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ABSTRACT

The present study was carried out at the Eastern farm, Faculty of Agriculture, Cairo University, Giza, Egypt. Twenty late pregnant Holstein Friesian cows and Egyptian buffaloes were used (10 each). The animals were divided randomly into 4 symmetric groups, 5 cows and 5 buffaloes as control were injected with 4ml 0.9% Na Cl at -30 and -15 days prepartum and another 5 cows and 5 buffaloes as vaccinated group were injected with 4ml Scour Guard 3® (K) following the same regieme.

The data showed that Suckling colostrum from immunized dams using Scour Guard 3® K in -30 and -15 days prepartum improved ($P<0.05$) offspring body weight by 6.5 %. The results are showed that using Scour Guard 3® (K) had a significant effect on dam serum IgG which increased in the vaccinated group compared to the control group by 74.4%, being higher in buffaloes than cows by 44.23% (39383 vs. 27306). Serum total protein (TP), albumin (A), and globulin (G) were the highest ($p<0.05$) in the vaccinated groups.

Concerning the offspring serum, suckling from their dams treated with Scour Guard 3® (K) caused an increase ($P<0.05$) in their serum total IgG 105.9% but being higher in buffalo's than cow's offspring by 9.42% (33633 vs. 30738). Vaccination of their dams with Scour Guard 3® (K) increased ($P<0.05$) serum total protein and globulin in the offspring serum but this increase was higher in buffalo than cows by 15.61%(5.2210 vs. 3.9406). No significant effects were recorded for (alb) concentration and (A/G) ratio among the vaccinated and control groups.

Using Scour Guard 3® (K) resulted in a significant increase in serum antimicrobial potency of the vaccinated group comparing to the control group. But, the antimicrobial potency was significantly ($p<0.05$) higher in buffaloes than cows by 57.8%. Also, the antimicrobial potency increased significantly ($p<0.05$) in offspring serum in both breeds. Antimicrobial potency of dam's milk, significantly ($p<0.05$) increased due to the vaccination, buffaloes responded better than cows in their milk antimicrobial potency.

In conclusion, treatment with Scour Guard 3® (K) at -30 and -15 days prepartum successfully increased serum IgG levels in dams and the suckling young. The antimicrobial potency of dam's milk and offspring serum significantly increased using this vaccination. Also the daily weight gain was increased. Buffaloes responded better than cows to the vaccination of Scour Guard 3® (K).

Key words: Immune colostrum, IgG, Scour Guard 3® (K), Antimicrobial potency and daily weight gain.

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