

| | Crate | PigSAFE | Danish | 360° Farrower | Outdoor |
|---|---|---|---|---|---|
| Area ($m^2$) | 4.3 | 8.9 | 6.0 | 4.3 | 526.3 |
| Floor/bed | FS | PS/ms | PS/ms | FS | E/Sh |
| Capital £ per place | 3,170 | 4,388 | 3,804 | 3,670 | 1,196 |
| | | +36% | +20% | +15% | |

The overall cost of a weaned pig using the PigSAFE system would be approximately 3.5% higher when compared to using a standard farrowing crate

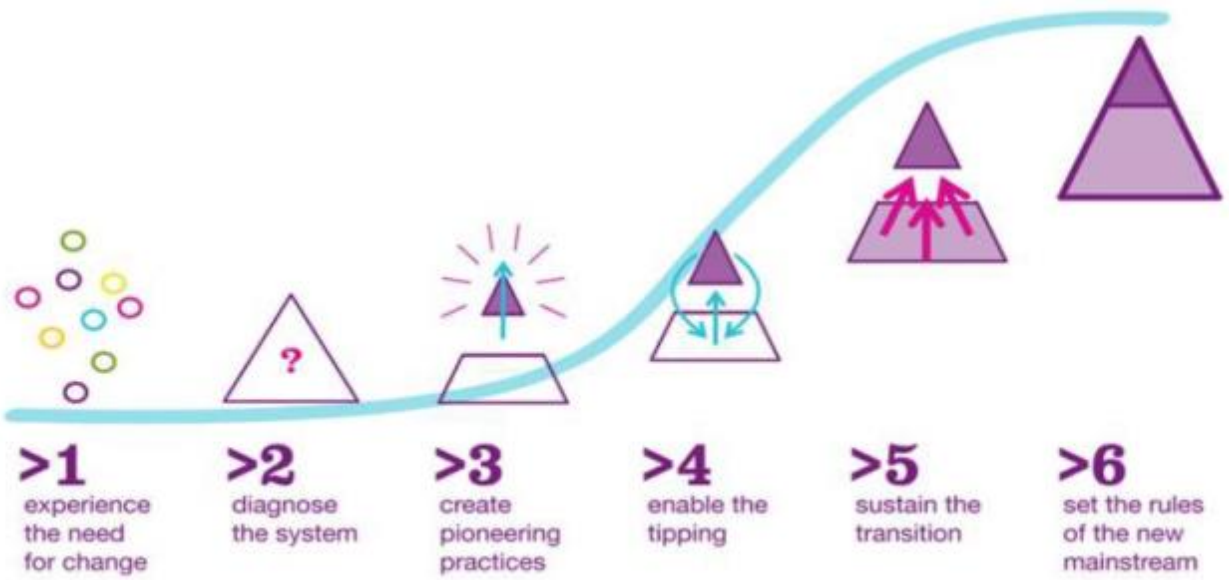
Market premium estimated at 1.6% is required for PigSAFE

Guy *et al* 2012

# Driving change

forum for the future

## Six steps to significant change

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Public campaigning


Recognise the need for change

# Recognise commitments to improve pig welfare through AWARDS






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# Good Pig Award Winners













# Sow Commendation Winners






# Good Pig Production Award winners


| Award winners rating | 2014 | 2015 | 2016 | Total |
|---|---|---|---|---|
| 5 star | 4 | 4 | - | 8 |
| 4 star | 2 | 3 | 6 | 11 |
| 3 star | 4 | 3 | 6 | 13 |
| 2 star | 1 | 2 | - | 3 |
| 1 star | 2 | 2 | 2 | 6 |
| **Total** | **13** | **14** | **14** | **41** |

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# Support projects & provide resources

Examples of on-going projects

- Group housing of sows in the observation period (China)
- Free-farrowing trials (Italy)
- Provision of manipulable material to stop the need for tail docking (with no tail biting)
- Use of IMPROVAC to end castration in heavy weight pigs (Italy/Spain)

- https://www.compassioninfoodbusiness.com/resources/pigs/

- Welfare issues of sows & meat pigs
- Pig welfare outcome measures
- Series of information sheets
- Booklets
- Case studies of best practice

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| Assurance Scheme | Logo | Country | SOWS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Do sows have enough space? | Are dry sows housed in groups? | Do sows farrow freely? | Do Farrowing sows have access to materials appropriate for nesting? | Are sows provided with bedding when group housed*? | Are sows provided with adequate manipulable material*? | Do sows have access to an outdoor range? | Does this system match the better AW level?* |
| RSPCA Approved Indoor | | Australia | YES | YES | YES | YES | YES | YES | NO | YES |
| RSPCA Approved Outdoor | | Australia | YES | YES | YES | YES | YES | YES | YES | YES |
| Australian Certified Organic | | Australia | YES | YES | YES | MAYBE | YES | YES | YES | YES |
| Demeter (Bio- Dynamic ResearchInstitute) | | Australia | YES | MAYBE | MAYBE | YES | YES | MAYBE | YES | NO |
| Humane Choice | | Australia | YES | YES | YES | YES | YES | YES | YES | YES |
| APIQ - certified Indoors | | Australia | MAYBE | MAYBE | NO | NO | NO | NO | NO | NO |
| APIQ - certified free range | | Australia | YES | MAYBE | YES | MAYBE | MAYBE | MAYBE | YES | MAYBE |
| APIQ - certified outdoor bred and eco-barn raised | | Australia | YES | MAYBE | YES | YES | YES | YES | YES | YES |
| GAP5STEP (from step 3 to 5) | | US | YES | YES | YES | YES | YES | MAYBE | YES | YES |
| Beter Leven (1*) | | The Netherlands | NO | NO | NO | MAYBE | NO | MAYBE | NO | NO |
| Beter Leven (2*)- free range | | The Netherlands | YES | NO | NO | YES | YES | YES | YES | NO |
| Beter Leven (3* / SKAL) | | The Netherlands | YES | YES | NO | YES | YES | YES | YES | NO |
| RSPCA Assured | | UK | YES | YES | YES | YES | YES | YES | MAYBE | YES |
| Milieukuer (mandatory) | | The Netherlands | NO | NO | NO | NO | NO | NO | NO | NO |
| Milieukuer (welfare options) | | The Netherlands | YES | YES | NO | NO | NO | YES | YES | NO |
| Neuland | | Germany | YES | YES | NO | YES | YES | YES | YES | NO |
| Label Rouge | | France | NO | NO | NO | NO | NO | NO | MAYBE | NO |
| Agriqualita | | Toscana region, Italy | NO | NO | NO | MAYBE | NO | NO | NO | NO |
| GlobalGAP Animal Welfare Add-on | | Global | NO | MAYBE | MAYBE | MAYBE | MAYBE | YES | NO | NO |
| American Humane Association | | USA | NO | NO | NO | NO | NO | NO | NO | NO |
| Humane Farm Animal Care | | USA | MAYBE | YES | YES | YES | MAYBE | YES | NO | MAYBE |
| Animal Welfare Approved | | USA | YES | YES | YES | YES | YES | YES | YES | YES |
| KRAV | | Sweden | YES | YES | YES | YES | YES | YES | YES | YES |
| Stjernekød - 1 star | | Denmark | no | YES | NO | YES | YES | YES | NO | NO |
| Stjernekød - 2 star | | Denmark | NO | YES | NO | YES | YES | YES | NO | NO |
| Stjernekød - 3 star | | Denmark | YES | YES | YES | YES | YES | YES | YES | YES |

# Role of other stakeholders to drive change

- Government – assist with market failure / set targets / legislation

- Producers & processors – work towards successful practice
- Retailers & food companies – support free-farrowing production
- Industry bodies & academics – promote the benefits / train
- Assurance schemes - clearly differentiate for higher welfare

- Equipment manufacturers – use correct design features, dimensions
- Breeding companies – breed for maternal behaviour, lower litter size

- NGO's – raise public awareness (negative & positive campaigns)
- Consumer – willing to pay modest premium

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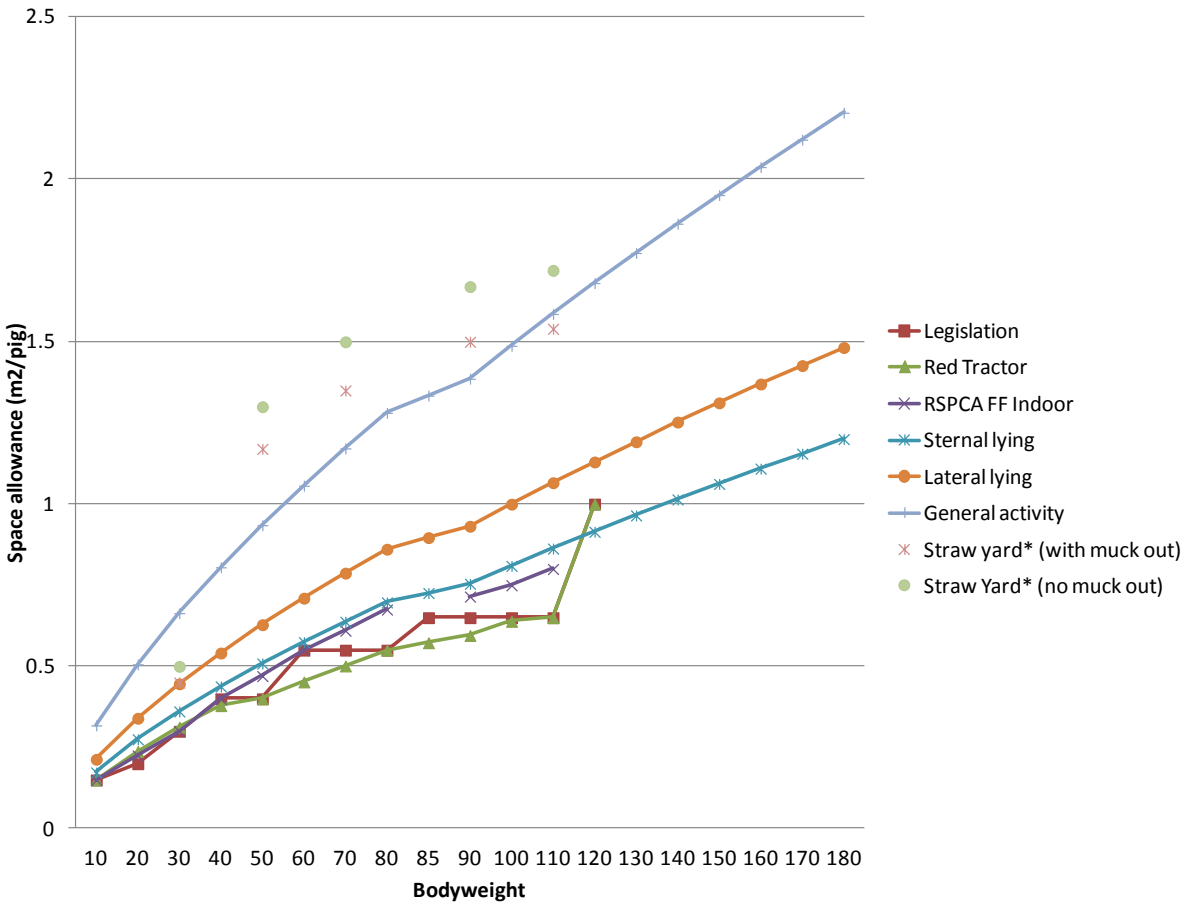
50 YEARS
FIGHTING CRUELTY
Thank you!

# Lack of space provision

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Min space: 1m$^2$ per100kg pig indoors
1.5m2 per 100kg pig straw yards