

1 ***Streptococcus* spp. from bulk-tank milk and milking machine**  
2 **teatcups on small ruminant farms, and factors potentially**  
3 **associated with their isolation**

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36 **Supplementary material 1.** Information collected by means of interviews of farmers in 51 sheep  
 37 and 23 goat farms into the study.

Question	Possible answers	Type of result	Results	
			Sheep farms	Goat farms
Grazing	No	no. of farms	7	3
	Yes		44	20
No. of female animals in farm	Number (n)	mean ± standard error	392±53	197±31
Average milk production per animal	Number (L)	mean ± standard error	218±19	213±51
Month of milking period at sampling	1st-2nd	no. of farms	6	8
	3rd-4th		15	7
	5th-6th		16	2
	7th-8th		14	6
Use of straw for bedding	No	no. of farms	1	4
	Yes		50	19
Frequency of straw bedding removal annually	Number	mean ± standard error	2.3±0.2	4.9±1.4
Milking method applied	Machine-milking	no. of farms	44	11
	Hand-milking		7	12
Daily milking sessions	Two	no. of farms	40	21
	Three		11	2
Pulsation rate in milking system <sup>b</sup>	Rate (cycles min <sup>-1</sup> )	mean ± standard error	141.5±2.7	141.5±5.7
Pressure in milking system <sup>a</sup>	Number (kPa)	mean ± standard error	39.8±0.9	38.4±2.4
Type of milk flow line <sup>a</sup>	High	no. of farms	8	3
	Low		36	8
Use of water for milking-system cleaning <sup>a</sup>	Yes	no. of farms	44	11
	No		0	0
Temperature of water used for milking-system cleaning <sup>a</sup>	°C	mean ± standard error	70.9±2.0	70.0±2.7
Use of detergent for milking-system cleaning <sup>a</sup>	Yes	no. of farms	42	11
	No		2	0
Application of post-milking teat dipping	Yes	no. of farms	10	3
	No		41	20
Intramammary administration of anti-microbial agents at end of lactation period	Yes	no. of farms	13	3
	No		38	20

38 <sup>a</sup> Relevance only in farms in which machine-milking was applied.

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49 **Supplementary material 2.** Significance of the association of various variables with the isolation  
 50 of *Streptococcus* spp. from bulk tank or milking machine teatcups in small ruminant farms.

Variable	Isolation of <i>Streptococcus</i> spp. from bulk tank		Isolation of <i>Streptococcus</i> spp. from milking teatcups	
	Sheep	Goats	Sheep	Goats
	<i>P</i> =			
Grazing	0.28	0.54	0.55	0.82
No. of female animals in farm	0.42	0.63	1.00	1.00
Average milk production per animal	0.59	0.38	0.50	0.42
Month of milking period at sampling	0.80	0.47	0.06	0.53
Use of straw for bedding	0.69	0.44	1.00	1.00
Frequency of straw bedding removal annually	0.21	0.33	0.30	0.74
Milking method applied	0.058	0.024	not relevant	not relevant
Daily milking sessions	0.25	0.67	0.22	0.92
Pulsation rate in milking system	1.00	1.00	1.00	0.60
Pressure in milking system	0.83	0.99	0.41	0.60
Type of milk flow line	0.44	0.72	0.65	0.82
Use of water for milking-system cleaning	1.00	1.00	1.00	1.00
Temperature of water for milking system cleaning	0.22	0.29	0.62	0.70
Use of detergent for milking system cleaning	0.43	0.31	0.22	0.88
Application of post-milking teat dipping	0.38	0.45	0.26	0.73
Intramammary administra- tion of anti-microbial agents at end of lactation period	0.62	0.45	0.26	0.73

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