# Animal welfare - does it pay off?

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EAAP 11 April 2025

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1.55 – 2.05 zł / egg

€0.37 – 0.48


1.20 zł / egg

€0.28


0.80 – 1.00 zł / egg

€0.19 – 0.24

Comparison: Box of 10 Medium eggs

Who was first: chicken or egg?

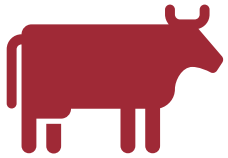
# The success of the egg

- Facing out of lowest tier system
- Tier system with range of options
- Relatively cheap product, hence small difference in absolute (but not relative) price
- Good marketing (Rondeel eggs, Happy eggs, etc.)


1,89 zl / egg (€0.45)
- more than organic eggs!


Pure & honest.
Environmentally friendly
Produced. €0.39 / egg

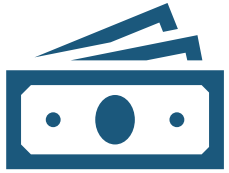
# Outline



**Economics of animal welfare**

Scenario A – from bad to better

Scenario B – from conventional to good



**Cost-benefit analyses**

Benefits

Costs

Market potential

**Does it pay off?**

# From a farmer's perspective

- Welfare seen as nuisance due to regulations
- Associated with high investments and workload
- Benefits are often overlooked

Pitfall:

Thinking that the solution is always expensive (or that the EU solution is the only option)

# Does welfare pay off?

Welfare = Basic health & biological functioning + Natural behaviour + Affective state

Improving these should result in optimum outcome

# Scenario A – from bad to better

Freedom…

1. From hunger or thirst
2. From discomfort
3. From pain, injury or disease
4. From fear and distress
5. To express normal behaviour

Mainly reduces suffering
Mostly based on health

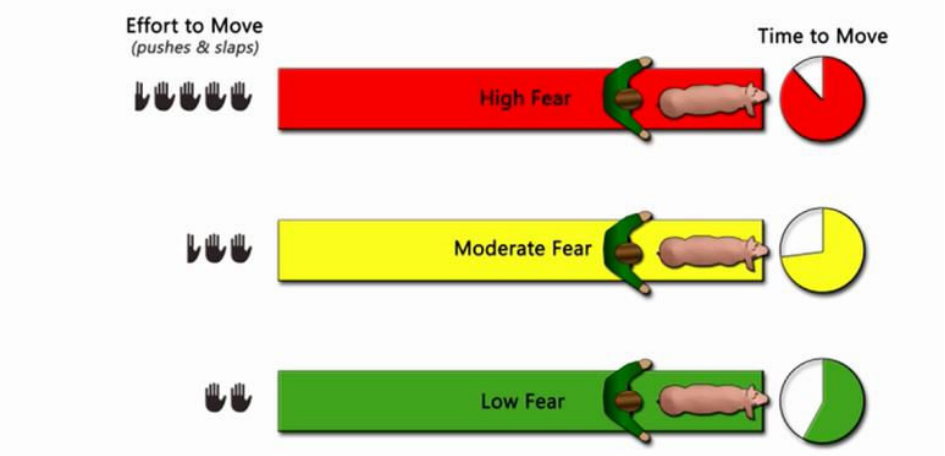
# Poor welfare increases costs.

- Reduced productivity
- Increased mortality
- Increased costs (veterinary costs, staff time)
- Reduced work pleasure of staff (low staff retainance)

# Some examples

- Cattle lameness: $76 to $533 / non-specific lameness case, and $232 to $1073 for sole ulcers (Dolecheck & Bewley, 2018)
- Heat stress: $2.4 billion annually across livestock species in USA (St-Pierre et al., 2003)
- Tail biting: ca. €19,- loss / pig (D'Eath et al. 2014; Niemi et al., 2021)
- Negative handling of cattle: lower milk yield (r = 0.36) (Hemsworth et al., 2000)





# Scenario B – from conventional to good

Moving from 5 freedoms to better integration of animals' affective states, e.g. 5 Domains model (Mellor, 2016; Mellor et al., 2020)

‘**Positive animal welfare** is defined as the animal flourishing through the experience of predominantly positive mental states and the development of competence and resilience’ (Rault et al., 2025)

# Does good welfare reduce costs?

- Cattle brush: each use results in 1.52 kg more milk (Keeling et al., 2016; Li et al., 2024)
- Free farrowing pens: increased piglet performance; 4kg heavier at slaughter (Kinane et al., 2021) (see also poster 75!)
- Positive human-animal interactions can give better productivity (Mota-Rojas et al., 2020; Pol et al., 2021)
- Music: depending on the type and volume of music (Ciborowska et al., 2021)

# Do the benefits weigh up to the costs of improving welfare?

# Before starting

- Requires farmers' willingness to change (Peden et al., 2018; 2019)
- Different profiles of farmers can be distinguished (Pol et al., 2021)
- Often requires staff who care

# Cost-benefit analyses

1. Define a timeframe
2. List all foreseeable costs
3. List all foreseeable benefits
4. Assign a monetary value to each cost
5. Assign a monetary value to each benefit
6. Subtract costs from benefits
7. Compare to alternatives
8. Compare to doing nothing

Rachel Peden

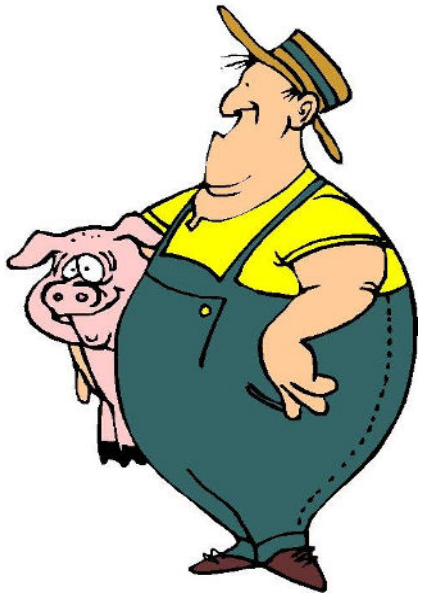
e.g. Peden & Akaichi, 2021

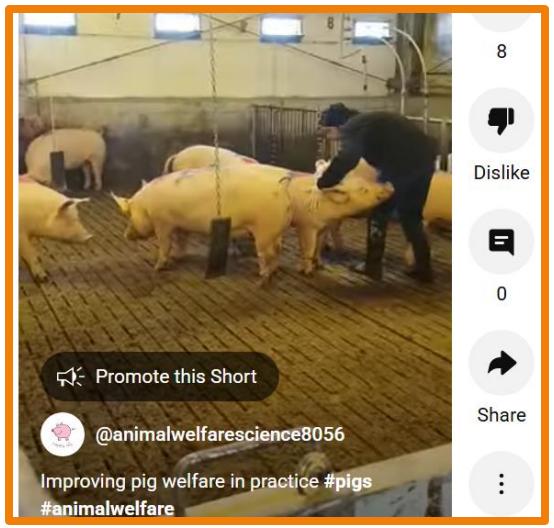
# Example

| Costs | Benefits |
|---|---|
| **Start-up costs:** | Improved feed efficiency |
| Investment in new materials | Improved growth rate |
| Farm restructuring | Improved job satisfaction (staff retention) |
| Staff training | Greater number of weaned pigs |
| **On-going costs:** | Easier animal handling |
| Increased staff workload | Reduced mortality |
| Maintenance/ cleaning of equipment | Reduced labour requirements |
| Replenishment of materials | Reduced veterinary costs |

# 1. The benefits

- Depends on the what welfare aspects are targeted and how
- Estimates of economic costs and benefits vary greatly between farms (e.g. Dolecheck & Bewley, 2018; Baxter et al., 2024)
- Takes trial-and-error to tailor it to farm circumstances





# 2. The costs

- Capital costs (building modifications, construction, large equipment)
  - Typically high(er) costs, especially space/animal
- Running/operating costs (transient: labour, consumables)
  - Many options for relatively low cost solutions
- Are there any free solutions?
  - Consider the costs of time / labour even for “free” solutions
  - Use of otherwise wasted / underutilized resources (incl. time)

# 3. Market impact

- Better price for high welfare products (certification, branding)
- Potential to sell it to the right market? (weaners vs fatteners, milk vs surplus calves)
- Market stability (consumer trends)
- Other financial support (subsidies)

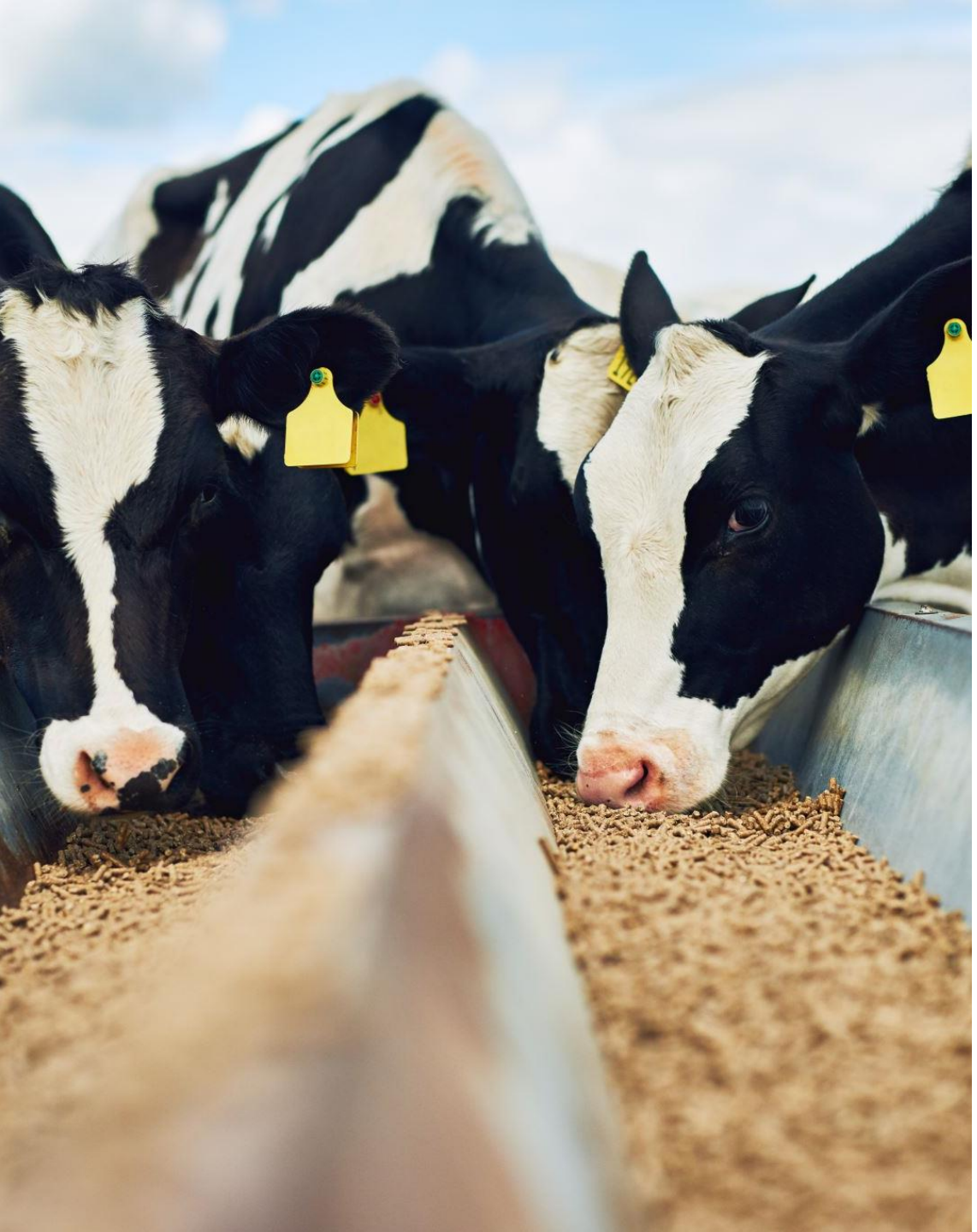
Avoid dependency on external sources in the cost-benefit analysis

# Market (external) influences

- Society can have a massive impact on a sector
- Pressure from government (regulations, investments) and retail (higher demands)
- Citizen-consumer paradox
- Systems may be rejected by society

**Society determines the 'license to produce'**


END THE CAGE AGE



# Making it work in practice

- Solutions for the benefit of the animal AND the farmer: animal handling, automatization
- Finding the cause rather than treating the symptoms
- Invest in animals that remain longer at farm
- Need to provide farmers with the information to come up with their own locally suited solutions (local materials, biosecurity)

# Does it pay off?
## Scenario A – from bad to better

- Benefits: YES
- Costs: Yes
- Market impact: None – unchanged

*Conclusion: duty of care and likely to give benefits*

# Does it pay off?
## Scenario B – from conventional to good

- Benefits: possibly yes, but lack of research and high variability
- Costs: yes, but highly depending on choices
- Market impact: varying. Depends on market possibilities

*Conclusion: highly depends on which changes are made*

# Animal welfare – does it pay off?

**YES It CAN,** but it requires strategic decisions

Research is needed on costs and benefits to give farmers insight in the options they have

(see e.g. Seddon et al., 2013)

# Animal welfare – It CAN pay off

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NARODOWE CENTRUM NAUKI

Photo: M. Farish