THE INTERACTION BETWEEN INTESTINAL HELMINTH INFECTION AND HOST NUTRITION. REVIEW

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Summary. The regulation of helminth populations in the host's gastrointestinal tract is a complex process, influenced by host immunological and nutritional status, age and breed of the animal. The interaction between helminth infection and nutrition can be considered from two interrelated points of view: the influence of the helminth infection on the host's physiology and nutrition and the effect of host nutrition on the helminth populations, i.e. their establishment, persistence and reproductive capacity. The first point of view has been the subject of numerous investigations over the past decade. It was estimated that common features of infection with intestinal helminths are: a reduction in voluntary feed intake, reduction of the digestibility's of dry and organic matter, a decrease in efficiency of feed utilization, significantly higher nitrogen output, and a rise in plasma urea concentration. It was described that only a limited amount of studies have examined the effects of nutrition on the parasite response in the parasite infected host, and even fewer have considered the events occurring at the intestinal level, where absorption of nutrients occurs, intestinal parasites reside, and the gastrointestinal associated tissues play role in directing both the local and the more systemic responses. In this review the reference is made to the important literature related to the effect of different nutrients, e. g. carbohydrate, protein, fat, non-organic constituens and malnutrition on the helminth populations in host. It appeared that gastrointestinal helminths have very specific physico-chemical requirements of their host gut environment, and nutritionally mediated changes have a direct influence on the parasite population. Furthermore, the mechanisms by which different nutrients influence helminth infection are addressed.