

# Economic effects of MijnVoer approach for pigs

Final version

Assessment commissioned by MijnVoer bv

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# Project

MijnVoer asked Wageningen Economic Research to assess economic consequences of their company approach for their customers at farm level

The MijnVoer approach is a combination of improved feed quality, lower feed price and nutritional and management advice

Costs for nutritional and management advice are not taken into account

The assessment has been performed for 7 countries: the Netherlands, Germany, France, Spain, Belgium, Denmark and the United Kingdom

# The MijnVoer approach consists of 3 elements

- 1 Feed price reduction: platform for transparent price-making, feed without advisory services
- 2 Constant feed composition of high quality
- 3 Nutritional and management advice by an independent consultant

Based on this approach, MijnVoer and independent consultants made assumptions for the analysis. We assessed the feasibility of these assumptions (see Slide 9), but MijnVoer is responsible for them. Still, a causality between the MijnVoer approach and the expected technical and economic progress has not been proven.

# Approach 1)

- A calculation model has been designed to assess production costs of pigs
  - Split into piglet production and finishing (finishing includes grow phase)
  - Results are presented for integrated farm and for piglet production separately
  - Integrated (full cost) approach
- Cost differences are shown between Basic and MijnVoer assumptions
- Cost effects are expressed in euros, excluding VAT
- Applied currency exchange ratios: DKK 7.45/euro and 0.877 UKP/euro
- The following abbreviations were used: NL (Netherlands), DE (Germany), FR (France), ES (Spain), BE (Belgium), DK (Denmark), UK (United Kingdom)

# Approach 2)

- Data are based on InterPIG cost calculation of 2019
  - InterPIG is an independent forum of pig economists and specialists of 17 countries, sharing information and calculating pig production costs since 2003
- The InterPIG approach has been partially adapted to allow accurate detailed comparisons, for instance:
  - The use of complete compound feed was assumed (no by-products, nor own feed production)
  - For the UK an indoor system is assumed

# Assumptions used in the analysis

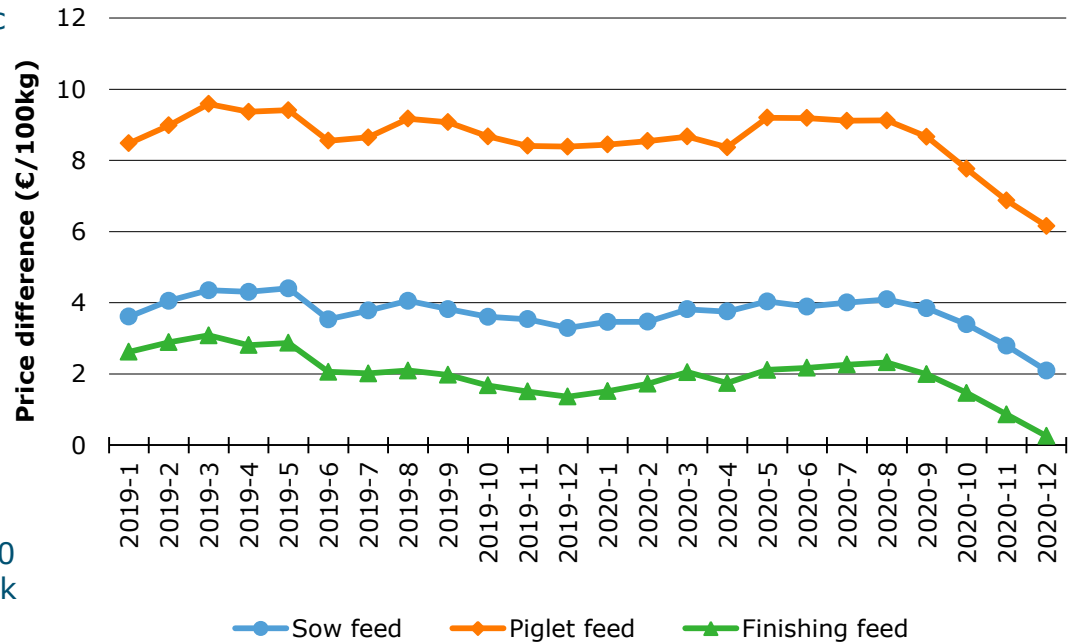
- Feed prices in the basic situation are shown on Slide 7. The price advantage of MijnVoer over WUR data (Agrimatie.nl; Boerderij.nl \*) amounts to: sow feed €3.70/100kg; piglet feed €8.60/100kg; finisher feed €2.00/100kg (see Slide 8)
- The following assumptions on performance improvements are given by MijnVoer and applied in the analysis:
  - Sow performance due to better sow and piglet health: +1.5 reared piglets/sow/year
  - Sow feed intake increases 20 kg per sow per year for each additional weaned piglet
  - Health costs in piglet production: -5% health costs per sow per year
  - Daily gain of finishers: +50 g/day
  - Feed efficiency of finishers: -0.15 feed conversion ratio
  - Additional housing costs were taken into account, in case of higher performance, both for piglet and for finishing places
  - No other secondary effects are taken into account (labour demand is assumed constant)
  - The assumptions were applied for all countries, except for Germany
  - Given the actual price orientation at the German feed market situation, the assumptions for Germany were different: +1.65 reared piglets/sow/y; -10% health costs/sow/year; daily gain +0 g/day and feed conversion ratio -0.2. No feed price advantage is assumed.

# Actual feed prices in euros/100 kg, basic situation

Country	Sow feed	Piglet feed	Finisher feed
Netherlands	26.90	37.56	25.24
Germany	23.51	34.43	22.46
France	26.22	36.65	23.63
Spain	23.93	40.98	25.51
Belgium	26.82	38.64	25.04
Denmark	23.73	33.96	23.68
United Kingdom	25.74	32.90	27.05

# Feed price assumptions

- Price margins between MijnVoer and Basic assumptions (Slide 7) are based on the period January 2019-December 2020:
  - sow feed €3.70/100kg;
  - piglet feed €8.60/100kg;
  - finisher feed €2.00/100kg
- Feed price advantage of MijnVoer over WUR data fluctuates over time and is related to the short-term purchase term of MijnVoer ingredients, whereas compound feed producers often apply purchase positions with different terms (e.g. from spot market to 6 months)
- Although lower margins at the end of 2020 are assumed to be temporary, we still took them into account





# Feasibility of performance assumptions

- We assessed the feasibility of assumed performance improvements for average farms, based on existing variation among farms in the Netherlands. This is by no means a proof of causality and therefore it should be clear that we didn't do research on the actual improvements and performance effects.
- Assumed performance effect and variation among farms in the Netherlands

Parameter	Assumption	Variation (SD) *)
piglets reared per sow/year	+1.5	2.5
health costs (€/sow/year)	-€4.6	€37
daily gain of finishing pigs (g/day)	+50	61
feed conversion ratio	-0.15	0.22

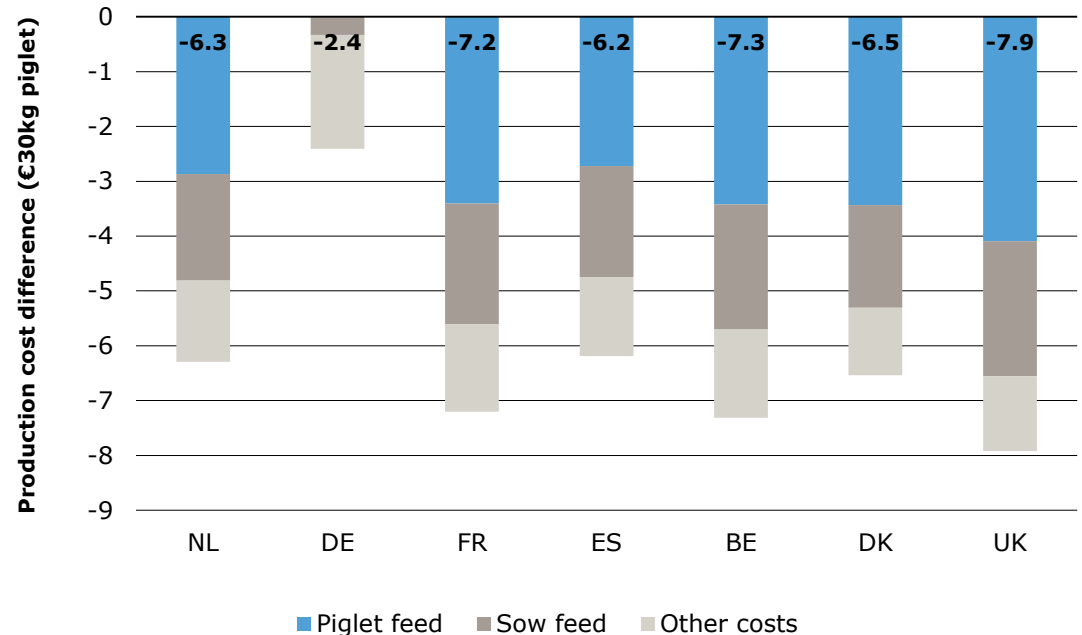
- We didn't check causality among performance improvements and the MijnVoer approach. Given the variation among farms and the given performance improvements, all deviate less than 1 SD from the average and are likely to be feasible for average farms. Whether this is caused by the MijnVoer approach is not clear as we didn't do research on this.
- We assumed a similar improvement of performance in the other countries.

# Outcomes



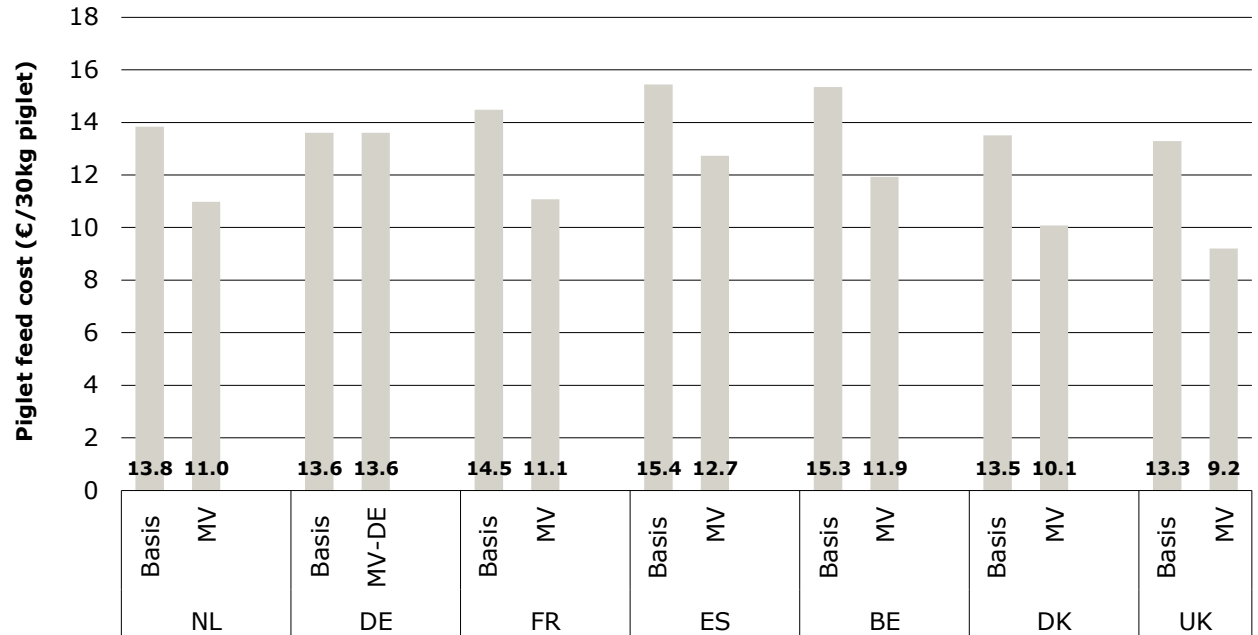
# Cost difference per 30kg piglet, €2, or €6-8

- Cost difference with MijnVoer amounts to about 6-8 euros per 30kg piglet; in Germany, however, this amounts to about 2 euros
- Piglet feed cost differences varies from 2.7 to 4.1 euros (0 in DE); variation in sow feed cost difference varies from 1.9 to 2.5 euros/30kg piglet (0.3 in DE)
- UK shows the highest effect, due to highest current feed consumption per piglet



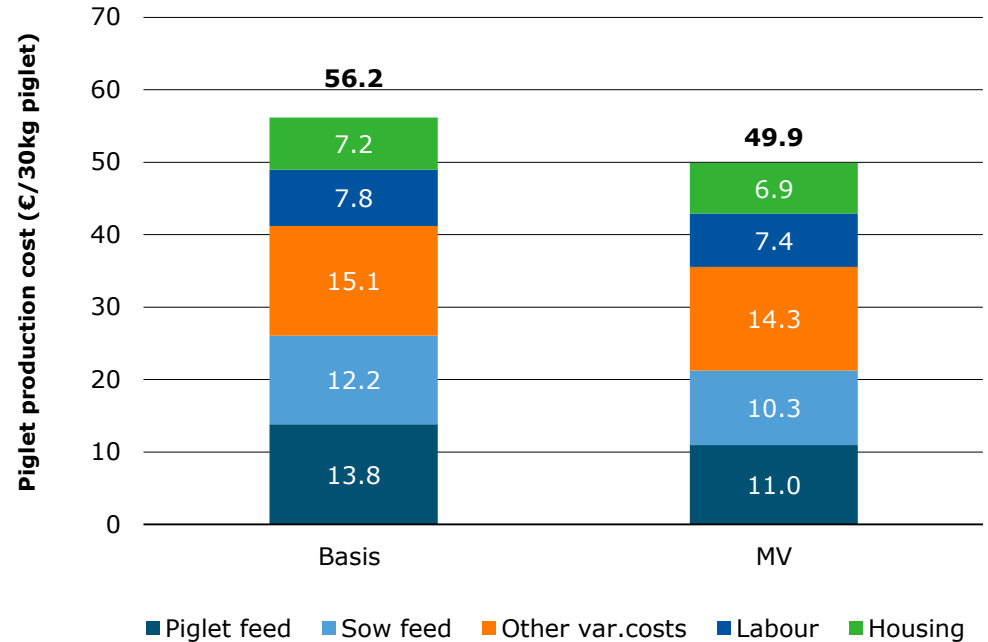
# 3-4 euros feed cost difference per raised piglet

- Piglet feed costs vary from 13.3-15.4 euros per 30kg piglet in the basic scenario
- Cost difference of MijnVoer amounts to about 2.7-4.1 euros per 30kg piglet; only in Germany this effect is zero, since no feed price difference was assumed
- UK shows the highest effect, due to highest current feed consumption



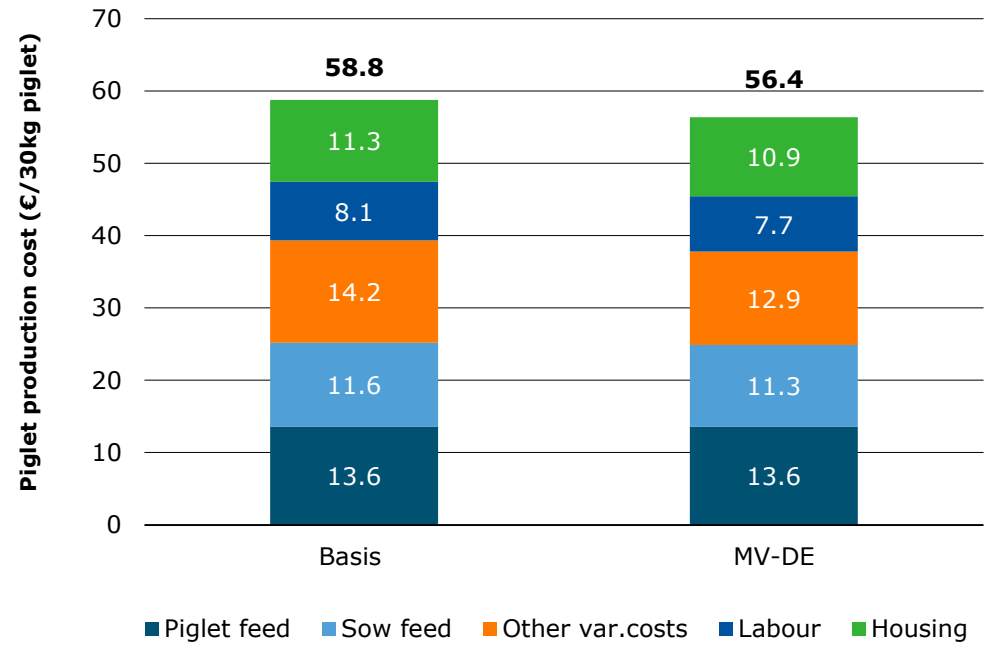
# Cost difference in NL 6 euro per 30kg piglet

- Total calculated cost difference of MijnVoer in piglet production in the Netherlands amounts to 6.3 euro per 30kg piglet
- Main effects come from lower piglet feed costs (-€2.9) and sow feed costs (-€1.9), due to a combination of lower feed price and improved performance
- Other effects relate to higher performance level
- For a 25kg piglet (a typical Dutch trade weight) the total feed costs would decrease from 10.7 to 8.3 euros/piglet, or minus 2.4 euros



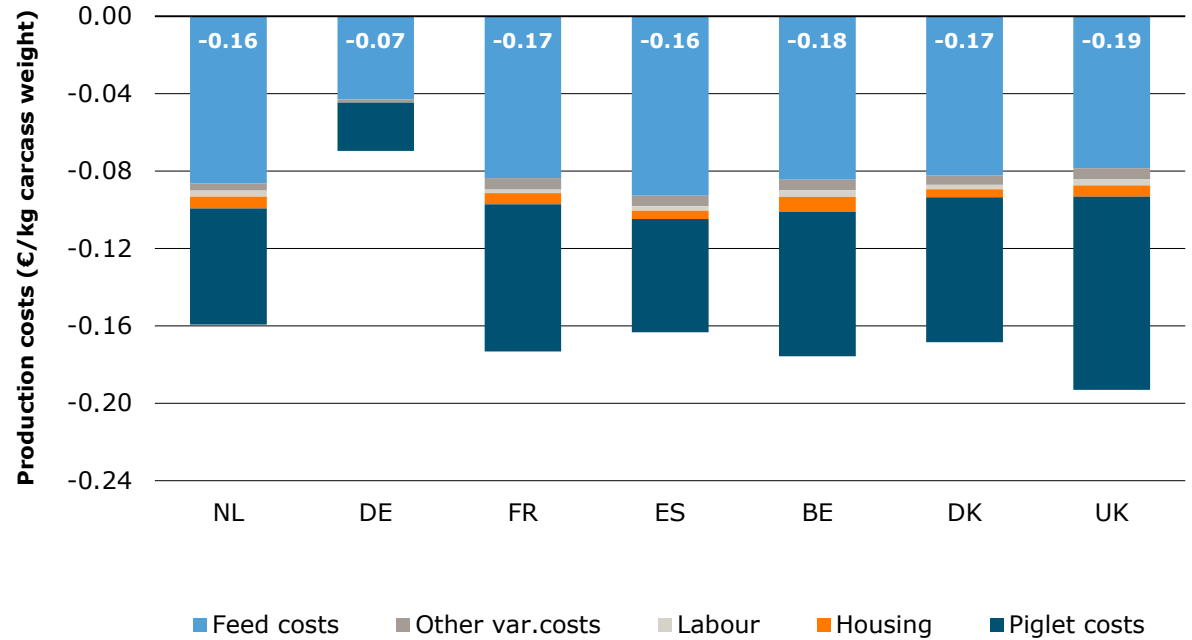
# Cost difference in Germany 2 euros per piglet

- Total calculated cost difference of MijnVoer in piglet production in Germany amounts to 2.4 euros per 30kg piglet
- Effects are found in all cost factors except in piglet feed



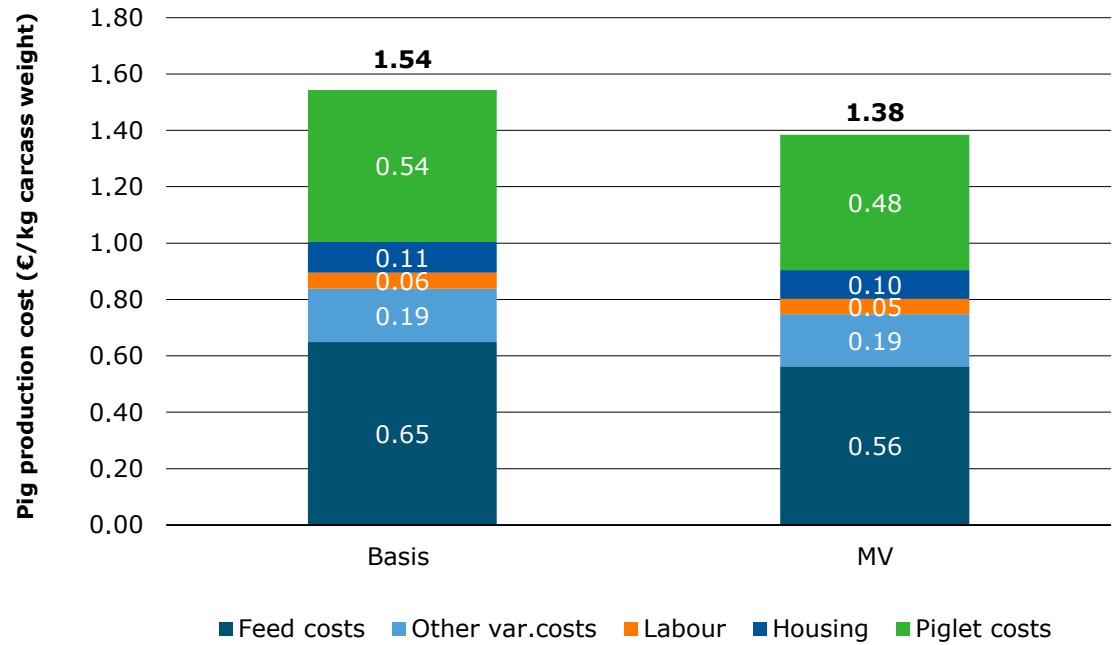
# 7-19 eurocents cost difference per kg carcass weight

- Cost difference of MijnVoer in pig production amounts to 16-19 eurocents/kg carcass weight (farrow-finish)
- In Germany, however, the cost effect amounts to just 7 eurocents/kg
- 9-10 eurocents are related to the finishing phase (mainly feed) and 6-10 eurocents to piglet costs



# 16 eurocents cost difference farrow-finish in NL

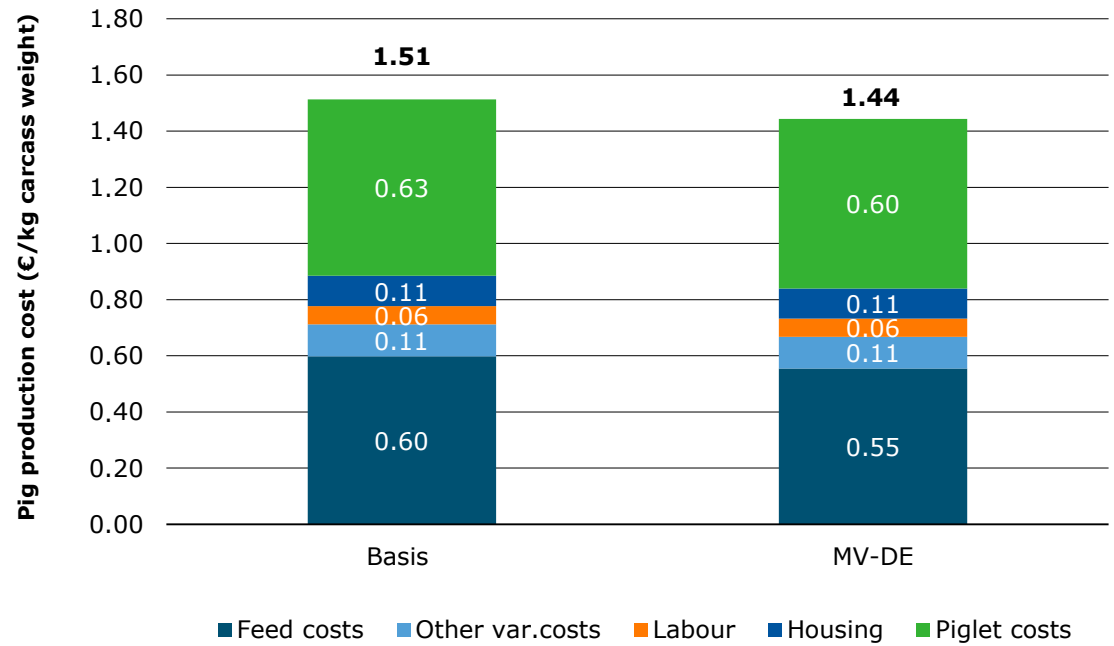
- Total calculated cost difference of MijnVoer in pig production in the Netherlands amounts to 16 eurocents/kg carcass weight (including cost effects in piglet production)
- Main effect comes from lower feed costs in the finishing phase (-9 eurocents) and lower piglet costs (-6 eurocents)





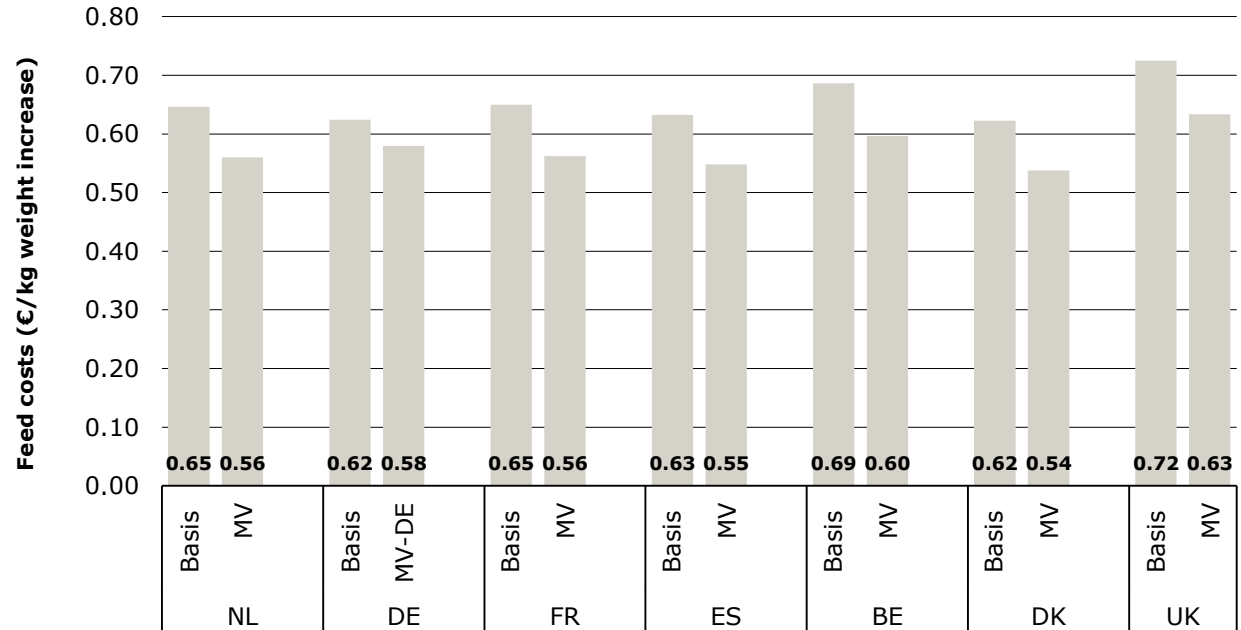
# 7 eurocents cost difference farrow-finish in Germany

- Total calculated cost difference of MijnVoer in pig production in Germany amounts to 7 eurocents/kg carcass weight (including cost effects in piglet production)
- This is caused by lower feed costs in the finishing phase (-5 eurocents) and lower piglet costs (-3 eurocents) (rounded numbers)



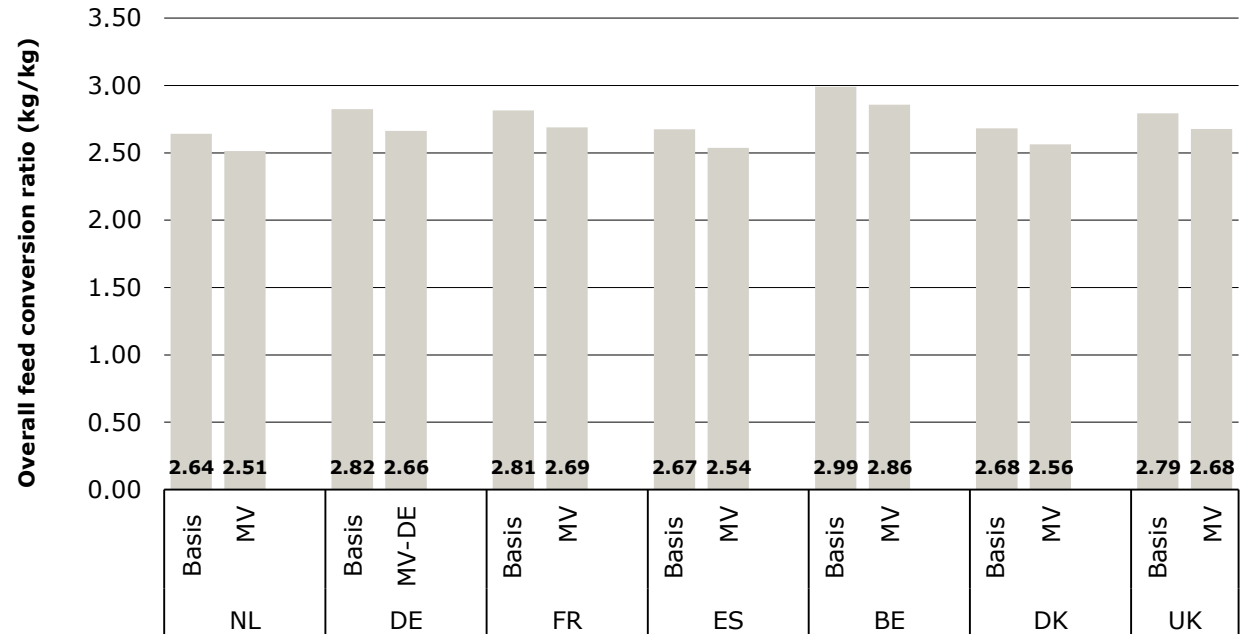
# 8-9 eurocents difference in feed cost per kg gain

- Total calculated difference of MijnVoer in feed cost per kg gain in the finishing pig production amounts to 8-9 eurocents per kg weight increase of finishers
- Only in Germany this amounts to 4 eurocents/kg
- Feed costs in the basic situation varies between €0.62 and €0.72 per kg gain among countries



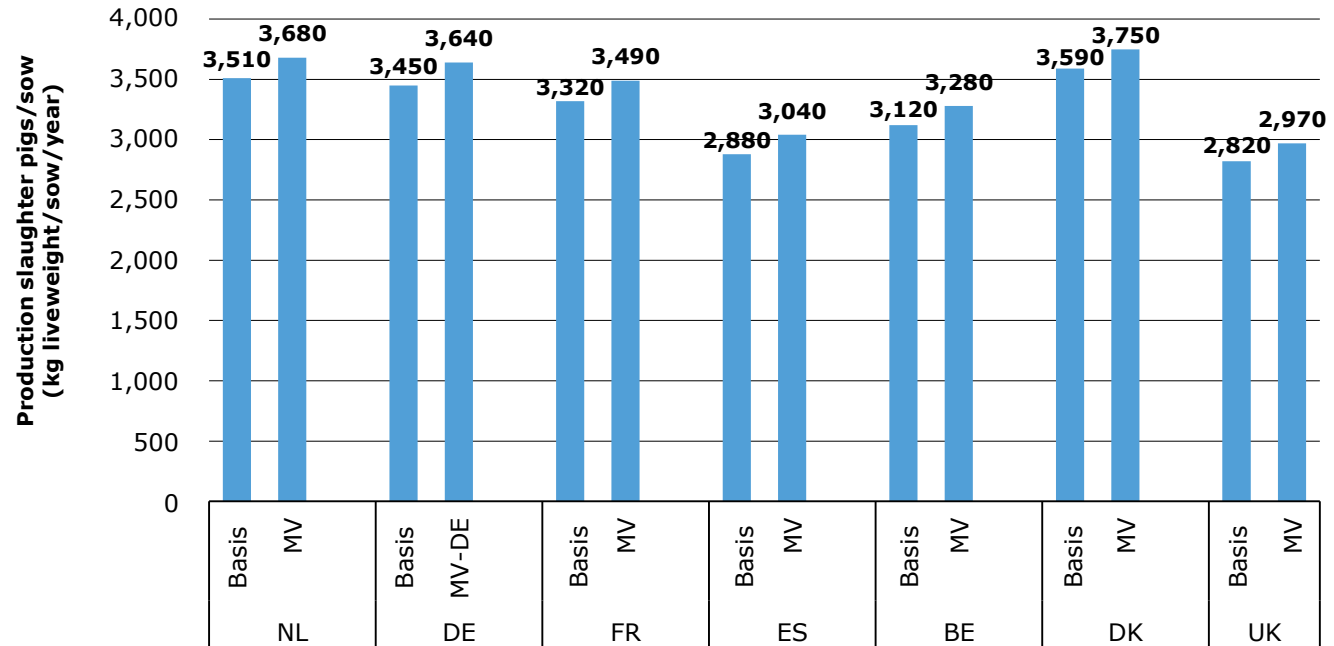
# Overall feed efficiency explains different effects

- Overall feed conversion ratio \*) differs among countries
- MijnVoer cost advantage is higher with higher Overall feed conversion ratio



# Production performance explains different effects

- Production performance in terms of production of slaughter pigs per sow/year differs among countries
- The MijnVoer effect differs due to different increase in sow performance (number reared/sow/year) and slaughter weight



# Conclusions

This research is based on assumptions as indicators for possible improvements. Realisation of improvements wasn't checked in practice. Given this limitation, the following conclusions can be drawn:

- The economic effect of improved zootechnical performance and feed price reductions with the alternative approach amounts to 16-19 eurocents/kg carcass weight, of which about 10-11 eurocents during the finishing phase. Effects differ among countries, especially in the piglet production phase. Feed costs per kg gain in finishing are reduced by about 8-9 eurocents/kg.
- Piglet costs of production are decreased by 6-8 euro per 30kg piglet. Main cost reduction comes from piglet feed (3-4 euros/30kg piglet).
- For Germany, with adapted assumptions on feed price and performance advantages, the economic difference is limited to 7 eurocents/kg carcass weight (farrow-finish), of which 3 eurocents in piglet production.
- Feed efficiency and zootechnical efficiency levels in the basis situation influence the effect of the alternative approach to some extent. The economic advantage is a little bit higher in situations with lower production efficiency and higher feed prices.
- Costs for advice to achieve higher performance levels are not included in the calculations and have to be taken into account.

# Limitations

- Assumptions used in the alternative approach are indications of potential improvements, based on experiences on Dutch farms. The real improvements may be different in other countries. Further research is needed to check whether the alternative approach can achieve such improvements.
- Potential improvements will differ among farms, due to e.g., the actual level of performance.
- Current effects are based on average farms, using compound feed. Farms using by-products or home-grown products are assumed to have a lower benefit.
- Other aspects will influence the attractiveness of specific markets, e.g., habit of home-mixing, application of food by-products, feed price reduction that can be reached, etc.
- As stated, we haven't researched the feasibility of the improvements as such; further research would be needed.



# More information

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