

Table 0871. Blood and milk Se in Ctrl, NaSe, SeYeast and SeMet at wk 0 and 7

	Wk	Ctrl	NaSe	SeYeast	SeMet
Blood Se ($\mu\text{g/L}$)	0	34 \pm 10	25 \pm 4	35 \pm 13	31 \pm 10
	3	39 \pm 12 ^a	63 \pm 14 ^b	71 \pm 13 ^b	68 \pm 11 ^b
	7	23 \pm 5 ^a	57 \pm 12 ^b	71 \pm 13 ^c	69 \pm 10 ^c
Milk Se ($\mu\text{g/kg}$)	0	16 \pm 2	15 \pm 1	14 \pm 2	16 \pm 2
	3	18 \pm 3 ^a	26 \pm 2 ^b	45 \pm 6 ^c	61 \pm 4 ^d
	7	21 \pm 9 ^a	46 \pm 15 ^b	63 \pm 12 ^c	75 \pm 14 ^c

^{a,b,c,d} Values with different superscript differ significantly between groups within the same week (row).

0872 (W034) Dynamic of intramammary infections in 3/4 Holstein x Zebu dairy cows from a herd of Minas Gerais State, Brazil. C. V. Ladeira¹, F. N. Souza¹, D. R. Freitas¹, L. G. Ladeira², D. S. Rodrigues², M. O. Leite¹, L. M. Fonseca¹, C. M. Penna¹, M. A. P. Brito³, and M. P. Cerqueira⁴, ¹Universidade Federal de Minas Gerais, Belo Horizonte, Brazil, ²EPAMIG, Belo Horizonte, Brazil, ³Embrapa, Juiz de Fora, Brazil, ⁴Universidade Federal de Minas Gerais (School of Veterinary Medicine), Belo Horizonte, Brazil.

The aim of the present study was to assess the occurrence of subclinical bovine intramammary infections (IMIs) in 3/4 Holstein x Zebu cattle in a dairy herd from Empresa de Pesquisa Agropecuária de Minas Gerais (EPAMIG). Thus, composite milk samples ($n = 132$) from 44 cows were collected in April, July, and September (dry period) for bacteriological examination and somatic cell count (SCC). Bacterial analysis was conducted by culturing 0.01 mL of each sample on 5% ovine blood agar plates and MacConkey agar. The plates were incubated for 48 h at 35°C, which was followed by gram staining, observation of colony morphology and biochemical testing. The cow was regarded as uninfected when the milk SCC was < 200,000 cells/mL and bacteriologically negative. A new IMI was determined when a cow was bacteriologically negative and had SCC < 200,000 cells/mL, and in the next sampling the milk sample was bacteriologically positive and/or have SCC > 200,000 cells/mL, or a different pathogen was isolated. If the same pathogen was isolated in all milk samples, the cow was regarded as chronically infected for that pathogen. A cure occurred when a cow that was regarded as infected became uninfected at the end of experiment (bacteriologically negative and SCC < 200,000 cells/mL). From the 44 cows, 22 (50%) were chronically infected by *S. aureus* (77.27%, $n = 17$), *Streptococcus* sp. (9.09%, $n = 2$), coagulase negative staphylococci (CNS; 9.09%, $n = 2$) and *Corynebacterium* sp. (4.55%, $n = 1$). Six cows (13.64%) were initially regarded as healthy, and from these cows, four cows (75%) have become infected. Furthermore, three cows (6.82%) have been cured from IMI (two by *S. aureus* and one by CNS) at the end of experiment. Finally, 13 cows (29.55%) have become infected by a different pathogen from that established at the beginning of the experiment (four by *S. aureus* and CNS,

two by *Klebsiella* sp., two by *Corynebacterium* sp. and one by *S. aureus* and *Corynebacterium* sp.). From those, five cows (38.46%) have been cured and then, established a new infection by a different pathogen. The percentage of spontaneous cure of *S. aureus* IMI was 18.18%. Thus, this study demonstrated the dynamic of IMIs in a herd that needs a continuous assessment of mastitis pathogens for a comprehensive control of IMIs.

Key Words: mastitis, milk, dairy cattle

0873 (W035) In vitro efficacy of teat disinfectants against *Staphylococcus aureus* strains isolated from bovine mastitis in Brazil. R. P. Santos¹, F. N. Souza¹, C. C. Vasconcelos², A. Cortez², D. O. Lapinha¹, A. B. Jardim¹, A. F. Cunha¹, M. O. Leite³, M. R. Souza³, A. Q. Lana¹, M. B. Heinemann¹, and M. P. Cerqueira⁴, ¹Universidade Federal de Minas Gerais, Belo Horizonte, Brazil, ²Laboratório Veterinário Vidavet, Botucatu, Brazil, ³Universidade Federal de Minas Gerais (School of Veterinary Medicine), Belo Horizonte, Brazil.

The present study sought to explore the in vitro efficacy of four antiseptics against *Staphylococcus aureus* isolated from milk of dairy cows with mastitis. The efficacy of chlorhexidine (2.0%), chlorine (2.5%), quaternary ammonium (4%), lactic acid (2.0%) and iodine (0.6%) was accessed in concentrations conventionally used as commercial antiseptics before and after teat dipping. We used 50 *S. aureus* strains isolated from milk of 50 different dairy herds located at Minas Gerais, Sao Paulo, Parana, and Rio Grande do Sul States, Brazil. The efficacy of antiseptics were evaluated by incubation of *S. aureus* with the disinfectant at four different times (15, 30, 60, and 300 min). We used 0.8 mL of each antiseptic, 0.2 of sterile milk, and 1.2 mL of a bacteria solution (MacFarland scale 1) for all treatments and testing times. The activity of the antiseptics was accessed by bacteria growth in brain-heart infusion broth and 5% sheep blood agar plates. If there was no bacteria growth in brain-heart infusion broth and blood agar plates, the antiseptic was regarded as efficient. Statistical analysis was performed using Cochran's Q test. We found higher activity of quaternary ammonium (98% at all testing times) and chlorhexidine (84% at 15 min, 90% at 30 min, 94% at 60 min, and 96% at 300 min) against *S. aureus* at all testing times ($P = 0.001$), followed by iodine (46% at 15 min, 56% at 30 min, 66% at 60 min, and 78% at 300 min) and chlorine (30% at 15 min, 40% at 30 min, 48% at 60 min, and 64% at 300 min). Lactic acid showed the worst results (4% at 15 min, 4% at 30 min, 8% at 60 min, and 14% at 300 min) at all testing times and its use should not be recommended. Due to variation in sensitivity and resistance of *S. aureus* to antiseptics, the appropriateness of a given intervention should be based on efficacy in the specific application.

Key Words: dairy cow, intramammary infection, milking, teat dip

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