

IRON SUPPLY STATUS OF BREEDING CALVES IN AUSTRIA

J. Reif¹, F. Gewessler², T. Wittek¹
Thomas.Wittek@vetmeduni.ac.at

¹University of Veterinary Medicine Vienna,
University Clinic for Ruminants, Vienna, Austria

²Sauwald Tierärzte, Sankt Roman, Austria

Veal production is important branch of the Austrian beef industry. Many consumers still prefer pale veal over darker meat although it is produced from iron deficient beef calves. However, optimal iron supply is of importance for growth and health, especially in female heifer calves raised for breeding.

The aim of the study was to assess iron supply in female breeding calves in Austria.

Twenty one dairy farms located in the Innviertel (Upper Austria) were visited to take blood samples from 118 heifer calves. Calves were excluded from the study if they were older than 16 weeks of age or had received a treatment with iron containing drugs within 7 days before collection of blood samples. Hematocrit, hemoglobin and plasma iron concentration were measured. On each farm a questionnaire concerning housing, feeding, health and medical treatment of the calves was completed.

Results showed the presence of iron deficiency anemia in a substantial proportion of the heifer calves. In 43.2 % and 17.8 % of the calves hematocrit and hemoglobin were either moderately or severely decreased below physiological values. Calves showed a deficiency of iron in blood plasma in 44.9 % of the cases.

The highest prevalence of anemic calves was found between the 5th and the 8th week of life. After this age the measured parameters in sampled calves steadily increased until 16 weeks of age.

The feeding of milk replacer instead of whole milk resulted in a positive effect on hematocrit, hemoglobin and plasma iron concentration. The same effect was observed if hay or grain was added to the diet as early as day eight of age. A positive effect caused by prophylactic application of iron supplements was evident: calves which received such supplements showed significantly higher blood hematocrit, hemoglobin and iron concentration than calves without any prophylactic measures.

Iron deficiency anemia plays an important role in heifer calves and needs to be considered in veterinary practice. Additional to therapeutic measures in animals suffering from iron deficiency prophylactic measures should become part of the general prophylactic concept for the herd.

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