

DIETARY ZINC SUPPLEMENTATION IN DAIRY COWS DURING TRANSITION PERIOD AFFECT ZINC, CHOLESTEROL AND FAT CONTENT IN MILK

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Abstract

The objective of present study was to investigate the effect of supplementing Zn in transition diet on zinc, cholesterol and fat content in milk. Twenty dairy cows (FH) were randomly assigned to 2 group: basal diet (control group; CON) and basal diet with supplementation of Zn 40 ppm (Con +Zn). Zn milk content were determined by atomic absorption spectrophotometry. Cholesterol and fat content in milk were measured with Biolabo kit and spectrophotometry. Cows were milked twice daily and throughout the experiment animal health was monitored daily. Milk samples (morning and afternoon milking) were taken at week 1-4 after calving. Results showed that Zn content in milk were higher in group CON + Zn compared with control group. In addition, milk fat and milk cholesterol were also affected by dietary Zn content in transition diet. No significant differences in milk production were observed between the 2 groups. In conclusion Zn supplementation increased Zn content, milk fat and cholesterol of dairy cows in early lactation. There is no negative effect on milk yield and total solid of the milk It seems feeding Zn above the requirements before calving not only maintain immune status but also increase milk quality and composition.

Keywords: *lipid metabolism, mineral status, milk composition, diet, dairy cows*