



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



comfort. In this study no illness signs were observed. These data indicate that Cr-Met affects body core temperature and standing behavior although blood metabolites and performance traits did not change. Cr-Met have been shown to decrease rectal temperature in several studies. Data on the effects of Cr-Met on animal behavior is rare and more researches are required.

Key Words: Chromium methionin, growing steers, rectal temperature, standing behavior

Body condition score, is it a risk factor for lameness?

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Lameness is one of the most significant challenges in the dairy industry. Extensive effects of lameness on herd performance are reported includes milk loss, impaired reproductive performance and finally lameness. Locomotion Scoring system have been used to distinguish the degree of lameness. Cows categorize into 1 to 5 from normal to severely lame.

Energy reserves in the form of fat and muscle (a.k.a. body condition) are extremely important for reproduction success. Body Condition Score (BCS) range from 1 “very thin cows” to 5 “severely over conditioned cows”. Ideal condition scores fall in the range

of 3 to 4 at dry off and calving and 2.5 to 3.5 at peak lactation.

This current study was done in a dairy herd with average of 4700 productive (Milking and dry) cows from March 2013- February 2014. Cows housed in free stall barns bedded with sand, milk three times a day and feed by total mixed ratio. The average annual milk production recorded as 40.47 lit/day. Body condition scoring was done on monthly basis by a 5 point scale by a single observer. BCS was done to accomplish management processes. Locomotion scoring also was done on a monthly basis on a five point scale that cows with score 1 known as sound and cows with score 5 known as severely lame cows by a single veterinarian. Locomotion scores 1-3 considered as non-lame and locomotion scores 4 and 5 consider as lame in data analysis.

Total of 49754 cows scored during 12 month (average 4146.16 ± 244.54). 6.64% scored 2 and less, 30.65% scored 2-3 and 62.69% scored more than 3 during this study.

Group 1 consist of cows with BCS 2 and less, group two consist of cows with BCS between two and three and cows with 3 and higher BCS assigned in group three. Kruskal-Wallis test showed a significant difference between lameness occurrence in different groups under study, as cows in groups one and three showed more lameness than group two ($P < 0.05$). Lameness maybe a result of high body condition score and also maybe a cause for low body condition scores cows that need further investigation.