

Supplementary tables to:

Antimicrobial resistance of *Streptococcus dysgalactiae*, *Streptococcus agalactiae*, and *Streptococcus canis* in quarter milk samples from Bavaria, Southern Germany, between 2012 and 2022

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Table S1. Distribution of MIC of penicillin for isolates of quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration (µg/ml) (n, %)					
			≤0.125	0.25	0.5	1	4	>8
<i>Sc. dysgalactiae</i>	All	9150	9121 99.68% ^{1,2}	15 0.16%	8 0.09%	4 0.04%	1 0.01%	1 0.01%
	2012	97	95.9% ^{1,2}	-	4.1%	-	-	-
	2013	291	98.6% ^{1,2}	0.7%	-	0.7%	-	-
	2014	497	99.6% ^{1,2}	0.4%	-	-	-	-
	2015	604	99.7% ^{1,2}	0.2%	-	-	0.2%	-
	2016	860	99.8% ^{1,2}	0.1%	-	-	-	0.1%
	2017	996	99.3% ^{1,2}	0.5%	0.2%	-	-	-
	2018	1402	99.9% ^{1,2}	0.1%	-	-	-	-
	2019	1235	99.8% ^{1,2}	-	0.1%	0.2%	-	-
	2020	1231	99.9% ^{1,2}	0.1%	-	-	-	-
	2021	1076	99.9% ^{1,2}	0.1%	-	-	-	-
	2022	861	99.9% ^{1,2}	-	0.1%	-	-	-
	<i>Sc. agalactiae</i>	All	3417	3415 99.94% ^{1,2}	1 0.03%	-	-	-
2012		72	98.6% ^{1,2}	1.4%	-	-	-	-
2013		137	100% ^{1,2}	-	-	-	-	-
2014		237	100% ^{1,2}	-	-	-	-	-
2015		232	100% ^{1,2}	-	-	-	-	-
2016		315	100% ^{1,2}	-	-	-	-	-
2017		388	100% ^{1,2}	-	-	-	-	-
2018		468	100% ^{1,2}	-	-	-	-	-
2019		431	100% ^{1,2}	-	-	-	-	-
2020		495	99.8% ^{1,2}	-	-	-	-	0.2%
2021		321	100% ^{1,2}	-	-	-	-	-
2022		321	100% ^{1,2}	-	-	-	-	-
<i>Sc. canis</i>		All	1554	1553 99.94% ^{1,2}	1 0.06%	-	-	-
	2012	41	100% ^{1,2}	-	-	-	-	-
	2013	89	100% ^{1,2}	-	-	-	-	-
	2014	176	99.4% ^{1,2}	0.6%	-	-	-	-
	2015	141	100% ^{1,2}	-	-	-	-	-
	2016	149	100% ^{1,2}	-	-	-	-	-
	2017	156	100% ^{1,2}	-	-	-	-	-
	2018	240	100% ^{1,2}	-	-	-	-	-
	2019	150	100% ^{1,2}	-	-	-	-	-
	2020	158	100% ^{1,2}	-	-	-	-	-
	2021	138	100% ^{1,2}	-	-	-	-	-
	2022	116	100% ^{1,2}	-	-	-	-	-

Table S2. Distribution of MIC of amoxicillin-clavulanate for isolates from quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration (µg/ml) (n, %)			
			≤4/2	8/4	16/8	>32/16
<i>Sc. dysgalactiae</i>	All	9150	9134 99.83%^{1,2}	15 0.16%	-	1 0.01%
	2012	97	100% ^{1,2}	-	-	-
	2013	291	100% ^{1,2}	-	-	-
	2014	497	99.8% ^{1,2}	0.2%	-	-
	2015	604	100% ^{1,2}	-	-	-
	2016	860	100% ^{1,2}	-	-	-
	2017	996	99.9% ^{1,2}	0.1%	-	-
	2018	1402	99.5% ^{1,2}	0.5%	-	-
	2019	1235	99.7% ^{1,2}	0.2%	-	0.1%
	2020	1231	99.9% ^{1,2}	0.1%	-	-
	2021	1076	99.9% ^{1,2}	0.1%	-	-
	2022	861	99.9% ^{1,2}	0.1%	-	-
<i>Sc. agalactiae</i>	All	3418	3410 99.77%^{1,2}	7 0.20%	1 0.03%	-
	2012	72	100% ^{1,2}	-	-	-
	2013	137	100% ^{1,2}	-	-	-
	2014	237	99.6% ^{1,2}	0.4%	-	-
	2015	232	100% ^{1,2}	-	-	-
	2016	315	100% ^{1,2}	-	-	-
	2017	388	99.7% ^{1,2}	0.3%	-	-
	2018	468	99.8% ^{1,2}	0.2%	-	-
	2019	432	99.8% ^{1,2}	0.2%	-	-
	2020	495	99.2% ^{1,2}	0.6%	0.2%	-
	2021	321	100% ^{1,2}	-	-	-
	2022	321	100% ^{1,2}	-	-	-
<i>Sc. canis</i>	All	1554	1552 99.87%^{1,2}	1 0.06%	-	1 0.06%
	2012	41	100% ^{1,2}	-	-	-
	2013	89	100% ^{1,2}	-	-	-
	2014	176	100% ^{1,2}	-	-	-
	2015	141	98.6% ^{1,2}	0.7%	-	0.7%
	2016	149	100% ^{1,2}	-	-	-
	2017	156	100% ^{1,2}	-	-	-
	2018	240	100% ^{1,2}	-	-	-
	2019	150	100% ^{1,2}	-	-	-
	2020	158	100% ^{1,2}	-	-	-
	2021	138	100% ^{1,2}	-	-	-
	2022	116	100% ^{1,2}	-	-	-

Table S3. Distribution of MIC of oxacillin for isolates of quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration (µg/ml) (n, %)			
			≤1	2	4	>4
<i>Sc. dysgalactiae</i>	All	9150	9058 98.99% ^{1,2}	71 0.78%	14 0.15%	7 0.08%
	2012	97	96.9% ^{1,2}	3.1%	-	-
	2013	291	99.3% ^{1,2}	0.7%	-	-
	2014	497	99.0% ^{1,2}	1.0%	-	-
	2015	604	99.5% ^{1,2}	0.2%	0.2%	0.2%
	2016	860	98.6% ^{1,2}	0.9%	0.5%	-
	2017	996	98.8% ^{1,2}	1.2%	-	-
	2018	1402	98.9% ^{1,2}	1.1%	-	0.1%
	2019	1235	99.4% ^{1,2}	0.2%	0.4%	0.1%
	2020	1231	98.2% ^{1,2}	1.1%	0.3%	0.3%
	2021	1076	99.6% ^{1,2}	0.4%	-	-
	2022	861	99.4% ^{1,2}	0.6%	-	-
<i>Sc. agalactiae</i>	All	3418	3384 99.01% ^{1,2}	26 0.76%	6 0.18%	2 0.06%
	2012	72	94.4% ^{1,2}	2.8%	2.8%	-
	2013	137	97.8% ^{1,2}	1.5%	-	0.7%
	2014	237	97.0% ^{1,2}	1.3%	1.7%	-
	2015	232	98.7% ^{1,2}	1.3%	-	-
	2016	315	98.7% ^{1,2}	1.3%	-	-
	2017	388	99.7% ^{1,2}	0.3%	-	-
	2018	468	99.8% ^{1,2}	0.2%	-	-
	2019	432	99.8% ^{1,2}	0.2%	-	-
	2020	495	99.0% ^{1,2}	0.8%	-	0.2%
	2021	321	99.1% ^{1,2}	0.9%	-	-
	2022	321	99.4% ^{1,2}	0.6%	-	-
<i>Sc. canis</i>	All	1554	1540 99.10% ^{1,2}	13 0.84%	-	1 0.06%
	2012	41	95.1% ^{1,2}	4.9%	-	-
	2013	89	92.1% ^{1,2}	7.9%	-	-
	2014	176	100% ^{1,2}	-	-	-
	2015	141	100% ^{1,2}	-	-	-
	2016	149	100% ^{1,2}	-	-	-
	2017	156	98.1% ^{1,2}	1.9%	-	-
	2018	240	99.6% ^{1,2}	-	-	0.4%
	2019	150	100% ^{1,2}	-	-	-
	2020	158	100% ^{1,2}	-	-	-
	2021	138	99.3% ^{1,2}	0.7%	-	-
	2022	116	100% ^{1,2}	-	-	-

Table S4. Distribution of MIC of pirlimycin for isolates of quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration (µg/ml) (n, %)			
			≤1	2	4	>4
<i>Sc. dysgalactiae</i>	All	9150	8509 92.99% ^{1,2}	114 1.25%	100 1.09%	427 4.67%
	2012	97	90.7% ^{1,2}	3.1%	1.0%	5.2%
	2013	291	93.5% ^{1,2}	1.4%	0.7%	4.5%
	2014	497	89.9% ¹	1.8% ²	2.0%	6.2%
	2015	604	90.7% ^{1,2}	1.7%	1.3%	6.3%
	2016	860	92.6% ^{1,2}	1.2%	2.2%	4.1%
	2017	996	94.6% ^{1,2}	0.9%	1.2%	3.3%
	2018	1402	94.9% ^{1,2}	1.4%	0.9%	2.9%
	2019	1235	92.3% ^{1,2}	1.3%	1.1%	5.3%
	2020	1231	91.1% ^{1,2}	1.9%	0.7%	6.3%
	2021	1076	94.0% ^{1,2}	0.7%	0.2%	5.2%
2022	861	94.5% ^{1,2}	0.5%	1.3%	3.7%	
<i>Sc. agalactiae</i>	All	3418	2913 85.23% ¹	40 1.17%	16 0.47%	449 13.14% ²
	2012	72	83.3% ¹	1.4%	-	15.3% ²
	2013	137	74.5% ¹	5.8%	-	19.7% ²
	2014	237	85.2% ¹	0.8%	-	13.9% ²
	2015	232	87.5% ¹	4.7%	0.4%	7.3% ²
	2016	315	79.7% ¹	0.6%	2.5%	17.1% ²
	2017	388	92.5% ^{1,2}	1.3%	0.5%	5.7%
	2018	468	87.8% ¹	0.4%	0.2%	11.5% ²
	2019	432	89.1% ¹	0.7%	-	10.2% ²
	2020	495	80.8% ¹	0.6%	0.6%	18.0% ²
	2021	321	80.7% ¹	0.6%	-	18.7% ²
2022	321	87.5% ¹	0.3%	0.3%	11.8% ²	
<i>Sc. canis</i>	All	1554	1510 97.17% ^{1,2}	9 0.58%	3 0.19%	32 2.06%
	2012	41	97.6% ^{1,2}	2.4%	-	-
	2013	89	100% ^{1,2}	-	-	-
	2014	176	97.2% ^{1,2}	1.1%	-	1.7%
	2015	141	91.5% ^{1,2}	0.7%	-	7.8%
	2016	149	99.3% ^{1,2}	0.7%	-	-
	2017	156	97.4% ^{1,2}	-	0.6%	1.9%
	2018	240	96.7% ^{1,2}	0.4%	-	2.9%
	2019	150	98.0% ^{1,2}	2.0%	-	-
	2020	158	96.2% ^{1,2}	-	1.3%	2.5%
	2021	138	97.1% ^{1,2}	-	-	2.9%
2022	116	100% ^{1,2}	-	-	-	

Table S5. Distribution of MIC of erythromycin for isolates of quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration (µg/ml) (n, %)						
			≤0.125	0.25	0.5	1	2	4	>4
<i>Sc. dysgalactiae</i>	All	9150	7595 83.01% ¹	748 8.17% ²	209 2.28%	68 0.74%	89 0.97%	75 0.82%	366 4.00%
	2012	97	39.2%	38.1% ¹	13.4% ²	1.0%	-	1.0%	7.2%
	2013	291	37.5%	36.8% ¹	19.2% ²	0.7%	0.7%	1.0%	4.1%
	2014	497	43.9%	34.8% ¹	11.5% ²	1.0%	1.4%	1.2%	6.2%
	2015	604	58.6% ¹	30.3%	4.0% ²	0.5%	1.7%	0.3%	4.6%
	2016	860	88.3% ¹	4.8% ²	1.0%	1.6%	0.8%	0.6%	2.9%
	2017	996	89.3% ¹	3.5% ²	1.4%	0.7%	0.9%	0.6%	3.6%
	2018	1402	88.9% ¹	4.2% ²	0.9%	0.5%	0.7%	0.9%	3.9%
	2019	1235	89.7% ¹	4.4% ²	1.0%	0.2%	1.1%	0.5%	3.2%
	2020	1231	90.9% ^{1,2}	2.4%	0.4%	0.8%	0.2%	1.3%	3.9%
	2021	1076	91.4% ^{1,2}	1.3%	0.1%	0.7%	0.8%	1.2%	4.5%
	2022	861	89.5% ¹	1.7% ²	0.7%	1.0%	2.1%	0.6%	4.3%
<i>Sc. agalactiae</i>	All	3418	2037 59.60% ¹	509 14.89%	182 5.32%	42 1.23%	72 2.11%	113 3.31%	463 13.55% ²
	2012	72	22.2%	23.6%	33.3% ¹	1.4%	-	-	19.4% ²
	2013	137	5.8%	21.9%	34.3% ¹	2.9%	-	6.6%	28.5% ²
	2014	237	21.9%	27.8%	26.2% ¹	5.1%	1.7%	1.3%	16.0% ²
	2015	232	37.9%	42.7% ¹	5.6%	0.9%	2.2%	1.3% ²	9.5%
	2016	315	58.7% ¹	16.5%	3.8%	-	3.2%	1.3%	16.5% ²
	2017	388	75.3% ¹	12.4%	2.1%	0.8% ²	2.1%	2.3%	5.2%
	2018	468	71.2% ¹	10.7%	0.6%	-	1.9%	3.4%	12.2% ²
	2019	432	69.2% ¹	17.1%	1.6%	-	1.2%	0.9% ²	10.0%
	2020	495	63.0% ¹	7.3%	0.6%	2.4%	3.6%	7.9%	15.2% ²
	2021	321	67.9% ¹	8.1%	-	0.6%	1.2%	3.1%	19.0% ²
	2022	321	72.9% ¹	3.4%	0.9%	1.9%	2.8%	5.0%	13.1% ²
<i>Sc. canis</i>	All	1554	1210 77.86% ¹	240 15.44% ²	63 4.05%	8 0.51%	1 0.06%	2 0.13%	30 1.93%
	2012	41	22.0%	63.4% ¹	12.2% ²	-	-	-	2.4%
	2013	89	21.3%	50.6% ¹	21.3% ²	1.1%	1.1%	-	4.5%
	2014	176	36.4%	43.8% ¹	11.9% ²	2.3%	-	1.1%	4.5%
	2015	141	59.6% ¹	31.2% ²	1.4%	0.7%	-	-	7.1%
	2016	149	86.6% ¹	13.4% ²	-	-	-	-	-
	2017	156	91.7% ^{1,2}	3.8%	4.5%	-	-	-	-
	2018	240	93.8% ^{1,2}	2.1%	2.5%	-	-	-	1.7%
	2019	150	88.7% ¹	9.3% ²	2.0%	-	-	-	-
	2020	158	97.5% ^{1,2}	-	-	1.3%	-	-	1.3%
	2021	138	97.1% ^{1,2}	2.2%	-	-	-	-	0.7%
	2022	116	100% ^{1,2}	-	-	-	-	-	-

Table S6. Distribution of MIC of marbofloxacin for isolates of quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration (µg/ml) (n, %)				
			≤0.25	0.5	1	2	>2
<i>Sc. dysgalactiae</i>	All	9149	1586 17.34%	5107 55.82% ¹	2336 25.53% ²	104 1.14%	16 0.17%
	2012	97	28.9%	44.3% ¹	24.7% ²	2.1%	-
	2013	291	33.0%	44.0% ¹	21.3% ²	1.7%	-
	2014	497	20.3%	46.3% ¹	32.0% ²	1.0%	0.4%
	2015	604	24.3%	57.6% ¹	17.2% ²	0.7%	0.2%
	2016	860	17.2%	57.1% ¹	24.4% ²	0.7%	0.6%
	2017	996	12.6%	56.2% ¹	30.1% ²	1.0%	0.1%
	2018	1401	21.6%	59.8% ¹	17.6% ²	0.9%	0.1%
	2019	1235	11.8%	56.3% ¹	31.0% ²	0.7%	0.2%
	2020	1231	11.9%	60.0% ¹	26.5% ²	1.4%	0.2%
	2021	1076	22.1%	52.7% ¹	23.9% ²	1.1%	0.2%
	2022	861	12.4%	54.4% ¹	30.8% ²	2.4%	-
	<i>Sc. agalactiae</i>	All	3418	45 1.32%	82 2.40%	1896 55.47% ¹	1332 38.97% ²
2012		72	2.8%	2.8%	47.2% ¹	44.4% ²	2.8%
2013		137	0.7%	0.7%	29.2%	68.6% ^{1,2}	0.7%
2014		237	1.7%	3.4%	46.4% ¹	41.4% ²	7.2%
2015		232	5.6%	3.9%	53.9% ¹	36.6% ²	-
2016		315	1.3%	3.2%	66.3% ¹	27.3% ²	1.9%
2017		388	0.5%	3.4%	54.1% ¹	37.9% ²	4.1%
2018		468	0.4%	3.4%	61.8% ¹	33.3% ²	1.1%
2019		432	1.4%	1.2%	51.9% ¹	44.0% ²	1.6%
2020		495	1.0%	1.8%	59.6% ¹	37.0% ²	0.6%
2021		321	0.9%	1.6%	58.6% ¹	37.4% ²	1.6%
2022		321	0.9%	1.2%	53.6% ¹	43.9% ²	0.3%
<i>Sc. canis</i>		All	1554	63 4.05%	216 13.90%	1228 79.02% ^{1,2}	43 2.77%
	2012	41	4.9%	9.8%	80.5% ^{1,2}	4.9%	-
	2013	89	7.9%	9.0%	80.9% ^{1,2}	2.2%	-
	2014	176	3.4%	6.8%	80.7% ^{1,2}	6.8%	2.3%
	2015	141	5.7%	11.3%	81.6% ^{1,2}	1.4%	-
	2016	149	4.0%	10.1%	85.9% ^{1,2}	-	-
	2017	156	5.8%	10.9%	80.1% ^{1,2}	3.2%	-
	2018	240	5.4%	23.3%	70.4% ^{1,2}	0.8%	-
	2019	150	3.3%	26.0%	65.3% ^{1,2}	5.3%	-
	2020	158	0.6%	11.4%	83.5% ^{1,2}	4.4%	-
	2021	138	3.6%	4.3%	92.0% ^{1,2}	-	-
	2022	116	0.9%	21.6%	75.0% ^{1,2}	2.6%	-

Table S7. Distribution of MIC of cefalexin/kanamycin for isolates of quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration ($\mu\text{g/ml}$) (n, %)				
			$\leq 4/0.4$	8/0.8	16/1.6	32/3.2	$> 32/3.2$
<i>Sc. dysgalactiae</i>	All	9149	9006 98.44% ^{1,2}	81 0.89%	41 0.45%	16 0.17%	5 0.05%
	2012	96	94.8% ^{1,2}	5.2%	-	-	-
	2013	291	99.0% ^{1,2}	0.3%	0.7%	-	-
	2014	497	98.6% ^{1,2}	1.0%	0.2%	0.2%	-
	2015	604	98.3% ^{1,2}	1.0%	0.7%	-	-
	2016	860	99.2% ^{1,2}	0.6%	0.2%	-	-
	2017	996	98.5% ^{1,2}	0.6%	0.7%	0.1%	0.1%
	2018	1402	98.1% ^{1,2}	1.1%	0.3%	0.4%	-
	2019	1235	99.4% ^{1,2}	0.2%	0.2%	0.2%	-
	2020	1231	98.4% ^{1,2}	1.1%	0.2%	0.1%	0.2%
	2021	1076	98.0% ^{1,2}	0.9%	0.9%	-	0.2%
	2022	861	97.6% ^{1,2}	1.2%	0.7%	0.6%	-
<i>Sc. agalactiae</i>	All	3403	566 16.63%	1362 40.02% ¹	1446 42.49% ²	17 0.50%	12 0.35%
	2012	57	61.4% ¹	24.6%	10.5% ²	-	3.5%
	2013	137	19.0%	55.5% ¹	25.5% ²	-	-
	2014	237	19.0%	51.1% ¹	30.0% ²	-	-
	2015	232	24.1%	44.8% ¹	30.6% ²	-	0.4%
	2016	315	12.4%	41.3% ¹	46.3% ²	-	-
	2017	388	19.3%	47.4% ¹	32.7% ²	0.3%	0.3%
	2018	468	15.8%	47.6% ¹	36.1% ²	0.2%	0.2%
	2019	432	12.0%	39.1% ¹	48.8% ²	-	-
	2020	495	13.9%	31.3%	53.7% ^{1,2}	0.8%	0.2%
	2021	321	14.3%	31.8%	52.6% ^{1,2}	0.9%	0.3%
	2022	321	15.3%	26.2%	54.5% ^{1,2}	2.5%	1.6%
<i>Sc. canis</i>	All	1543	1523 98.70% ^{1,2}	9 0.58%	7 0.45%	4 0.26%	-
	2012	30	100.0% ^{1,2}	-	-	-	-
	2013	89	98.9% ^{1,2}	1.1%	-	-	-
	2014	176	98.9% ^{1,2}	0.6%	0.6%	-	-
	2015	141	97.9% ^{1,2}	2.1%	-	-	-
	2016	149	100% ^{1,2}	-	-	-	-
	2017	156	100% ^{1,2}	-	-	-	-
	2018	240	97.5% ^{1,2}	-	2.5%	-	-
	2019	150	99.3% ^{1,2}	0.7%	-	-	-
	2020	158	99.4% ^{1,2}	0.6%	-	-	-
	2021	138	96.4% ^{1,2}	0.7%	-	2.9%	-
	2022	116	99.1% ^{1,2}	0.9%	-	-	-

Table S8. Distribution of MIC of cefazolin for isolates of quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration (µg/ml) (n, %)			
			≤4	8	16	>32
<i>Sc. dysgalactiae</i>	All	9150	9125 99.73% ^{1,2}	21 0.23%	3 0.03%	1 0.01%
	2012	97	99.0% ^{1,2}	1.0%	-	-
	2013	291	100% ^{1,2}	-	-	-
	2014	497	100% ^{1,2}	-	-	-
	2015	604	99.3% ^{1,2}	0.5%	0.2%	-
	2016	860	99.9% ^{1,2}	-	-	0.1%
	2017	996	99.3% ^{1,2}	0.6%	0.1%	-
	2018	1402	99.7% ^{1,2}	0.3%	-	-
	2019	1235	99.9% ^{1,2}	0.1%	-	-
	2020	1231	99.8% ^{1,2}	0.2%	0.1%	-
	2021	1076	99.7% ^{1,2}	0.3%	-	-
	2022	861	99.9% ^{1,2}	0.1%	-	-
<i>Sc. agalactiae</i>	All	3418	3399 99.44% ^{1,2}	17 0.50%	1 0.03%	1 0.03%
	2012	72	100% ^{1,2}	-	-	-
	2013	137	100% ^{1,2}	-	-	-
	2014	237	96.6% ^{1,2}	3.4%	-	-
	2015	232	98.7% ^{1,2}	1.3%	-	-
	2016	315	99.7% ^{1,2}	-	0.3%	-
	2017	388	100% ^{1,2}	-	-	-
	2018	468	99.1% ^{1,2}	0.9%	-	-
	2019	432	99.8% ^{1,2}	0.2%	-	-
	2020	495	99.6% ^{1,2}	0.2%	-	0.2%
	2021	321	100% ^{1,2}	-	-	-
	2022	321	100% ^{1,2}	-	-	-
<i>Sc. canis</i>	All	1554	1547 99.55% ^{1,2}	7 0.45%	-	-
	2012	41	100% ^{1,2}	-	-	-
	2013	89	100% ^{1,2}	-	-	-
	2014	176	100% ^{1,2}	-	-	-
	2015	141	100% ^{1,2}	-	-	-
	2016	149	97.3% ^{1,2}	2.7%	-	-
	2017	156	100% ^{1,2}	-	-	-
	2018	240	98.8% ^{1,2}	1.3%	-	-
	2019	150	100% ^{1,2}	-	-	-
	2020	158	100% ^{1,2}	-	-	-
	2021	138	100% ^{1,2}	-	-	-
	2022	116	100% ^{1,2}	-	-	-

Table S9. Distribution of MIC of cefoperazone for isolates of quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration (µg/ml) (n, %)				
			≤2	4	8	16	>16
<i>Sc. dysgalactiae</i>	All	9150	9103 99.49% ^{1,2}	40 0.44%	4 0.04%	1 0.01%	2 0.02%
	2012	97	100% ^{1,2}	-	-	-	-
	2013	291	98.6% ^{1,2}	1.4%	-	-	-
	2014	497	99.8% ^{1,2}	0.2%	-	-	-
	2015	604	99.8% ^{1,2}	-	-	-	0.2%
	2016	860	99.7% ^{1,2}	0.3%	-	-	-
	2017	996	99.1% ^{1,2}	0.6%	0.2%	0.1%	-
	2018	1402	99.5% ^{1,2}	0.5%	-	-	-
	2019	1235	99.6% ^{1,2}	0.2%	0.1%	-	0.1%
	2020	1231	99.4% ^{1,2}	0.6%	-	-	-
	2021	1076	99.3% ^{1,2}	0.7%	-	-	-
	2022	861	99.7% ^{1,2}	0.2%	0.1%	-	-
	<i>Sc. agalactiae</i>	All	3418	3385 99.03% ^{1,2}	28 0.82%	3 0.09%	-
2012		72	95.8% ^{1,2}	1.4%	2.8%	-	-
2013		137	97.8% ^{1,2}	1.5%	0.7%	-	-
2014		237	98.3% ^{1,2}	1.7%	-	-	-
2015		232	98.3% ^{1,2}	1.7%	-	-	-
2016		315	99.4% ^{1,2}	0.6%	-	-	-
2017		388	99.2% ^{1,2}	0.8%	-	-	-
2018		468	99.1% ^{1,2}	0.9%	-	-	-
2019		432	99.8% ^{1,2}	0.2%	-	-	-
2020		495	99.6% ^{1,2}	0.4%	-	-	-
2021		321	98.8% ^{1,2}	1.2%	-	-	-
2022		321	99.1% ^{1,2}	0.3%	-	-	0.6%
<i>Sc. canis</i>		All	1554	1543 99.29%	11 0.71%	-	-
	2012	41	95.1% ^{1,2}	4.9%	-	-	-
	2013	89	100% ^{1,2}	-	-	-	-
	2014	176	99.4% ^{1,2}	0.6%	-	-	-
	2015	141	100% ^{1,2}	-	-	-	-
	2016	149	96.6% ^{1,2}	3.4%	-	-	-
	2017	156	100% ^{1,2}	-	-	-	-
	2018	240	99.6% ^{1,2}	0.4%	-	-	-
	2019	150	99.3% ^{1,2}	0.7%	-	-	-
	2020	158	100% ^{1,2}	-	-	-	-
	2021	138	100% ^{1,2}	-	-	-	-
	2022	116	99.1% ^{1,2}	0.9%	-	-	-

Table S10. Distribution of MIC of cefquinome for isolates of quarter milk samples by year; vertical lines indicate breakpoints. MIC50¹, MIC90² in the respective year.

Pathogen	Year	n	Minimum Inhibitory Concentration (µg/ml) (n, %)			
			≤1	2	4	8
<i>Sc. dysgalactiae</i>	All	9150	9128 99.76% ^{1,2}	20 0.22%	2 0.02%	-
	2012	97	100% ^{1,2}	-	-	-
	2013	291	99.0% ^{1,2}	1.0%	-	-
	2014	497	100% ^{1,2}	-	-	-
	2015	604	99.8% ^{1,2}	0.2%	-	-
	2016	860	99.8% ^{1,2}	0.2%	-	-
	2017	996	99.7% ^{1,2}	0.3%	-	-
	2018	1402	99.9% ^{1,2}	0.1%	-	-
	2019	1235	99.6% ^{1,2}	0.4%	-	-
	2020	1231	100% ^{1,2}	-	-	-
	2021	1076	99.4% ^{1,2}	0.4%	0.2%	-
	2022	861	99.9% ^{1,2}	0.1%	-	-
<i>Sc. agalactiae</i>	All	3418	3398 99.41% ^{1,2}	16 0.47%	2 0.06%	2 0.06%
	2012	72	95.8% ^{1,2}	4.2%	-	-
	2013	137	96.4% ^{1,2}	2.9%	0.7%	-
	2014	237	100% ^{1,2}	-	-	-
	2015	232	99.1% ^{1,2}	0.9%	-	-
	2016	315	100% ^{1,2}	-	-	-
	2017	388	99.5% ^{1,2}	-	-	0.5%
	2018	468	99.8% ^{1,2}	0.2%	-	-
	2019	432	100% ^{1,2}	-	-	-
	2020	495	99.2% ^{1,2}	0.6%	0.2%	-
	2021	321	100% ^{1,2}	-	-	-
	2022	321	99.1% ^{1,2}	0.9%	-	-
<i>Sc. canis</i>	All	1554	1552 99.87% ^{1,2}	2 0.13%	-	-
	2012	41	100% ^{1,2}	-	-	-
	2013	89	100% ^{1,2}	-	-	-
	2014	176	99.4% ^{1,2}	0.6%	-	-
	2015	141	100% ^{1,2}	-	-	-
	2016	149	100% ^{1,2}	-	-	-
	2017	156	100% ^{1,2}	-	-	-
	2018	240	100% ^{1,2}	-	-	-
	2019	150	100% ^{1,2}	-	-	-
	2020	158	99.4% ^{1,2}	0.6%	-	-
	2021	138	100% ^{1,2}	-	-	-
	2022	116	100% ^{1,2}	-	-	-