Is Nutritional Diagnosis and Formulation of Supplementation Possible Through Analysis of Horsehair?

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1. Introduction

A number of studies (12 bibliographical references) have been carried out on the analysis of horsehair and equine nutritional status. Other studies have enabled examination of the impact of a mineral supplement on trace element content in hair, and another study has been carried out that takes into account each horse’s daily ration and trace element concentration in the hair. The number of individuals used in the studies and the methods of analysis, which vary from one study to another, do not permit statistically reliable results to be obtained. The trace element values recorded in horsehair have, however, been established. In the case of a mineral provision below American National Research Council (NRC) norms, no clinical signs of deficiency were observed. With mineral supplementation, variations in trace element content in the hair do not permit reliable and coherent interpretation. With concentrations above or below recorded values, no clinical signs of deficiency or excess were observed. The analysis of horsehair is, therefore, not a reliable and interpretable method for making a nutritional diagnosis. The formulation of a mineral supplement cannot be made from the analysis of this tissue.