



cows: glucose, blood urea nitrogen (BUN), cholesterol, total protein, albumin, globulin, calcium, phosphorus, magnesium, sodium, potassium, AST, beta-hydroxy butyric acid (BHBA), and non-esterified fatty acids (NEFA). Hoof trimming records were used in this study. Hoof trimming were done on the following basis: Cows in 100 – 120 days in milk, repeat breeders, high locomotion scored cows, dry cows and referred cows due to lameness. All new lameness and diseases occurrence were recorded. Sole ulcers in zone 4 and white line disease in zone 3, were evaluated from 3 month before to 3 month after MPT. All data were analyzed by ANCOVA in SAS software.

Results showed that serum albumin and protein reduced significantly before occurrence of sole ulcer and hemorrhages in sole. AST significantly increased in cows with hemorrhage and sole ulcer. NEFA increased significantly before occurrence of hemorrhage and / or sole ulcer. High-scored and referred cows due to lameness had negative correlation with serum cholesterol concentrations. Cows with sole ulcer and hemorrhages showed higher level of calcium before injury ($P < 0.05$).

Although, there are some significant relationships between hoof disorders and serum biochemistry, but it remains to be elucidated whether MPT can play a major role as a predictor tool in these conditions. More studies need to be done to draw a practical conclusion. The present experiment as a preliminary study indicated that MPT has potential to act such a role.

Longitudinal observation of hoof lesions causing lameness at herd level

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Lameness in all animals known as infirmity or abnormality in both normal and natural walk and always describes as one of the most important problems in dairy cow herds that infectious and non-infectious agents brings about it, therefore lameness in dairy cow describes as a multifactorial disease. Appearance of epidemic lameness takes third place in order of prevalence after mastitis and reproductive disease in dairy cow herds. It can import many economical failures on animal husbandry society such as reducing of milk yield, progressive body weight loss, infertility and eventually early cull of lame cows. This observation was carried out at a dairy herd in the vicinity of Tehran during the two years period in a total of 830 cows. In each observation all of the lame cows were assessed using Sprecher 1-5 scoring lameness after the hoof inspection at the trimming box. Results of this study showed that from 171 lame cow, 50 cases had digital dermatitis, 34 cases had white line issues, 9 cases had heel disorders, 47 cases had sole injuries, 31 cases had toe problems, 2 cases were observed with double sole and one case of thin sole is confirmed. Suggestions were made for pain relief and wound healing for all cases. These suggestions include a wide range of treatments from application of local



bandage to installation of a wooden block on the sole of the sound digit which removes the pain during weight gain; aforementioned treatments continue until rehabilitation.

Key word: Longitudinal observation, Lamé cow, Hoof lesions.

Chromium methionin can affect comfort and feeding behaviour of growing beef steers

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Chromium (Cr) is required for insulin metabolism and, thus, for optimum essential nutrients uptake by peripheral cells. It amplifies insulin signaling and facilitates cell glucose entry. Previous researches indicate that increased dietary Cr supply can benefit post-weaning insulin and glucose and affect rectal temperature. Current experiment was conducted to determine the effects of feeding chromium methionin (Cr-Met) to growing beef steers on performance traits, blood metabolites, rectal temperature as an index of comfort and feeding behavior. Twenty-six growing Holstein dairy calves were randomly divided in two groups to fed 0 (first BW=160±12 kg) and 0.9 ppm Cr-Met supplement (first BW=148±10 kg). Two group of calves were fed and kept in two different common pens in farm close to Saveh city (central Iran). Before beginning of feeding experimental diets, calves in each pen fed with basal diet (forage to

concentrate ratio of 50:50; crude protein=15% of dry matter and Metabolizable energy=2.34 Mcal/kg of dry matter) for ten days. Group dry matter intake during six days and body weight of each calf at the end of this period was measured and used as covariate in final statistical model. After the commencement of experiment, for calves in Cr-Met group one gram of Availa Cr added per kg of DM of basal diet which finally resulted to 0.9 ppm of supplement Cr-Met. This study performed in two different periods of 28 days with 21 days' adaptation to diets and later 7 days' sample collection within each period. Calves fed with basal diets without adding Cr-Met for two weeks between two experimental periods. Data was analyzed with proc mixed SAS and least significant difference (LSD) test used to compare means. Results showed that final weight, dry matter intake and feed efficiency were not affected by Cr-Met supplement ($P>0.05$). Eating, rumination and resting times were similar between two groups of growing steers ($P>0.05$). Steers fed with Cr-Met had lower rectal temperature (38.74 versus 39.62, SEM=0.139; $P=0.0004$) and tended to have lower standing time (346.2 vs. 399.5 min, SEM=13.2; $P=0.09$). Blood glucose, insulin, insulin to glucose ratio, total protein and urea were similar between two groups ($P>0.05$). The average of temperature humidity index (THI) during this study was 64.3 (SD=7.7) indicating no thermal stress. It is well documented that increased rectal temperature indicates an abnormal health status. Higher rectal temperature in calves fed with no Cr-Met supplementation diet still was in normal range for steer. In cattle more standing behavior indicates lower