Abstract #M218

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Effect of yeast culture plus enzymatically hydrolyzed yeast supplementation starting prepartum on acute phase protein profiles and reproductive performance in dairy cows.

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The aim of this study was to evaluate the effect of yeast culture plus enzymatically hydrolyzed yeast supplementation starting prepartum on acute phase protein profile and reproductive performance in dairy cows. Twenty 9 multiparous Holstein cows were blocked by milk production on the previous lactation and randomly assigned into 2 groups which consisted in one (n = 15) receiving 28 g/d top-dressed yeast culture plus enzymatically hydrolyzed yeast (YC-EHY; Celmanax, Arm & Hammer Animal Nutrition, Princeton, NJ), while the control group (n = 14) did not receive the supplement. The experimental period lasted from d −35 relative to calving to 150 d postpartum. Plasma samples collected on −21, −14, −7, 0, 3, 7, 14, 21, 28, 35, and 42 d relative to calving were analyzed for acute phase proteins (haptoglobin, paraoxonase and albumin). To assess estrous cyclicity resumption, blood samples were collected weekly from 14 to 35 d after calving to evaluate the concentration of progesterone. Reproductive performance was also monitored until 150 d after calving. Data were analyzed using mixed models with repeated measures over time. Interval from calving to conception was analyzed using Kaplan-Meier survival curves. The YC-EHY group had lower (P = 0.04) interval from calving to conception than control group respectively, 95.35 ± 10.78 vs.130.73 ± 10.35 d. The interval from calving to the first ovulation were similar (P = 0.18) between groups, 23,33 ± 2,8 d vs. 29,16 ± 2,8 d, respectively for YC-EHY and control groups. The YC-EHY tended (P = 0.07) to have lower activity of paraoxonase during the postpartum period (112.54 ± 3.49 U/L vs. 106.39 ± 3.60 U/L) than the control group. No differences (P > 0.05) were observed in albumin and haptoglobin concentrations during the transition period. In conclusion, dairy cows supplemented since prepartum with yeast culture plus enzymatically hydrolyzed yeast, had lower interval from calving to conception, without affect calving to first ovulation interval and tend to have lower activity of paraoxonase during the postpartum period.

Key Words: nutrition, reproduction, supplement