SUPPLEMENTARY

Table 1 – Distribution of frequency and Chi-square test to evaluate association between result test or categories and size of farm, breed, vaccination, type of housing at young calves, type of housing at heifers until 24 months of years and type of housing at cows.

Variables		Size of farm			Breed		Vaccination	
		Small	Medium	Large	Holstein	Jersey		
		% (n)	% (n)	% (n)	% (n)	% (n)	P % (n)	A % (n)
PCR	Positive (ref.)	62.50% (10/16)	42.86% (6/14)	44.44% (10/18)	100% (24/24)	20.83% (5/24)	95.24% (20/54)	4.76% (1/21)
	Negative	61.76% (21/34)	56.52% (13/23)	32.26% (10/31)	88.64% (39/44)	40.91% (18/44)	82.93% (34/54)	17.07% (7/41)
	P value	0.9601(SM)	0.4199 (ML)	0.3936 (SL)	0.1042	0.0945	0.1396	
ELISA	Positive (ref.)	60% (9/15)	37.5% (6/16)	47.37% (9/19)	100% (25/25)	20% (5/25)	91.30% (21/23)	8.70% (2/23)
	Negative	62.07% (18/29)	57.89% (11/19)	69.23% (18/26)	91.89% (34/37)	40.54% (15/37)	82.35% (28/34)	17.65% (6/34)
	P value	0.8937 (SM)	0.2291 (ML)	0.1392	0.2054	0.0897	0.2059	
CAT0	Positive (ref.)	65.22% (15/23)	38.46% (5/13)	47.06% (8/17)	88.46% (23/26)	46.15% (12/26)	82.61% (19/23)	17.39% (4/23)
	Negative	59.26% (16/27)	63.64% (14/22)	72.41% (21/29)	100% (36/36)	22.22% (8/36)	88.24% (30/34)	11.76% (4/34)
	P value	0.6653 (SM)	0.1014 (ML)	0.0855 (SL)	0.0687	<mark>0.0467</mark>	0.2485	
CAT1	Positive (ref.)	50.00% (3/6)	33.33% (3/9)	33.33% (3/9)	100% (12/12)	25% (3/12)	83.33% (10/12)	16.67% (2/12)
	Negative	63.16% (24/38)	53.85% (14/26)	66.67% (24/36)	94% (47/50)	34% (17/50)	86.67% (39/45)	13.33% (6/45)
	P value	0.2818 (SM)	0.4430 (ML)	0.0613 (SM)	0.5182	0.7353	0.3253	
CAT3	Positive (ref.)	55.56% (5/9)	36.36% (4/11)	41.67% (5/12)	100% (16/16)	25% (4/16)	92.86% (13/14)	7.14% (1/14)
	Negative	62.86% (22/35)	54.17% (13/24)	66.67% (22/33)	93.48% (43/46)	34.78% (16/46)	83.72% (36/43)	16.28% (7/43)
	P value	0.2710 (SM)	0.1815 (ML)	0.0893 (SL)	0.4014	0.1960	0.2370	

P – Presence; A – Absence; CAT0 – category level 0 ; CAT1 category level 1; CAT3- category level 3; SM- Small farms versus Medium farms; SL – Small farms versus large farms and ML- Medium farms versus Large farms.

Cont. Table 1 – Distribution of frequency and Chi-square test to evaluate association between result test or categories and size of farm, breed, vaccination, type of housing at young calves, type of housing at heifers until 24 months of years and type of housing at cows.

Result Test	Variables	Suckling Calves					Weaned calves				
		C	I	TC	AC	FC	I	G	P	CB	FS
		% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)
PCR	Positive (ref.)	8.33% (2/24)	83.33% (20/24)	8.33% (2/24)	0% (0/24)	0% (0/24)	0% (0/24)	36.36% (8/22)	54.55% (12/22)	4.55% (2/22)	4.55% (1/22)
	Negative	9.3% (4/43)	62.79% (27/43)	18.60% (8/43)	2.33% (1/43)	4.65% (2/43)	4.54% (2/44)	31.81% (14/44)	59.09% (26/44)	2.57% (1/44)	0% (0/44)
	P value	0.3413	==0.0486==	0.1614	0.6418	0.4084	0.4410	0.7119	0.7247	0.4513	0.3333
ELISA	Positive (ref.)	8% (2/25)	80% (20/25)	12% (3/25)	0% (0/25)	0% (0/25)	0% (0/23)	34.78% (8/23)	56.52% (13/23)	4.35% (1/23)	4.35% (1/23)
	Negative	11.11% (4/36)	63.89% (23/36)	16.67% (6/36)	2.78% (1/36)	2.78% (1/36)	5.41% (2/37)	35.14% (13/37)	54.05% (20/37)	2.70% (1/37)	0% (0/37)
	P value	0.3183	0.1748	0.2583	0.5902	0.5902	0.3763	0.2188	0.2068	0.4808	0.33833
CAT0	Positive (ref.)	8% (2/25)	60% (15/25)	20% (5/25)	4% (1/25)	4% (1/25)	3.85% (1/26)	38.46$ (10/26)	53.85% (14/26)	0% (0/26)	0% (0/26)
	Negative	11.11% (4/36)	77.78% (28/36)	11.11% (4/36)	0% (0/36)	0% (0/36)	2.94% (1/34)	32.35% (11/34)	55.88% (19/34)	5.88% (2/34)	2.94% (1/34)
	P value	0.3183	0.1343	0.1805	0.4098	0.4098	0.4994	0.6230	0.8752	0.3169	0.5667
CAT1	Positive (ref.)	16.67% (2/12)	75% (9/12)	8.33% (1/12)	0% (0/12)	0% (0/12)	8.33% (1/12)	33.33% (4/12)	50% (6/12)	8.33% (1/12)	0% (0/12)
	Negative	8.16% (4/49)	69.39% (34/49)	16.33% (8/49)	2.08% (1/48)	2.04% (1/49)	2.08% (1/48)	35.42% (17/48)	56.25% (27/48)	2.08% (1/48)	2.08% (1/48)
	P value	0.5879	0.2641	0.3121	0.8000	0.8033	0.3254	0.2631	0.2343	0.3254	0.800
CAT3	Positive (ref.)	6.25% (1/16)	87.50% (14/16)	6.25% (1/16)	0% (0/16)	0% (0/16)	0% (0/15)	20% (3/15)	66.67% (10/15)	6.67% (1/15)	6.67% (1/15)
	Negative	11.11% (5/45)	64.44% (29/45)	17.78% (8/45)	2.22% (1/45)	2.22% (1/45)	4.44% (2/44)	40% (18/45)	51.11% (23/ 45)	2.22% (1/45)	0% (0/45)
	P value	0.3521	0.0591	0.1989	0.7377	0.7377	0.5593	0.0978	0.2943	0.3814	0.2500

P – Presence; A – Absence; CAT0 – category level 0 ; CAT1 category level 1; CAT3- category level 3; C – Cage; I- Individual; TC – Tropical Calf; AC – Argentine Calf; FC – Feeder Calf; G – Groups; P – pasture; CB – Compost Barn; FS – Free Stall; FSP – Free stall with access an pasture

Cont. Table 1 – Distribution of frequency and Chi-square test to evaluate association between result test or categories and size of farm, breed, vaccination, type of housing at young calves, type of housing at heifers until 24 months of years and type of housing at cows.

Result Test	Variables	Heifers (9-12mo)					Heifers (13-24mo)			
		BC	P	CB	FS	FSP	P	CB	FS	FSP
		% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)
PCR	Positive (ref.)	5% (1/20)	85% (17/20)	0% (0/20)	10% (2/20)	0% (0/20)	90% (18/20)	5% (1/20)	5% (1/20)	0% (0/20)
	Negative	0% (0/34)	94.12% (32/34)	2.94% (1/34)	0% (0/34)	2.94% (1/34)	89.47% (34/38)	2.63% (1/38)	5.26% (2/38)	2.63% (1/38)
	P value	0.3704	0.2022	0.6296	0.1328	0.6296	0.3465	0.4598	0.4557	0.6552
ELISA	Positive (ref.)	4.76% (1/21)	85.76% (18/21)	0% (0/21)	9.52% (2/21)	0% (0/21)	90.48% (19/21)	4.76% (1/21)	4.76% (1/21)	0% (0/21)
	Negative	0% (0/28)	92.86% (26/28)	3.57% (1/28)	0% (0/28)	3.57% (1/28)	87.88% (29/33)	3.03% (1/33)	6.06% (2/33)	3.03% (1/33)
	P value	0.4286	0.2636	0.5714	0.1786	0.5714	0.3327	0.4843	0.4470	0.6111
CAT0	Positive (ref.)	0% (0/19)	100% (19/19)	0% (0/19)	0% (0/19)	0% (0/19)	95.65% (22/23)	0% (0/23)	4.35% (1/23)	0% (0/23)
	Negative	3.33% (1/30)	83.33% (25/30)	3.33% (1/30)	6.67% (2/30)	3.33% (1/30)	83.87% (26/31)	6.45% (2/31)	6.45% (2/31)	3.23% (1/31)
	P value	0.6122	0.0747	0.6122	0.3699	0.6122	0.2241	0.3249	0.4312	0.5743
CAT1	Positive (ref.)	0% (0/10)	80% (8/10)	10% (1/10)	0% (0/10)	10% (1/10)	72.73% (8/11)	9.09% (1/11)	9.09% (1/11)	9.09% (1/11)
	Negative	2.56% (1/39)	92.31% (36/39)	0% (0/39)	5.13% (2/39)	0% (0/39)	93.02% (40/43)	2.33% (1/43)	4.65% (2/43)	0% (0/43)
	P value	0.7959	0.2157	0.2041	0.6301	0.2041	0.0788	0.3305	0.0781	0.2037
CAT3	Positive (ref.)	7.14% (1/14)	78.57% (11/14)	0% (0/14)	14.29% (2/14)	0% (0/14)	85.71% (12/14)	7.14% (1/14)	7.14% (1/14)	0% (0/14)
	Negative	0% (0/35)	94.29% (33/35)	2.86% (1/35)	0% (0/35)	2.86% (1/35)	90.00% (36/40)	2.50% (1/40)	5.00% (2/40)	2.50% (1/40)
	P value	0.2857	0.1136	0.7143	0.0774	0.7143	0.3220	0.3013	0.0410	0.7407

P – Presence; A – Absence; CAT0 – category level 0 ; CAT1 category level 1; CAT3- category level 3; C – Cage; I- Individual; TC – Tropical Calf; AC – Argentine Calf; FC – Feeder Calf; G – Groups; P – pasture; CB – Compost Barn; FS – Free Stall; FSP – Free stall with access an pasture

Cont. Table 1 – Distribution of frequency and Chi-square test to evaluate association between result test or categories and size of farm, breed, vaccination, type of housing at young calves, type of housing at heifers until 24 months of years and type of housing at cows.

Result Test	Variables	Cows in lactation				Dry cows (60-30 PP)				Dry cows (30 PP)			
		P	CB	FS	FSP	P	CB	FS	FSP	P	CB	F	FSP
		% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)
PCR	Positive (ref.)	26.09% (6/23)	13.04% (3/23)	56.52% (13/23)	4.35% (1/23)	58.33% (14/24)	20.83% (5/24)	12.5% (3/24)	8.33% (2/24)	76.19% (16/21)	4.76% (1/21)	9.52% (2/21)	9.52% (2/21)
	Negative	50% (22/44)	11.36% (5/44)	38.64% (17/44)	0% (0/44)	70.73% (29/41)	7.32% (3/41)	19.51% (8/41)	2.44% (1/41)	71.43% (30/42)	9.52% (4/42)	16.67% (7/42)	2.38% (1/42)
	P value	0.0595	0.2949	0.1622	0.3433	0.3080	0.0898	0.2161	0.2591	0.2221	0.3344	0.2394	0.2221
ELISA	Positive (ref.)	25% (6/24)	12.5% (3/24)	58.33% (14/24)	4.17% (1/24)	60% (15/25)	20% (5/25)	12% (3/25)	8% (2/25)	77.27% (17/22)	4.55% (1/22)	9.09% (2/22)	9.09% (2/22)
	Negative	51.35% (19/37)	13.51% (5/37)	35.14% (13/37)	0% (0/37)	64.71% (22/34)	8.82% (3/34)	23.53$ (8/34)	2.94% (1/34)	65.71% (23/35)	11.43% (4/35)	20% (7/35)	2.86% (1/35)
	P value	0.0270	0.2996	0.0748	0.3934	0.2000	0.1434	0.1492	0.3138	0.1574	0.2751	0.1727	0.2763
CAT0	Positive (ref.)	65.38% (17/26)	7.69% (2/26)	26.92% (7/26)	0% (0/26)	79.17% (19/24)	0% (0/24)	16.67% (4/24)	4.17% (1/24)	83.33% (20/24)	0% (0/24)	12.5% (3/24)	4.17% (1/24)
	Negative	22.86% (8/35)	17.14% (6/35)	57.14% (20/35)	2.86% (1/35)	51.43% (18/35)	22.86% (8/35)	20% (7/35)	5.71% (2/35)	60.61% (20/33)	15.15% (5/33)	18.18% (6/33)	6.06% (2/33)
	P value	0.0008	0.1791	0.0188	0.5738	0.0215	0.0106	0.2553	0.4393	0.0436	0.0567	0.2492	0.4331
CAT1	Positive (ref.)	16.67% (2/12)	25% (3/12)	58.33% (7/12)	0% (0/12)	36.36% (4/11)	27.27% (3/11)	36.36% (4/11)	0% (0/11)	33.33% (4/12)	33.33% (4/12)	33.33% (4/12)	0% (0/12)
	Negative	46.94% (23/49)	10.20% (5/49)	40.82% (20/49)	2.04% (1/49)	68.75% (33/48)	10.42% (5/48)	14.58% (7/48)	6.25% (3/48)	90% (36/48)	2.22% (1/45)	11.11% (5/45)	6.67% (3/45)
	P value	0.0438	0.1425	0.2735	0.8033	0.0402	0.1274	0.0868	0.5320	0.0031	0.0053	0.0672	0.4850
CAT3	Positive (ref.)	20% (3/15)	20% (3/15)	60% (9/15)	0% (0/15)	56.25% (9/16)	18.75% (3/16)	12.5% (2/16)	12.5% (2/16)	69.23% (9/13)	7.69% (1/13)	7.69% (1/13)	15.38% (2/13)
	Negative	47.83% (22/46)	10.87% (5/46)	39.13% (18/46)	2.17% (1/46)	65.12% (28/43)	11.63% (5/43)	20.93% (9/43)	2.33% (1/43)	70.45% (31/44)	9.09% (4/44)	18.18% (8/44)	2.27% (1/44)

P value	0.0521	0.2118	0.1576	0.7541	0.5312	0.2431	0.2418	0.1587	0.2658	0.4215	0.2561	0.1173

Presence; A – Absence; CAT0 – category level 0 ; CAT1 category level 1; CAT3- category level 3; P – Pasture; CB – Compost Barn; FS – Free Stall; FSP – Free stall with access an pasture