

Pig husbandry in a changing environment

Concerns of different stakeholder groups about pig husbandry

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Concerns

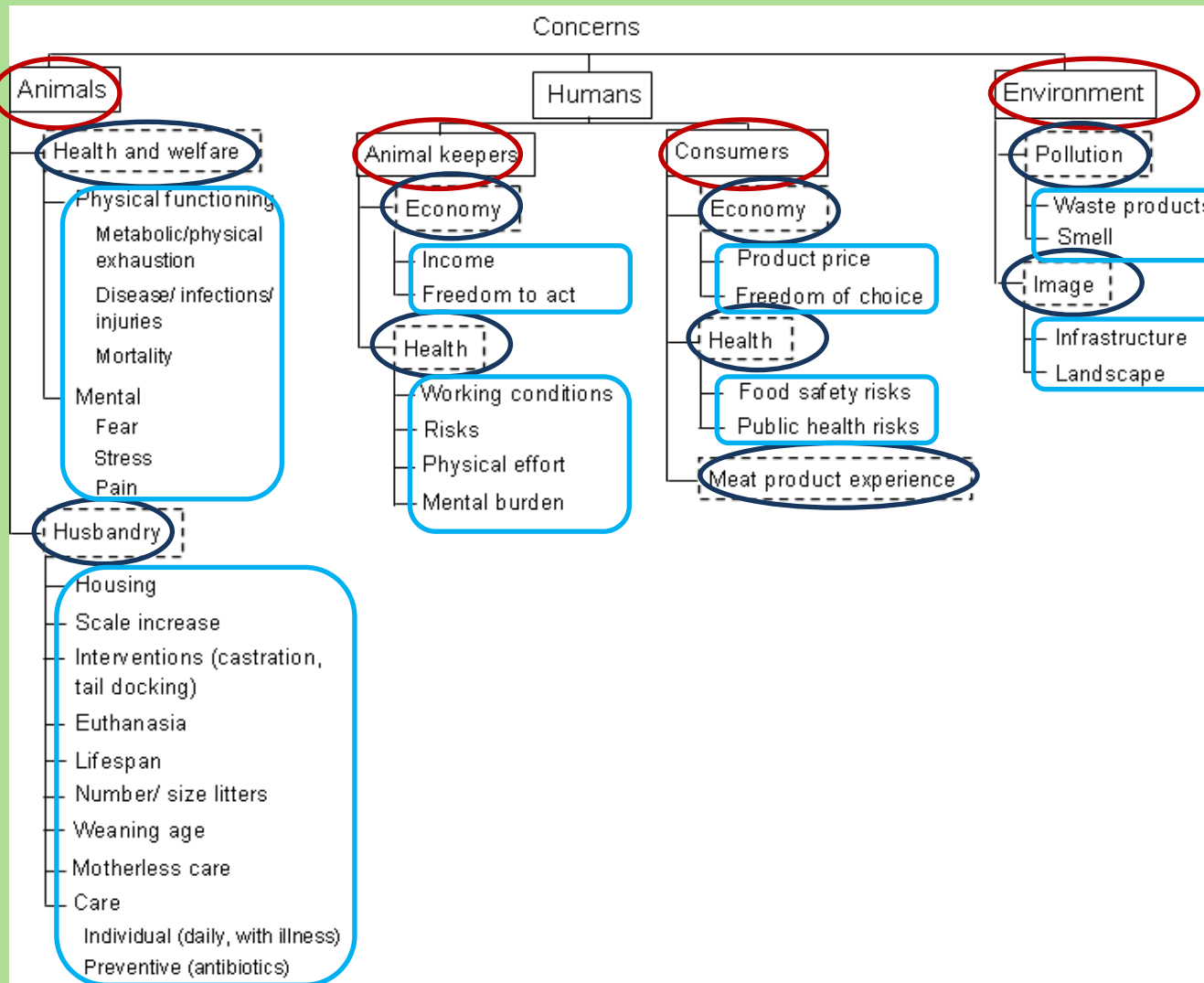
- Worldwide concerns about animal husbandry
- Concerns about
 - Animals
 - Humans
 - Environment
- Concerns differ between groups
 - Citizens
 - Farmers
 - Scientists
- Different concerns → incomprehension → lack of support
- Measures:
 - Developed by scientists and sector
 - Not supported by citizens
- In measure development → include concerns of all stakeholder groups
- First get insight in concerns

Objective

Determine and compare concerns about animals, humans and the environment in relation to pig husbandry of:

- Citizens
- Conventional pig farmers
- Organic pig farmers
- Yard entrants of pig farms
- Pig veterinarians.

Framework



Entities

Constructs

Aspects

Data collection and analyses

- Questionnaire:
 - Part 1: Perceptions about animals, humans, environment → level of additional care (AC) per aspect
 - Part 2: Socio-demographic features
- Citizens: CentERdata → 2 weeks in October 2011
- Other stakeholder groups → October 2011 until December 2011



- Analyses:
 - Descriptive statistics
 - Ordered multinomial logit
 - Corrected for socio-demographics

Results

Animals

Aspect	Citizens					Conventional farmers					Cit				Con
	NAC	LAC	TAC	SAC	MAC	NAC	LAC	TAC	SAC	MAC	Con	Org	Yar	Vet	Yar
Quality/quantity feed	8.8	9.5	32.7	33.7	15.3	35.4	10.5	16.6	22.7	14.9	<0.01	0.21	<0.01	0.06	0.03
Rate sickness/infection/injury	3.7	5.6	25.2	39.6	25.9	19.3	18.8	20.4	23.8	17.7	<0.01	0.82	<0.01	0.22	0.26
Mortality	4.5	5.8	33.5	36.5	19.7	18.2	22.1	23.2	25.4	11.0	<0.01	0.50	<0.01	0.37	0.43
Fear/anxiety	2.4	4.9	27.7	36.3	28.7	25.4	22.1	24.9	17.7	9.9	<0.01	0.18	<0.01	0.03	0.96
Pain	2.4	5.1	26.1	35.5	30.9	30.4	19.3	21.0	17.7	10.5	<0.01	0.80	<0.01	0.21	0.85
Number of kept animals	3.5	4.8	26.5	33.7	31.5	40.3	12.7	21.6	16.6	6.6	<0.01	0.14	<0.01	<0.01	0.02
Environmental enrichment	5.9	7.1	32.5	32.9	21.6	28.2	23.2	23.8	17.7	7.1	<0.01	0.17	<0.01	0.04	0.62
Number of animals per m2	2.8	3.8	26.1	34.0	33.3	37.6	19.3	23.8	13.3	6.1	<0.01	0.53	<0.01	<0.01	0.17
Floor cover	3.1	4.8	27.1	36.6	28.4	38.7	19.9	21.0	14.4	6.1	<0.01	0.60	<0.01	0.02	0.50
Possibility to go outside	3.3	4.4	22.7	30.2	39.4	73.0	11.0	2.2	2.2		<0.01	0.53	<0.01	<0.01	0.48
Tail docking	5.9	7.9	30.4	27.4	28.4	42.5	18.2	19.9	12.7	6.1	<0.01	0.02	<0.01	0.05	0.44
Castration	5.8	7.4	32.4	26.5	27.9	29.8	14.9	25.4	14.4	14.9	<0.01	0.13	<0.01	0.93	0.07
Time euthanasia	5.7	6.7	33.6	29.1	25.0	24.3	13.8	23.2	22.7	14.9	<0.01	0.03	0.39	<0.01	0.27
Lifespan sow	4.2	5.4	34.4	32.1	23.9	28.2	15.5	27.0	19.9	8.3	<0.01	0.82	<0.01	0.16	0.49
Number of litters per sow	4.9	5.1	34.9	31.2	23.9	44.2	13.7	19.9	14.4	7.2	<0.01	0.16	<0.01	<0.01	0.25
Litter size	5.7	6.3	36.6	30.6	20.8	37.6	15.5	19.9	15.5	9.3	<0.01	0.03	<0.01	<0.01	0.29
Weaning age	4.8	6.6	35.2	31.5	21.9	38.1	19.3	18.2	17.7	6.1	<0.01	<0.01	<0.01	0.67	0.96
Motherless care	4.6	6.9	29.5	31.7	27.3	31.5	14.4	17.1	20.4	16.0	<0.01	0.15	<0.01	0.36	0.01
Care for individual animal	4.1	5.1	28.6	33.1	29.1	35.9	14.4	18.8	18.8	10.4	<0.01	0.04	<0.01	0.78	0.56
Use of antibiotics (animal)	3.0	2.6	21.1	22.8	50.5	13.7	13.3	27.1	22.7	22.1	<0.01	0.11	<0.01	0.04	0.52

Results

Humans

Entity	Aspect	Citizens					Conventional farmers					Cit				Con Yar
		NAC	LAC	TAC	SAC	MAC	NAC	LAC	TAC	SAC	MAC	Con	Org	Yar	Vet	
Animal keeper	Enough income	3.9	6.0	33.6	41.4	15.2	3.9	0.6	5.5	21.0	69.1	<0.01	0.01	<0.01	<0.01	0.22
	Freedom to act	5.9	10.2	42.7	31.1	10.1	6.1	7.1	21.0	38.7	26.0	<0.01	0.15	0.03	0.02	0.05
	Working conditions	4.2	7.6	36.3	37.4	14.6	9.4	12.7	26.0	34.3	17.7	0.54	0.35	0.59	0.13	0.39
	Health risks	3.4	4.7	28.9	36.6	26.4	10.4	16.0	22.7	34.8	15.5	0.04	0.12	0.03	0.24	0.62
	Physical burden	4.3	7.1	35.0	37.5	16.2	11.0	9.9	25.4	29.8	22.8	0.09	0.11	0.33	0.47	0.05
	Mental burden	4.4	7.2	35.0	37.0	16.6	8.3	6.1	19.9	33.1	32.6	<0.01	0.03	<0.01	<0.01	0.47
Consumer	Price product	7.9	10.8	35.8	31.6	13.9	8.8	3.9	11.0	23.2	53.0	<0.01	<0.01	<0.01	<0.01	0.45
	Freedom of choice	7.4	10.4	34.2	33.5	14.4	16.0	11.6	26.0	28.2	18.2	0.95	0.01	0.76	0.58	0.82
	Food safety risks	3.0	4.6	23.3	30.8	38.3	30.9	2.7	16.6	16.6	21.5	<0.01	0.61	<0.01	<0.01	0.12
	Public health risks	2.8	3.6	22.3	29.2	42.1	31.5	13.3	16.6	17.7	21.0	<0.01	0.52	<0.01	<0.01	0.36
	Use of antibiotics (human)	2.7	3.2	19.8	23.8	50.5	16.0	13.3	25.4	23.8	21.5	<0.01	0.22	<0.01	<0.01	0.82
	Experience meat products	8.0	7.3	36.9	29.8	18.0	8.8	8.8	17.7	31.5	32.1	<0.01	<0.01	<0.01	<0.01	0.11

Environment

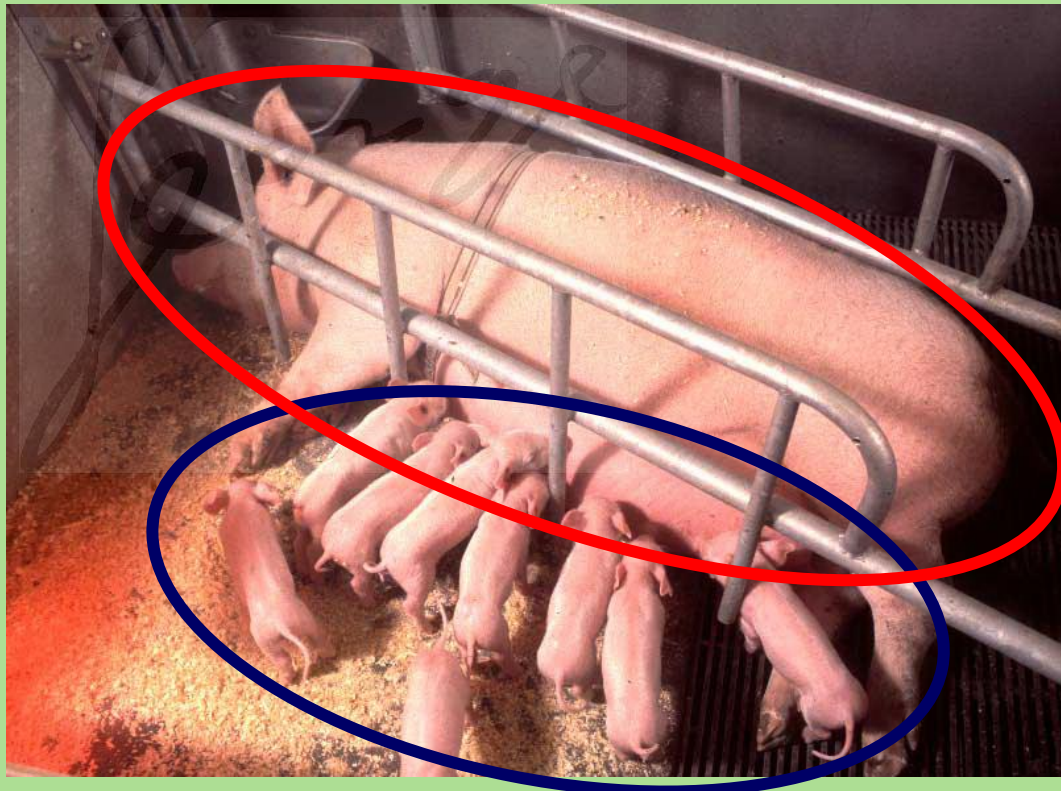
Aspect	Citizens					Conventional farmers					Cit				Con Yar
	NAC	LAC	TAC	SAC	MAC	NAC	LAC	TAC	SAC	MAC	Con	Org	Yar	Vet	
Environmental waste	2.4	3.6	20.3	37.3	36.4	33.7	18.2	21.5	16.1	9.9	<0.01	0.05	<0.01	<0.01	0.95
Smell	5.1	8.7	32.3	31.5	22.4	24.3	20.5	27.6	18.2	8.3	<0.01	0.81	<0.01	0.03	0.71
Change in infrastructure	3.5	6.1	31.0	36.9	22.5	32.0	15.5	26.5	17.1	8.3	<0.01	0.42	<0.01	0.04	0.78
Image landscape	2.4	11.7	32.3	32.3	21.3	23.8	17.1	27.6	21.5	9.4	<0.01	0.06	<0.01	<0.01	0.01

Discussion/ conclusions

- AC levels = levels of concern
- Concerns about pig husbandry:
 - Cit = org
 - Vet < (=) cit and org
 - Con = yar
 - Vet = (>) con and yar
 - Cit and org > con and yar
- Cit and org highest concerns about:
 - Animal welfare
 - Human health
- Con and yar highest concerns about:
 - Economics

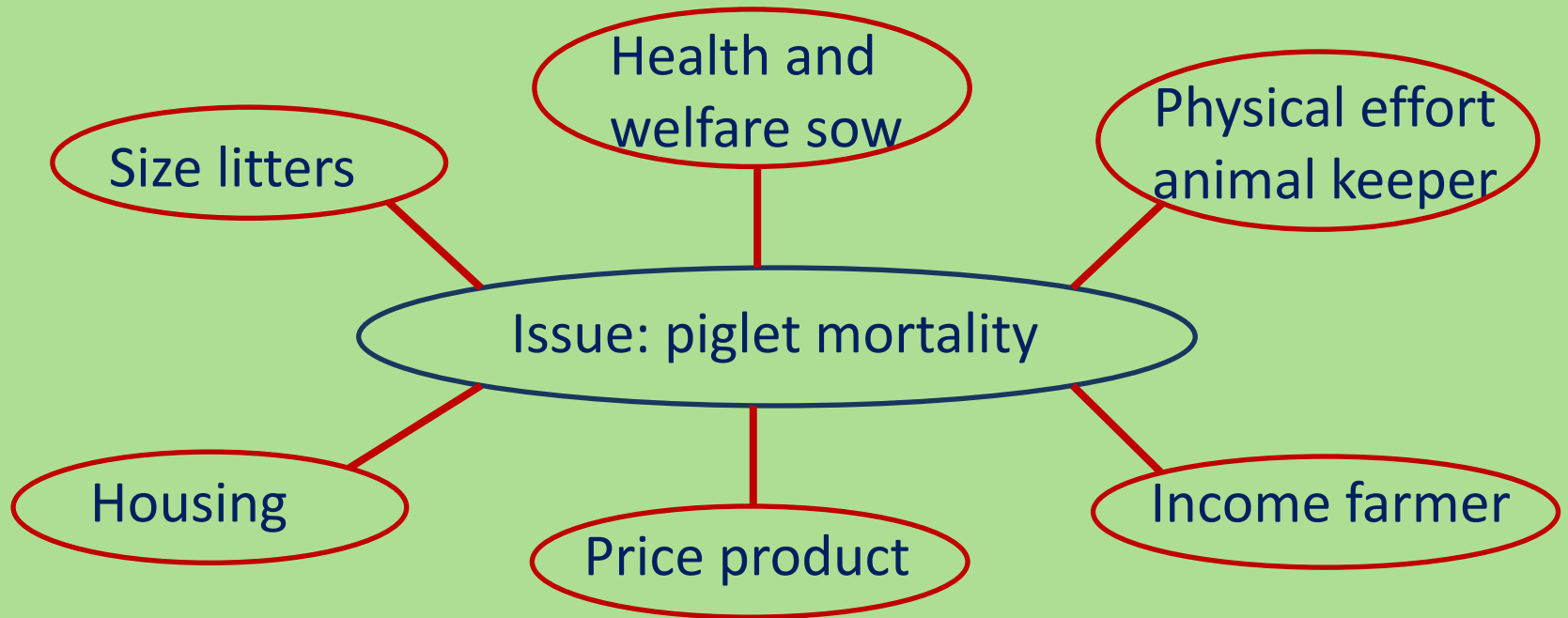
Discussion/ conclusions

- Different concerns → incomprehension
- Nowadays → societal concerns are the focus
- Measures → made by scientists and sector
- Incomprehension → lack of support for measures



Discussion/ conclusions

- For support of all stakeholder groups
 - Include concerns of all stakeholder groups
 - Include concerns about all entities
 - Measures should meet aspects that underlie concerns



Thank you for listening!



Are there any questions?

