

Table 5 Evaluation of interobserver reliability at farm level: mean values [%] (including standard errors) for the categories of the human-animal relationship test, the categories of the assessment of stereotypies and the categories of the assessment of measures of the physical state and health in sows and piglets assigned to the two observers, and corresponding statistical parameters (Spearman's rank correlation coefficient: RS, intraclass correlation coefficient: ICC, smallest detectable change: SDC, limits of agreement: LoA), indicating poor (normal type), acceptable (italic type) and good interobserver reliability (bold type).

Measure	Category	n	Observer 1	Observer 2	RS	ICC	SDC	LoA
Human-animal relationship test								
Fear of humans	0	20	58.1 (4.88)	60.6 (4.88)	0.96	0.97	0.09	-0.11 to 0.06
	1	20	16.8 (3.06)	22.0 (3.46)	0.53	0.51	0.28	-0.33 to 0.22
	2	20	25.2 (4.67)	17.5 (4.29)	0.71	0.76	0.24	-0.17 to 0.32
Stereotypies								
Sham chewing	2	20	23.0 (3.99)	20.4 (3.68)	0.96	0.94	0.11	-0.08 to 0.13
Tongue rolling	2	20	8.6 (2.54)	10.5 (2.29)	0.86	0.61	0.19	-0.21 to 0.17
Teeth grinding	2	20	1.1 (0.47)	0.4 (0.20)	0.59	0.21	0.04	-0.03 to 0.05
Bar/drinker/ trough biting	2	20	0.8 (0.39)	0.8 (0.26)	0.88	0.77	0.02	-0.02 to 0.02
Floor licking	2	20	1.9 (0.75)	4.1 (1.03)	0.49	0.47	0.07	-0.10 to 0.05
Sows								
Wounds on the body	0	40	90.1 (1.28)	91.8 (1.01)	0.67	0.76	0.10	-0.11 to 0.08
	1	40	9.6 (1.27)	7.8 (0.93)	0.63	0.72	0.10	-0.08 to 0.12
	2	40	0.3 (0.09)	0.5 (0.19)	0.35	0.10	0.02	0.02 to 0.02
Vulva lesions	0	40	87.4 (1.43)	84.0 (1.69)	0.77	0.68	0.15	-0.11 to 0.18

Body condition score	1	40	10.2 (1.25)	13.9 (1.42)	0.76	<i>0.61</i>	0.14	-0.17 to 0.10
	2	40	2.4 (0.42)	2.1 (0.46)	<i>0.53</i>	<i>0.65</i>	0.05	-0.04 to 0.05
	0	40	89.8 (1.72)	91.2 (1.56)	0.86	0.90	<i>0.09</i>	-0.10 to 0.08
Absence of manure on the body	1	40	10.1 (1.71)	8.2 (1.54)	0.82	0.89	<i>0.09</i>	-0.07 to 0.11
	2	40	0.1 (0.06)	0.5 (0.17)	<i>0.43</i>	0.14	0.02	-0.03 to 0.02
	0	40	92.0 (0.86)	97.1 (0.48)	<i>0.50</i>	0.32	<i>0.08</i>	-0.14 to 0.03
Metritis	1	40	6.9 (0.81)	2.7 (0.45)	<i>0.46</i>	0.33	<i>0.08</i>	-0.04 to 0.12
	2	40	1.1 (0.24)	0.2 (0.09)	0.17	0.04	0.03	-0.02 to 0.04
	2	20	6.9 (1.95)	3.9 (1.40)	0.88	0.75	<i>0.08</i>	-0.05 to 0.11
Lameness	0	40	98.6 (0.31)	99.2 (0.25)	<i>0.55</i>	<i>0.51</i>	0.03	-0.04 to 0.03
	1	40	1.2 (0.31)	0.6 (0.23)	<i>0.59</i>	<i>0.49</i>	0.03	-0.03 to 0.04
	2	40	0.2 (0.12)	0.2 (0.12)	0.83	0.93	0.01	-0.01 to 0.00
Local infections	0	40	83.4 (1.86)	78.9 (1.67)	0.76	0.70	0.15	-0.11 to 0.20
	1	40	12.4 (1.43)	18.4 (1.44)	0.74	<i>0.59</i>	0.13	-0.19 to 0.07
	2	40	4.2 (0.65)	2.7 (0.43)	<i>0.56</i>	0.33	<i>0.08</i>	-0.06 to 0.09
Bursitis	0	40	54.5 (2.92)	38.7 (3.12)	<i>0.58</i>	<i>0.45</i>	0.34	-0.18 to 0.50
	1	40	42.9 (2.84)	59.8 (3.14)	<i>0.57</i>	<i>0.40</i>	0.35	-0.52 to 0.18

Shoulder sores	2	40	2.6 (0.44)	1.5 (0.29)	0.47	0.32	0.05	-0.04 to 0.06
	0	20	60.8 (4.80)	60.0 (5.20)	0.38	0.30	0.47	-0.46 to 0.48
	1	20	35.4 (3.88)	35.0 (5.04)	0.03	0.08	0.48	-0.48 to 0.48
	2	20	3.8 (1.80)	5.0 (2.04)	0.90	0.90	0.07	-0.08 to 0.05
Panting (individual animal level)	2	20	56.4 (5.60)	66.1 (6.64)	0.86	0.73	0.37	-0.47 to 0.27
Panting (group level)	0	20	97.5 (2.50)	95.0 (5.00)	1.00	0.80	0.21	-0.19 to 0.24
	1		2.5 (2.50)	5.0 (5.00)	1.00	0.80	0.21	-0.24 to 0.19
Piglets								
Coughing	%	20	0.4 (0.37)	0.1 (0.08)	- 0.05	0.00	0.03	-0.03 to 0.04
Sneezing	%	20	3.0 (1.15)	0.7 (0.25)	0.88	0.29	0.07	-0.06 to 0.11
Scouring	2	20	4.6 (1.64)	1.1 (0.73)	0.52	0.35	0.11	-0.09 to 0.16
Absence of manure on the body	0	20	99.5 (0.50)	99.0 (0.69)	0.69	0.65	0.04	-0.04 to 0.05
	1	20	0.5 (0.50)	0.5 (0.50)	- 0.05	0.00	0.06	-0.06 to 0.06
	2	20	0.0 (0.00)	0.5 (0.50)	^a	0.00	0.03	-0.05 to 0.04
Lameness	0	20	90.4 (2.26)	94.9 (1.75)	0.52	0.43	0.18	-0.23 to 0.14
	1	20	6.8 (1.97)	4.6 (1.75)	0.44	0.33	0.19	-0.17 to 0.21
	2	20	2.9 (1.44)	0.5 (0.50)	0.40	0.15	0.11	-0.10 to 0.15

Huddling	0	20	53.6 (7.16)	45.0 (7.53)	0.34	0.26	0.77	-0.68 to 0.85
	1	20	10.4 (3.50)	0.0 (0.00)	^a	0.00	0.37	-0.41 to 0.62
	2	20	36.1 (6.29)	55.0 (7.74)	0.49	0.49	0.60	-0.78 to 0.41
Panting	0	20	100.0 (0.00)	98.5 (1.09)	^a	0.00	0.07	-0.08 to 0.11
	2	20	0.0 (0.00)	1.5 (1.09)	^a	0.00	0.07	-0.11 to 0.08

^a Calculation not possible due to lack of variance in one of the observers