

- 1 Appendix IV: Animal welfare inputs for the simulation model; the animal welfare scores (AWS) per feature for the default situation and
- 2 the increase or decrease in AWS compared to the default situation and the variation (Var; ±) per measure for sow husbandry.

Feature	AWS ^a		Increase or decrease in AWS per measure and their variation																														
	Default	μ PM1 ^b	Var PM1	μ PM2	Var PM2	μ PM3	Var PM3	μ PM4	Var PM4	μ TB1	Var TB1	μ TB2	Var TB2	μ TB3	Var TB3	μ TB4	Var TB4	μ HS1	Var HS1	μ HS2	Var HS2	μ HS3	Var HS3	μ HS4	Var HS4								
Water supply	87.5	c																								7.5	0.0						
Number sows per drinking spot	100																										-23.0	0.0					
Bursitis	60																		20.0	10.0	15.0	10.0	15.0	10.0	15.0	10.0							
Absence manure body sow	69.5																		10.2	5.2	7.2	5.0	7.2	5.0	7.2	5.0							
Absence manure body piglet	69.5													10.3	5.1	10.3	5.1																
Shoulder sores sow	95.0					3.5	1.5																										
Surface per sow	12.5																		40.8	0.0													
Group size	20																									80.0	0.0						
Lameness sow	90																		5.0	3.0	5.0	3.0	5.0	3.0	5.0	3.0							
Lameness piglet	90											5.0	2.0	1.0	1.0	5.0	2.0																
Body wounds sow	79.8																		10.2	5.2	5.1	3.0	5.1	3.0	10.2	5.2							
Body wounds piglet	98.8													-18.7	5.3	-12.6	5.4	-10.6	5.4														
Vulva lesions sow	89.9																		8.1	1.0	8.1	1.0	8.1	1.0	6.0	2.0							
Mortality sow	95																		2.0	0.0													
Mortality piglet	87	1.0	0.2	0.8	0.1	0.6	0.1	0.6	0.2																								
Tail docking	0													25.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0												
Positive social behavior sow	3								1.0	1.0																3.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0
Positive social behavior piglet	8															4.0	2.0	1.0	0.5														
Negative social behavior sow	95								1.0	1.0																3.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0
Negative social behavior piglet	88													2.0	2.0	4.0	2.0	2.0	2.0														
Stereotypies sow	60																		5.0	5.0	30.0	15.0	30.0	15.0	32.0	15.0							
Explorative behavior sow	48			12.0	5.0	12.0	5.0												32.0	10.0	22.0	10.0	22.0	10.0	32.0	10.0							
Explorative behavior piglet	52													18.0	5.0	28.0	10.0	13.0	10.0														
Human-animal relation score sow	16.7								58.1	5.2																32.4	10.2	22.1	6.1	19.1	3.1	35.5	7.3
Human-animal relation score piglet	1.95																		5.6	4.3	11.8	4.2	16.1	4.5									
Qualitative Behavioral Assessment (QBA) score sow	18.8			12.5	6.3	12.5	6.3	12.5	6.3																	43.8	6.3	37.5	6.3	37.5	6.3	43.8	6.3
Qualitative Behavioral Assessment (QBA) score piglet	18.8																																

- 3 ^a Animal welfare scores were given on a scale of 1 (worst for animal welfare) to 100 (best for animal welfare).
- 4 ^b Measure abbreviations: PM: piglet mortality, TB: tail biting, IH: indoor housing gestating sows, PM1: camera surveillance farrowing pen, PM2: jute sack provision
- 5 sow, PM3: straw provision sow, PM4: sow habituation, TB1: tail docking with analgesia, TB2: biting material for weaned piglets, TB3: straw playing area for weaned
- 6 piglets, TB4: chopped straw provision for weaned piglets, IH1: free range outside area, IH2: straw provision, IH3: straw provision and window, IH4: straw provision,
- 7 window and increased group size.
- 8 ^c When no value is given it was assumed to be the same value as in the default situation.