All feeds and animal tissues contain minerals in widely varying amounts and proportions. Much research was done in the field of major and trace elements metabolism, mostly summarized in the international symposia on Trace Elements Metabolism in Animals (TEMA). Now the symposium was renamed to Trace Elements in Man and Animals and the “Animal” contribution has shrunk out of all recognition. Therefore, the aim of the book is to meet the needs of students of agricultural and veterinary science, of teachers and research workers in animal nutrition, of agricultural and veterinary extension officers and of progressive livestock producers to apply modern scientific knowledge of mineral nutrition.

The book covers all aspects of macro and trace element nutrition in farm livestock. Information are given on metabolism, functions and interactions of minerals to explain why needs, feeds and imbalances are not always easy to define or anticipate. The major emphasis is on the mineral nutrition of ruminants since they are most likely to be affected by imbalances. Attention is also given to pigs and poultry, sometimes to horses, but not to fish and pets.

Compared with the second edition this new edition has been thoroughly revised and expanded in some cases. New topics and several chapters were introduced. For example, calcium, phosphorus, sodium and potassium are now treated separately, many chapters on trace elements have been drastically revised and claims for enhanced availability for chelated trace mineral sources are critically reviewed.

Complete new chapters focus on the need of the ruminant for elemental sulphur (Chapter 9), occasionally beneficial elements (17), essentially toxic elements (18) and the design of supplementation trials for assessing mineral deprivation (19).

All together the book covers 19 chapters as well as preface, appendices and index. Starting with the general introduction (1), Chapters 2 and 3 deal with natural sources of minerals and the detection and correction of mineral imbalances in animals.

The major elements calcium, phosphorus, magnesium, sodium and chloride, potassium and sulphur are described in Chapters 4–9. Chapters 10–16 deal with the trace elements cobalt, copper, iodine, iron, manganese, selenium and zinc.

Description of major and trace elements (Chapters 4–16) follows the Introduction, Natural sources, Metabolism, Functions, Biochemical indices of disorders, Clinical manifestations, Occurrence of element-responsive disorders, Diagnosis of disorders, Prevention and control of disorders, Element requirements for different species and categories, Toxicity.
Boron, chromium, lithium, molybdenum, nickel, silicon, tin and vanadium have been summarized as occasionally beneficial elements (Chapter 17).
Aluminium, arsenic, cadmium, fluorine, lead and mercury are described in Chapter 18 as essentially toxic elements.
Finally, designs of supplementation trials for assessing mineral deprivation are described in Chapter 19.
The textbook “Mineral Nutrition of Livestock” reviewed important aspects of major and trace element nutrition. The book is recommended to veterinarians, animal scientists advisors and advanced students of animal nutrition.

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Escherichia coli O157 in Farm Animals

As Escherichia coli O157 is a dangerous pathogen communicated from animal to man, a workshop was held at the Rowett Research Institute, Bucksburn, Aberdeen, UK in April 1998 to discuss the problems and challenges arising from it in an international group. The book contains the 11 papers of this workshop and two more reviews concerning the occurrence of Escherichia coli O157 in farm animals and the factors affecting the spread of this bacterium in the environment and to humans. Most of the contributors came from UK (22) but also 16 came from USA and eight from Canada and only one from Germany. So the meeting seemed to be only international with regard to some English-speaking countries but, however, these are the countries mostly concerned with the problem.
The book takes care of all aspects of E. coli starting with basic information such as genetic/molecular belongings according to pathology and ecology of the diseases and acid tolerance which is responsible for the survival of the bacterium in food and during the gastrointestinal passage. A section with three papers concerning bovine infection follows for both the animals and contaminated milk and meat from bovines are often the source of infection for humans and, besides, cattle often perceived to be the major reservoir for the bacterium. The next part is concerned with epidemiological aspects, the risk of human infection and experiences with outbreaks and the isolation of E. coli O157 in animals, the environment, food and humans in different countries. Two articles follow dealing with preventive measures at slaughter and the ecological cycle of E. coli O157 as base of prevention in general. The book is concluded by an outlook on possibilities for a