1. Record Nr. UNINA9910784641903321 Autore Fitter Alastair Titolo Environmental physiology of plants [[electronic resource] /] / Alastair Fitter, Robert Hay San Diego, Calif., : Academic Press, c2002 Pubbl/distr/stampa **ISBN** 1-281-01876-7 9786611018764 0-08-054981-0 Edizione [3rd ed.] Descrizione fisica 1 online resource (396 p.) Altri autori (Persone) HayRobert K. M. <1946-> Disciplina 571.2 571.2 21 Soggetti Plant ecophysiology Plant ecology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references (p. [313]-345). Front Cover; Environmental Physiology of Plants; Copyright Page; Nota di contenuto Preface to the Third Edition; Acknowledgements; Dedication; Table of Contents; Chapter 1. Introduction; 1. Plant growth and development: 2. The influence of the environment; 3. Evolution of adaptation; 4. Comparative ecology and phylogeny; Part I: The Acquisition of Resources; Chapter 2. Energy and Carbon; 1. Introduction; 2. The radiation environment; 3. Effects of spectral distribution of radiation on plants; 4. Effects of irradiance on plants; 5. Responses to elevated carbon dioxide concentrations Chapter 3. Mineral nutrients1. Introduction; 2. Nutrients in the soil system; 3. Physiology of ion uptake; 4. Morphological responses; 5. Soil micro-organisms; 6. General patterns of response to soil nutrients; Chapter 4. Water: 1. Properties of water: 2. The water relations of plants and soils; 3. Adaptations favouring germination and seedling establishment in dry environments; 4. Adaptations favouring survival and reproduction under conditions of water shortage; 5. Some special problems in tree/water relations; Part II: Responses to Environmental

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Sommario/riassunto

This is the third edition of an established and successful university textbook. The original structure and philosophy of the book continue in this new edition, providing a genuine synthesis of modern ecological and physiological thinking, while entirely updating the detailed content. New features include a fresh, unified treatment of toxicity, emphasizing common features of plant response to ionic, gaseous, and other toxins, explicit treatment of issues relating to global change, and a section on the role of fire in plant physiology and communities. The illustrations in the text are improve