



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**Micronutrients and Animal Nutrition and the Link between the Application of  
Micronutrients to Crops and Animal Health**

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**Abstract:** Micronutrients (or 'trace elements') are required in animal diets for health and welfare, and therefore they are essential for the agricultural production of milk, meat, fibre, and eggs. It is clear from the literature that deficiencies of micronutrients, particularly in their sub-clinical form where they are not visually apparent, can result in major reductions in productivity. Micronutrients are used mostly as the central elements of enzymes and co-enzymes in the biochemistry of ruminants and monogastrics. Thus, their deficiency often leads to sub-optimal growth and fertility. Within the farming system, the aim should be to only use supplementation with micronutrients where it is necessary; that is, where an actual or likely deficiency has been diagnosed. Further, the supplement used should be cost effective and appropriate to the farming system in question. Gaps in knowledge still remain, the most obvious being the use and levels of micronutrients that are typical in manures and the use of these in animal systems.

**Key Words:** Micronutrients, animal health, animal nutrition

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