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 **Principles of plant nutrition.**

Author(s) : [Mengel, K.](#) ; [Kirkby, E. A.](#)

Author Affiliation : Justus Liebig Univ., Giessen, German Federal Republic.

Book : [Principles of plant nutrition.](#) 1978 pp.593 pp. ref.58 pp. of

Abstract : A 'textbook for students of agriculture, horticulture and forestry' chapters on plant nutrients, the soil as a plant nutrient medium, nutrient uptake, assimilation, plant water relationships, nutrition and plant growth, fertilizer use, a chapter on each of N, S, P, K, Ca, Mg, Fe, Mn, Zn, Cu, Mo, B (their occurrence, physiological importance and role in crop nutrition); and two final chapters on Co, and V; and (the elements with more toxic effects) I, Br, F, Al, Ni, Cr, Se, Pb. Throughout the book virtually none of the numerous examples is taken from new para>ADDITIONAL ABSTRACT:<new para>The topics considered are:

nutrients; soil as a nutrient medium; nutrient uptake and assimilation; plant nutrition and growth; fertilizers; N, S, P, K, Ca, Mg, Fe, Mn, Zn, Cu, Mo, B, Cl, Si, Co and V in soil, and in plant physiology and crop nutrition; toxic elements (I, Br, F, Al, Ni, Cr, Se, Pb, Cd) in soil, and in plant physiology and crop nutrition.

ADDITIONAL ABSTRACT: This book is a text-book for students of agriculture, horticulture and forestry, and as a guide for those interested in plant science and crop production. Vegetable and fruit crops are treated briefly.

ADDITIONAL ABSTRACT: This book on the assimilation of nutrients, their functions in metabolism, their contribution to growth and yield, and on fertilizer application presents a wide spectrum of topics including soil chemistry, plant physiology and biochemistry. It is intended essentially as a textbook for students, providing information on solving practical problems, but also serves as a guide for those interested in plant science and crop production. It is divided into 20 chapters: 1-3 nutrients; the soil as a plant nutrient medium; nutrient uptake and assimilation; 4-6 relationships; nutrition and plant growth; fertilizer application; N; S; P; K; Ca; Mg; Cu; Mo; B; further elements of importance; and elements with more toxic effects. Chapters 3-5 in particular cover important aspects of ion uptake and ionic status of plants, photosynthesis, N and S assimilation, plant water relationships, water balance, long distance transport, physiological aspects of water stress, salinity, essential nutrients, and yield components, nutrition and yield response, and nutrition and plant composition. The effects of applied mineral nutrient on plant physiology and growth are discussed in chapters 7-20. A list of references for further reading follows each chapter. A subject index is included.

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