

## Supplementary Material

Table S1: Description of the scales on work satisfaction, load, and affective attitudes towards working with cows. For each component, the number of items is indicated and the first three items included in the component are given as examples in German and English. For the section on personal well-being, see (Ganglmair-Wooliscroft and Wooliscroft, 2019) for German and English version.

Name of scale	No. items	German	English
<b>Perceived workload</b>	3	a) Die Arbeitsbelastung ist im Sommer zu hoch, b) Die Arbeitsbelastung ist im Winter zu hoch, c) Der Zwang zur ständigen Anwesenheit wegen der Tiere ist eine große Belastung.	a) Workload is too high during summer, b) Workload is too high during winter, c) The necessity to always be present for animal care is a great burden.
<b>Professional Satisfaction</b>	6	a) Ich bin glücklich und stolz Landwirt / Landwirtin zu sein, b) Mein Betrieb ist langfristig überlebensfähig, c) Die Arbeit in der Landwirtschaft erfüllt mich und trägt zu meiner Lebensqualität bei.	a) I am happy and proud to be a farmer, b) My farm is viable in the long term, c) Farm work fulfils me and contributes to my quality of life.
<b>Free time satisfaction</b>	6	Ich habe genügend Zeit für... a) ... mich, b) ... die Partnerschaft / das Familienleben, c) mein Umfeld (Freunde / Nachbarn/usw.)	I have enough time for ... a) ... myself, b) ... my partner/family life, c) ... my social environment (friends, neighbours, ...)
<b>Physical and Mental Load</b>	6	a) Wie schätzen Sie Ihre derzeitige psychische (mentale) Belastung ein? b) Wie schätzen Sie Ihre derzeitige körperliche Belastung ein?	a) How would you rate your current psychological (mental) load? b) How would you rate your current physical load?
<b>Workplace satisfaction</b>	16	Wie zufrieden sind sie mit den folgenden Gesichtspunkten ihrer Arbeit am landwirtschaftlichen Betrieb? a) Berufswahl, -ausübung, b) Einkommen, c) Arbeitsumfang (h / Tag)	How satisfied are you with the following aspects of your work at the farm? a) Career choice, professional practice, b) Income, c) Working hours (h / day)
<b>Affective attitudes towards working with cows</b>	13	Geben Sie bitte an, zu welchem Grad Ihnen der Kontakt mit den Kühen in den verschiedenen Situationen angenehm oder unangenehm ist bzw. wie sehr Ihnen dieser Kontakt gefällt.	Please indicate to what degree the contact with cows in the different situations is pleasant or unpleasant for you or how much you like the contact, respectively.
<b>Component 1: Enjoying work with cows</b>	6	a) Arbeiten mit den Kühen im Allgemeinen, b) Körperlicher Kontakt mit den Kühen beim Treiben in den Melkstand, c) Körperlicher Kontakt mit den Kühen beim Melken	a) Working with cows in general, b) Physical contact with the cows during moving in the milking parlour, c) Physical contact with the cows during milking

**Component 2:  
Liking of  
positive  
contact**

3 a) Kraulen und streicheln der Kühe, wenn sie trocken sind, b) Reden mit den Kühen im Melkstand, c) Reden mit den Kühen beim Treiben a) Scratching and stroking of cows when they are dry, b) Talking to cows in the milking parlour, c) Talking to cows during moving

**Component 3:  
(Not) Liking  
negative  
contact**

2 a) Treiben der Kühe mit einem Stock, wenn es notwendig ist, b) Treten der Kühe, wenn sie sich sonst nicht Treiben lassen a) Moving of cows with a stick, if it is necessary, b) Kicking of cows if they cannot be moved otherwise

Table S2: Results of the Principal Component Analysis that was applied to each scale separately. The loadings of each item that was included in the factor, the Eigenvalue and the explained variance of each factor are shown.

Item	a	b	c	d	e	f	g	h	Eigenvalue	Variance explained (%)
<b>Perceived workload</b>									1.839	61.30
Loading	0.781	0.782	0.787							
<b>Professional satisfaction</b>									2.900	48.38
Loading	0.725	0.650	0.757	0.781	0.686	-0.547				
<b>Free time satisfaction</b>									3.547	59.11
Loading	0.823	0.822	0.852	0.821	0.673	0.584				
<b>Physical and Mental Load</b>									1.600	80.02
Loading				0.871		0.881				
<b>Workplace Satisfaction</b>									4.779	29.87
Item	a	b	c	d	e	f	g	h		
Loading	0.526	0.476	0.619	0.569	0.419	0.506	0.430	0.582		
Item	i	j	k	l	m	n	o	p		
Loading	0.572	0.393	0.611	0.555	0.595	0.628	0.619	0.564		
<b>Personal Well-being</b>									4.257	53.22
Loading	0.756	0.728	0.618	0.668	0.736	0.823	0.801	0.682		
<b>Affective attitudes towards working with cows</b>										
Component 1: Enjoying work with cows									3.947	30.36
Item	a	b	c	d	e	f	g	h		
Loading	0.654	0.663	0.621				0.745	0.499		
Item	i	j	k	l	m					
Loading		0.668								
Component 2: Liking of positive contact									1.727	13.29
Item	a	b	c	d	e	f	g	h		
Loading				0.553	0.890	0.867				
Component 3: (Not) Liking of negative contact									1.389	10.69
Item	i	j	k	l	m					
Loading			0.750	0.814						

Table S3. Spearman rank correlation coefficients of the components on work satisfaction, personal well-being and affective attitudes towards working with cows with number of calves, herd size, demographic variables and holidays. **Significant** ( $p \leq 0.05$ ) associations are marked in **bold**, *tendencies* ( $0.05 < p \leq 0.1$ ) are marked in *italics*.

		Per-ceived work-load	Profes-sional satis-faction	Free time satis-faction	Physical / Mental Load	Work-place satis-faction	Person-al Well-being	Enjoy-ing work with cows	Liking of positive contact	(Not) liking of negative contact	Number of calves	Herd size	Age	Years of experi-ence with cattle	Working time	Highest educa-tion
Number of calves	$r_s$	0.100	-0.077	-0.187	0.211	-0.203	-0.081	0.012	-0.008	0.027	--	0.522	0.021	0.055	0.070	0.052
	p	0.297	0.418	<b>0.047</b>	<b>0.024</b>	<b>0.030</b>	0.393	0.896	0.935	0.775	--	<b>0.000</b>	0.822	0.568	0.473	0.587
	n	111	112	113	114	114	114	112	112	112	114	114	114	111	107	113
herdsize	$r_s$	0.067	-0.014	-0.093	0.205	-0.008	-0.034	-0.013	-0.092	-0.073	0.522	--	-0.060	-0.072	0.038	0.006
	p	0.485	0.884	0.327	<b>0.029</b>	0.933	0.717	0.890	0.333	0.447	<b>0.000</b>	--	0.523	0.454	0.698	0.947
	n	111	112	113	114	114	114	112	112	112	114	114	114	111	107	113
Age	$r_s$	-0.094	-0.147	-0.074	-0.043	-0.113	-0.063	-0.202	-0.218	0.009	0.021	-0.060	--	0.788	-0.208	-0.087
	p	0.329	0.123	0.439	0.651	0.231	0.504	<b>0.033</b>	<b>0.021</b>	0.928	0.822	0.523	--	<b>0.000</b>	<b>0.032</b>	0.358
	n	111	112	113	114	114	114	112	112	112	114	114	114	111	107	113
Years of experience in working with cattle	$r_s$	-0.045	-0.279	-0.107	0.052	-0.218	-0.154	-0.107	-0.292	0.195	0.055	-0.072	0.788	--	-0.197	0.014
	p	0.647	<b>0.003</b>	0.266	0.590	<b>0.021</b>	0.107	0.270	<b>0.002</b>	<b>0.043</b>	0.568	0.454	<b>0.000</b>	--	<b>0.044</b>	0.888
	n	108	109	110	111	111	111	109	109	109	111	111	111	111	105	110
Working time	$r_s$	0.160	0.086	-0.091	0.051	0.029	0.024	0.102	0.070	-0.026	0.070	0.038	-0.208	-0.197	--	0.070
	p	0.106	0.384	0.354	0.602	0.763	0.803	0.302	0.478	0.793	0.473	0.698	<b>0.032</b>	<b>0.044</b>	--	0.474
	n	104	105	106	107	107	107	105	105	105	107	107	107	105	107	106
Highest education	$r_s$	0.064	0.055	0.003	-0.017	-0.008	0.092	-0.040	0.051	-0.069	0.052	0.006	-0.087	0.014	0.070	--
	p	0.505	0.568	0.972	0.860	0.931	0.333	0.677	0.597	0.470	0.587	0.947	0.358	0.888	0.474	--
	n	111	111	112	113	113	113	111	111	111	113	113	113	110	106	113
Holiday	$r_s$	-0.025	0.045	0.159	0.052	0.181	0.126	-0.080	-0.058	-0.100	-0.001	0.099	0.002	-0.031	-0.373	-0.036
	p	0.797	0.645	<i>0.100</i>	0.590	<i>0.058</i>	0.188	0.412	0.554	0.304	0.994	0.305	0.981	0.753	<b>0.000</b>	0.710
	n	107	108	109	110	110	110	108	108	108	110	110	110	107	104	109

Table S4: Results of the Mann-Whitney U Tests to investigate the association of dichotomous, potentially influencing variables and components of farmers' work satisfaction, personal well-being, load, and affective attitudes. **Significant** ( $p \leq 0.05$ ) associations are marked in **bold**, *tendencies* ( $0.05 < p \leq 0.1$ ) are marked in *italics*.

		Rearing system	Gender	Organic	Education	Grown up on farm
Perceived workload	Z	-1.392	-0.405	-1.220	-0.515	-0.919
	p	0.165	0.687	0.225	0.610	0.362
Professional satisfaction	Z	-0.252	-0.962	-0.978	-0.066	-1.718
	p	0.803	0.338	0.331	0.950	<i>0.086</i>
Free time satisfaction	Z	-0.187	-0.615	-0.093	-0.351	-0.615
	p	0.853	0.541	0.927	0.729	0.543
Physical and Mental Load	Z	-1.080	-0.790	-0.464	-0.559	-0.109
	p	<b>0.037</b>	0.432	0.644	0.578	0.913
Workplace satisfaction	Z	-1.260	-0.617	-1.081	-0.540	-1.540
	p	0.209	0.540	0.282	0.593	0.125
Personal well-being	Z	-0.908	-0.135	-0.508	-0.551	-2.414
	p	0.366	0.892	0.615	0.586	<b>0.015</b>
Enjoying work with cows	Z	-0.678	-1.533	-1.103	-1.833	-1.327
	p	0.500	0.126	0.273	<i>0.067</i>	0.187
Liking of positive contact	Z	-1.744	-1.136	-0.983	-1.351	-1.958
	p	<i>0.081</i>	0.258	0.328	0.179	<i>0.050</i>
(Not) Liking of negative contact	Z	-0.418	-0.209	-1.204	-1.804	-1.636
	p	0.678	0.837	0.231	<i>0.071</i>	0.102

Table S5: Results of the Chi<sup>2</sup> Tests to investigate the association between two dichotomous variables. **Significant** ( $p \leq 0.05$ ) associations are marked in **bold**, *tendencies* ( $0.05 < p \leq 0.1$ ) are marked in *italics*.

		Rearing system	Gender	Organic	Education
Gender	$\chi^2$	2.932	--	2.454	10.085
	p	0.087	--	0.117	<b>0.001</b>
Organic	$\chi^2$	37.116	2.454	--	0.455
	p	<b>&lt; 0.001</b>	0.117	--	0.500
Education	$\chi^2$	0.082	10.085	0.455	--
	p	0.774	<b>0.001</b>	0.500	--
Grown up on farm	$\chi^2$	0.243	23.811	0.003	27.549
	p	0.622	<b>&lt; 0.001</b>	0.960	<b>&lt; 0.001</b>

Table S6: Variance inflation factors (VIF) for the variables included in the models

<b>Predicting variable</b>	Rearing system	Number of calves	Number of cows	Holidays	Education	Years of experience with cattle	Grown up on farm
<b>Outcome variable</b>							
Perceived Workload	1.144	1.398	1.427	1.170	1.645	1.334	1.883
Professional Satisfaction	1.161	1.389	1.411	1.200	1.663	1.372	2.050
Free time satisfaction	1.146	1.395	1.425	1.164	1.571	1.355	1.888
Physical and Mental Load	1.145	1.392	1.421	1.154	1.573	1.339	1.874
Workplace Satisfaction	1.145	1.392	1.421	1.154	1.573	1.339	1.874
Personal Well-being	1.145	1.392	1.421	1.154	1.573	1.339	1.874
Enjoying working with cows	1.142	1.384	1.422	1.148	1.670	1.344	1.913
Liking positive contact	1.142	1.384	1.422	1.148	1.670	1.344	1.913
(Not) Liking negative contact	1.142	1.384	1.422	1.148	1.670	1.344	1.913