

Pig welfare model development: the animals' perspective

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Q-PorkChains Project:

« Development of high quality pork products »

Pig welfare affects pork quality:

- ✓ Directly → meat characteristics
- ✓ Indirectly → consumers' perception

Module VI.3:

« Integration of the existing knowledge into a prediction model for animal welfare »

Perspectives:

- ✓ Animals
- ✓ Farmers
- ✓ Consumers
- ✓ Citizens

} Submodels

Animal component of the Welfare model:

- ✓ Quantify the effect of individual (genotypic/phenotypic) traits, and of factors related to housing and feeding conditions, on different welfare indicators (behaviour, performance, etc.)
- ✓ Collection of information from scientific literature, and processing by means of meta-analytical tools
- ✓ Multiagent modelling approach:
Based on predictions for different individuals, taking into account within-group variability

Example:

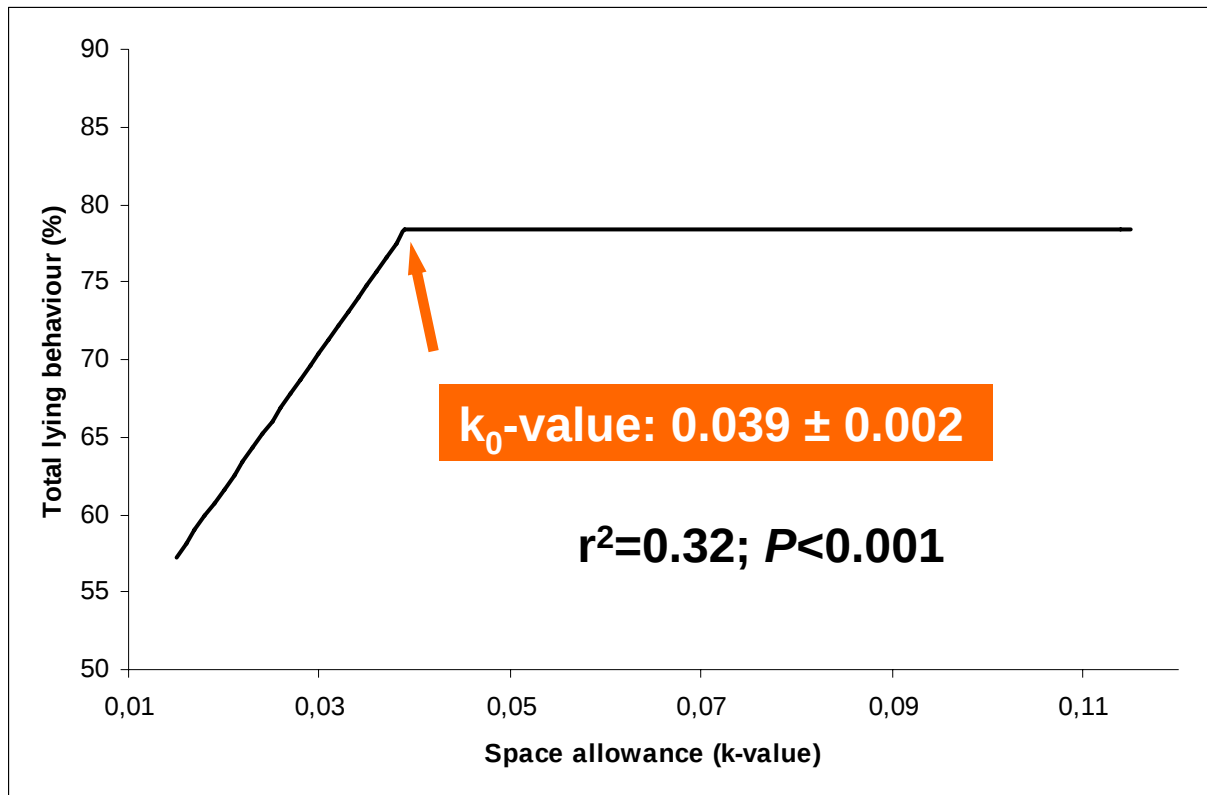
Relationship between space allowance, group size, and floor characteristics on the lying behaviour of growing-finishing pigs

- ✓ Information from 22 experiments in 21 publications
- ✓ Growing-finishing pigs (initial BW between 19 and 87 kg)
- ✓ Factors tested:
 - ❑ Space allowance → allometric approach ($k\text{-value} = m^2/BW^{0.667}$)
 - ❑ Group size (n)
 - ❑ Floor characteristics (Fully/Partly vs. Non slatted floors)
- ✓ Experiment, random factor

Meta-analysis results on the effect of the fixed tested factors

Effect		<i>P</i>
Intercept		<0.001
k-value		0.0249
Quadratic k-value		0.0028
Group size		0.5659
Floor type	No slats	0.0011
	Slats	-
k-value×Floor type	No slats	0.0291
	Slats	-

Regression between the allometric space allowance and the percentage of total lying behaviour on slatted floor

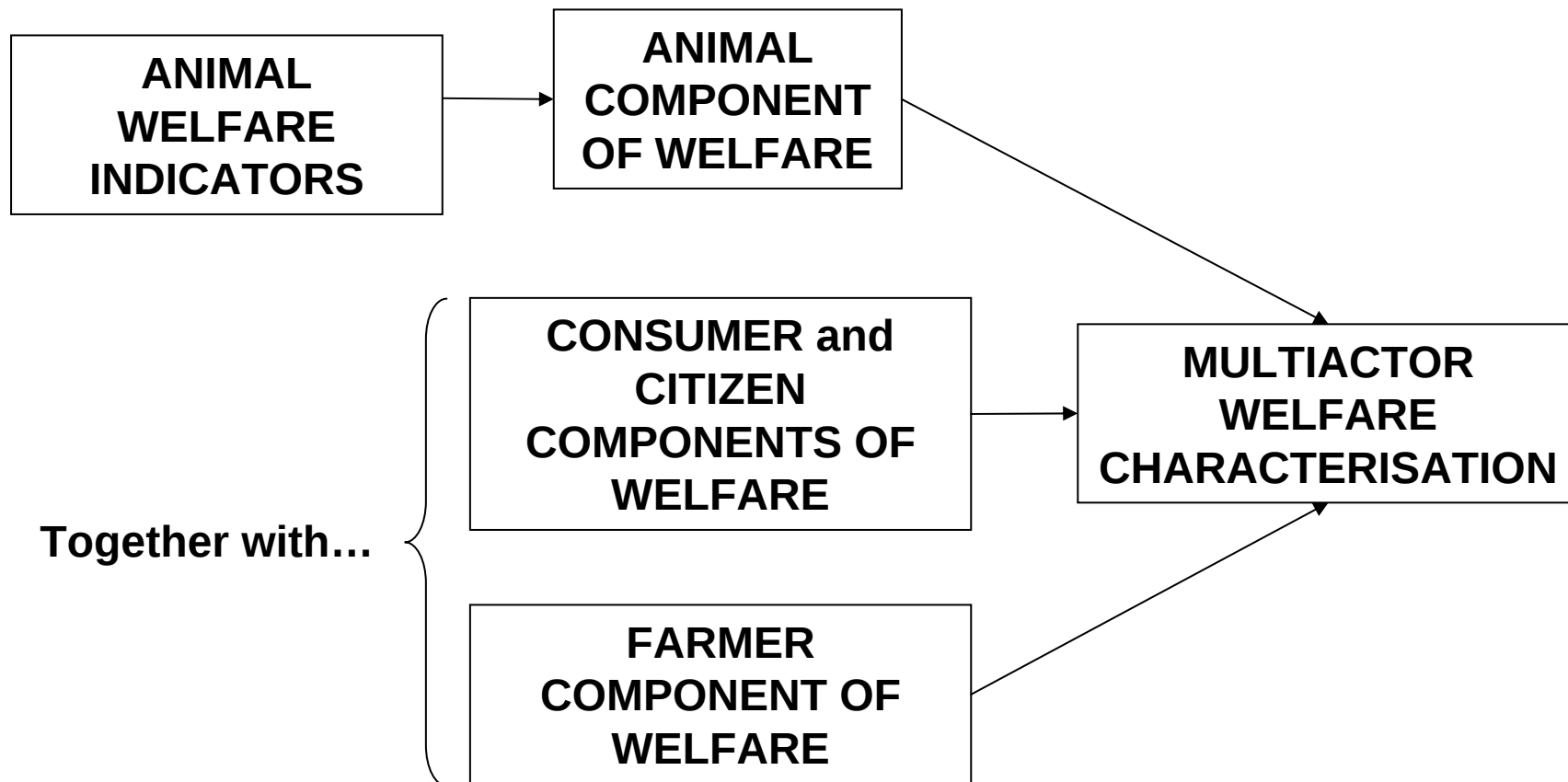


As a reference...

**Directive 120/2008/CE
Growing-finishing pigs**

kg	K-value
30	0.031
60	0.036
100	0.030

Expectations



Thank you very much for your attention!