



# Pig - man - environment interaction

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# Trends in pig production

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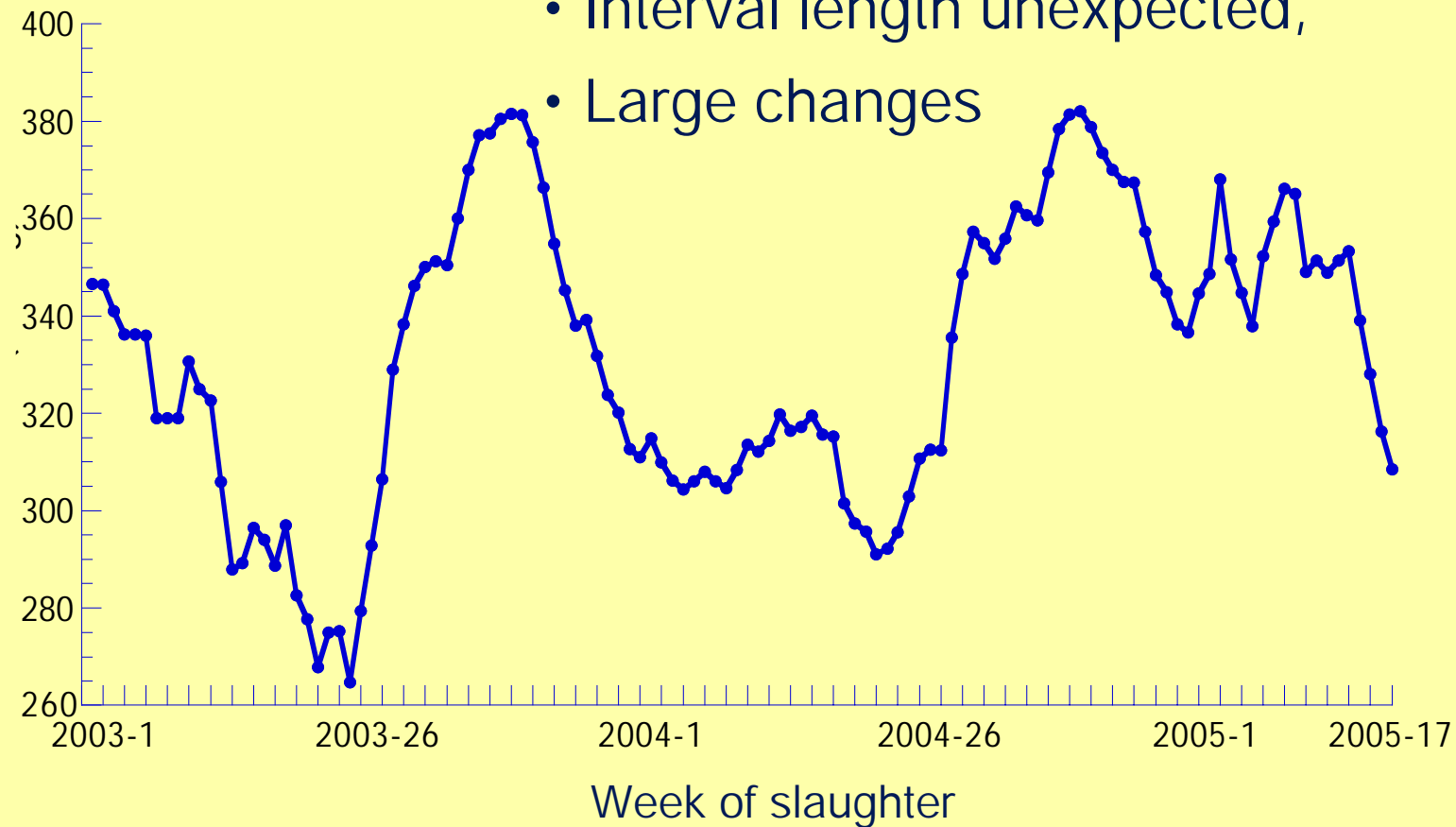
- Less earnings per pig for a farmer
- Number of herds reduced, herd size increased
- Higher productivity of stockpersons and livestock expected
- Cheaper work, less educated ...
- Extending in harsh environment
- Globalization
- Internationalization of breeding goals



# Market instability ...

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Price (SIT/kg)

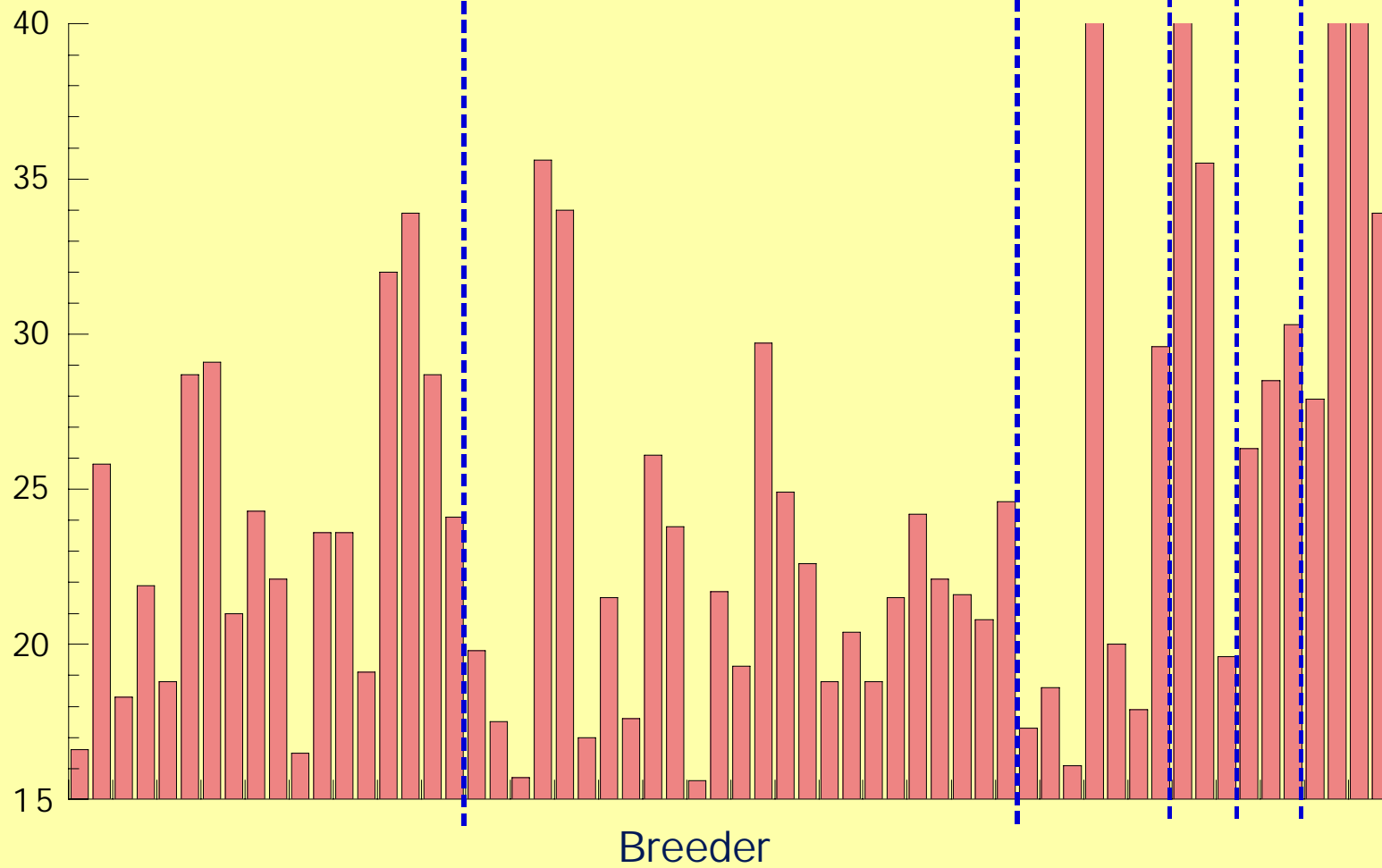


- More frequent changes,
- Interval length unexpected,
- Large changes



# Farm productivity

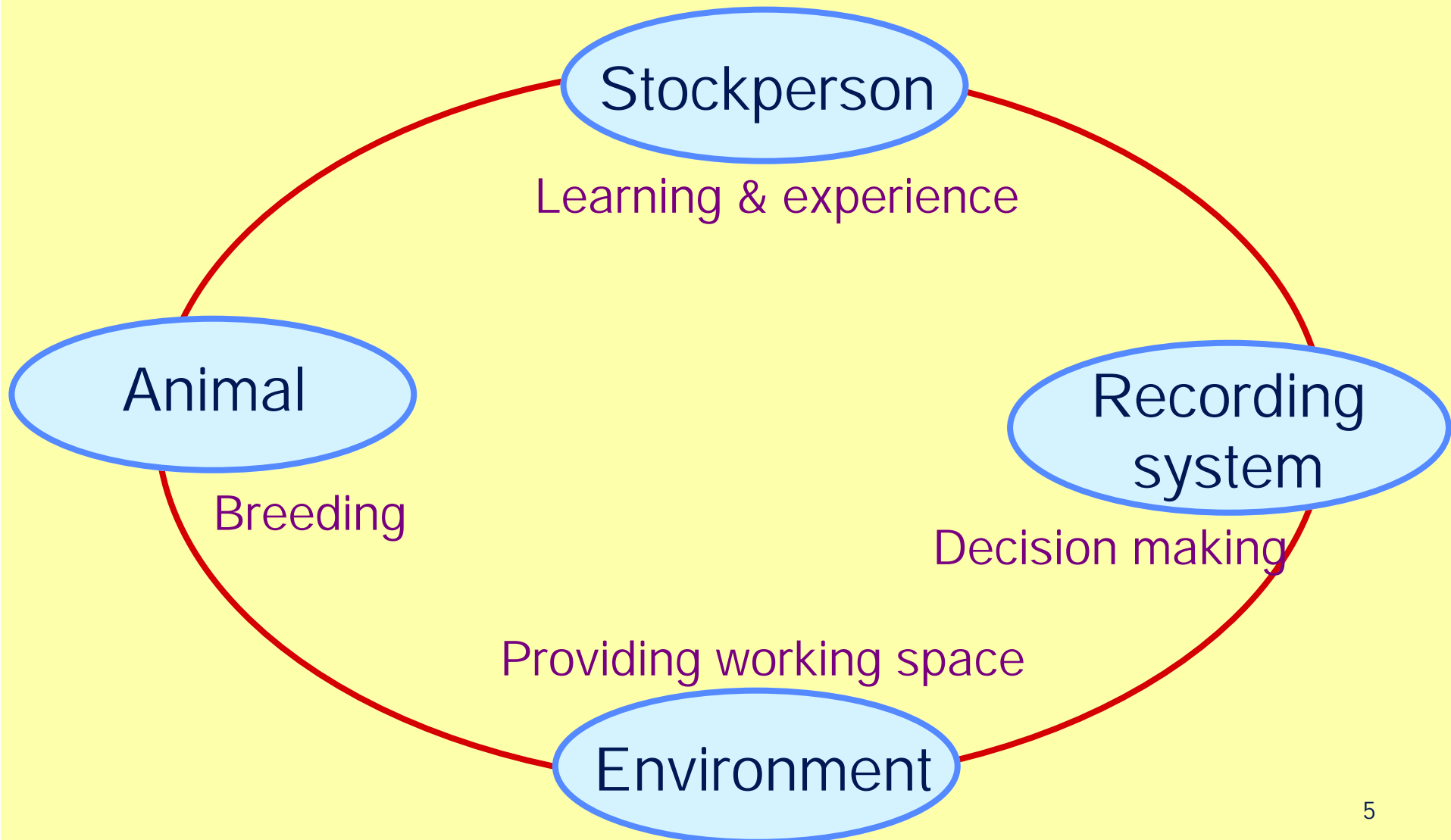
Female days/piglet





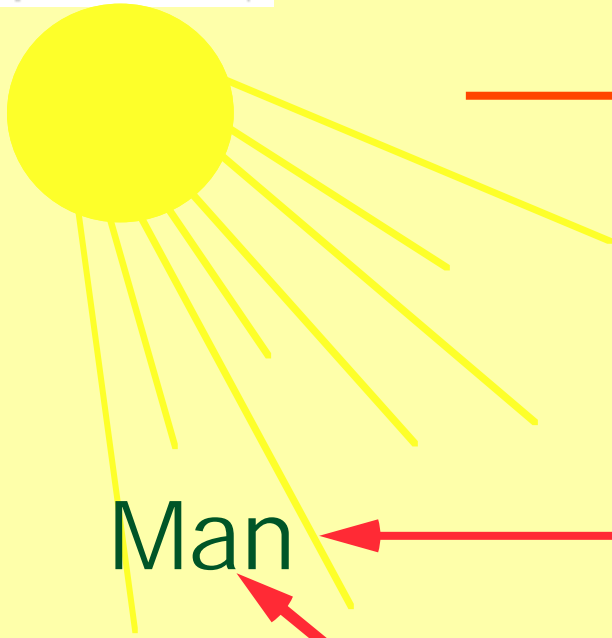
# Improving productivity

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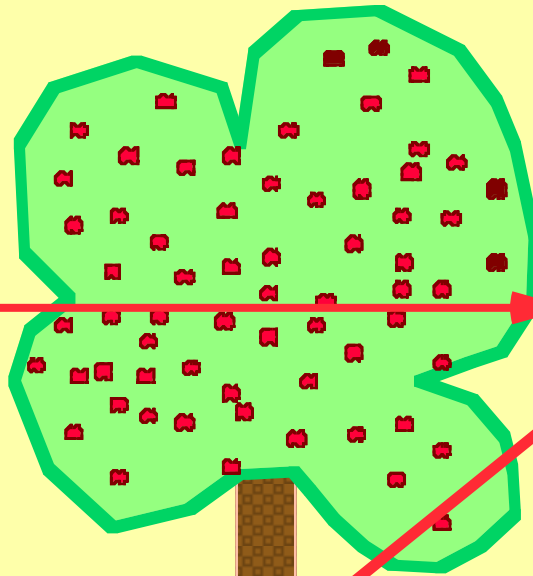
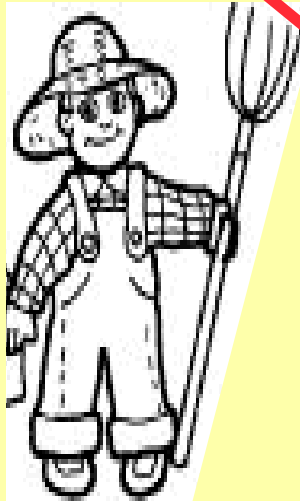


# Interactions

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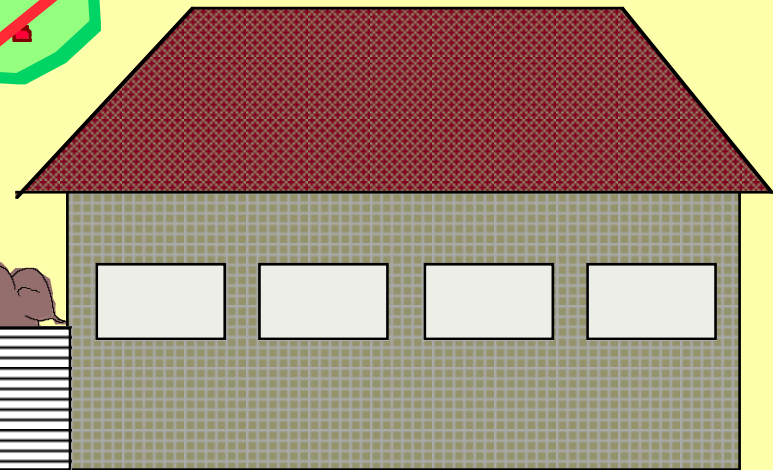
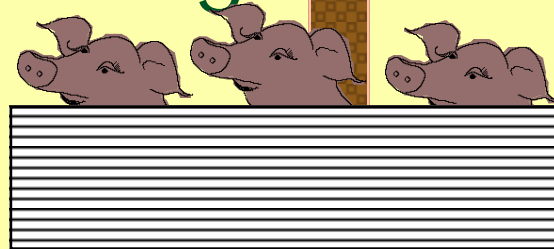


Man



Environment

Pigs





# Changing animal needs

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- Animals change by breeding
  - more productive, more sensitive
  - more specialised, less adaptable
- Novel technology
  - less work, less contact with human, sometimes even less comfort for animals ...
- Increasing disproportion between animal needs and production conditions



# Production systems

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- Pig production is moving to worse condition areas
- Conditions in nucleus and commercial herds differ
  - purebreds : hybrids
  - different stocking density, diets ...
  - individual : group housing/feeding (competitiveness)
  - health status ...



# Assessment of animal needs

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- Breeder:** ... production resources ...  
= no or little attention needed
- Public:** ... define needs according to human feelings  
or wild pigs ...  
= torture ...
- Government:** ... somewhere between breeders and public ...  
... many words ...



# Consumer demands

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Consumers are concerned about

- human health
- animal health
- animal welfare
- product quality

required high standards,

but are not willing to pay more!



# Dealing with public

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## Breeders

must pay attention to the public,  
follow government requirements - legislation,  
satisfy consumers or  
educate them and  
still stay in business.



# Animal rights

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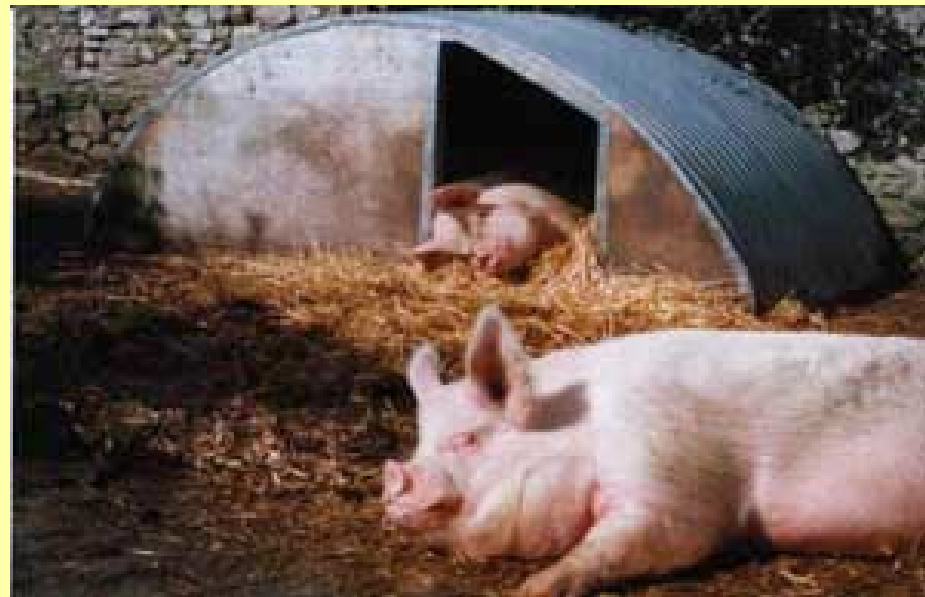
- Rules set by public
- Often based on human feelings, not necessary on animal needs
- Often unrealistic requirements:  
animals must feel well all the time



# Animal welfare

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- based on animal needs (more realistic)  
animals must feel well most of the time
- rules depend on culture, knowledge, experience ...
- no objective measure
- the only useful  
criteria: productivity

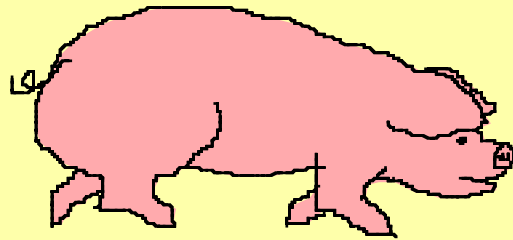




# Pigs

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## Ability of adaptation



- genetic potential
- learning by doing
- physiological status



# Lack of robustness

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Disease outbreak

- mortality
- morbidity

Overburdening

- genetic differences
- environment

Reduced welfare

- behavioural response
- cronical stress

Reduced  
animal productivity



# Breeding under local conditions

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- sustainable production systems
- animals adapted to local conditions
- local breeding organisations
- conservation programs





# Breeding for robust pig

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- animals adapted easy to various production systems
- international breeding organisations/companies
- require recording system in production herds
- marker assisted selection
- new breeding objectives
- price ...



# Changes in breeding goals

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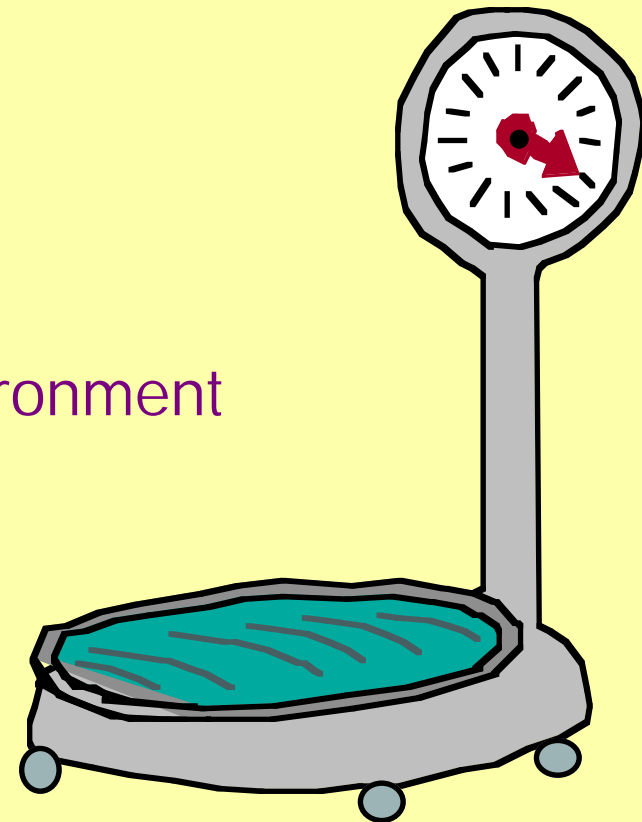
- **Production traits:**
  - growth, feed intake,
  - carcass, meat quality,
  - fertility ...
- **Robustness:**
  - survival,
  - longevity,
  - disease resistance,
  - heat tolerance,
  - behaviour traits,
  - leg and udder quality ...



# Robustness

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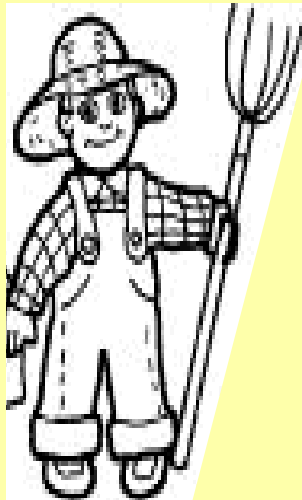
- Low heritable traits
- Difficult to measure: definitions
- Where to measure: controlled  
vs. commercial environment
- Require organisational efforts





# Human - animal relationship

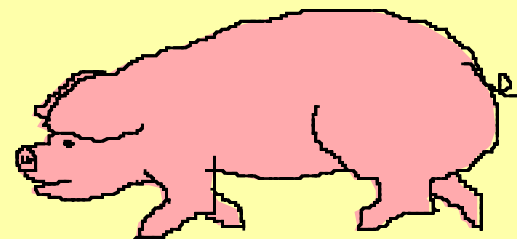
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Handling



Fear expression  
Productivity





# Breeder contributions

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- Allow animals to adapt
- Provide opportunity to accommodate
- Enrich environment
- Recognise animals with problems
- Support and protect animals
- Create/manage environmental conditions



# Become a good stockperson

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- Learning & training
- Use all senses to observe animals
- Keep records, analyse them
- Optimise workload per person
- Be calm, patient ...
- Perform self assessment



# Conclusions

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- Pig production extends to worse condition
- Higher productivity for human as well as animals expected
- Enlarged discrepancy between animal needs and conditions
- Impact of breeders on production efficiency
  - to handle animals
  - to manage environment
  - to breed animals

