

1. Record Nr.	UNINA9910810129503321
Autore	Loomis R. S.
Titolo	Crop ecology : productivity and management in agricultural systems // David J. Connor, Robert S. Loomis, Kenneth G. Cassman [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2011
ISBN	1-139-01264-9 1-107-21666-4 1-283-05496-5 9786613054968 0-511-97419-1 1-139-01178-2 1-139-01204-5 1-139-01125-1 1-139-01098-0 1-139-01151-0
Edizione	[Second edition.]
Descrizione fisica	1 online resource (xii, 562 pages) : digital, PDF file(s)
Classificazione	NAT038000
Disciplina	630.2/77
Soggetti	Agricultural ecology Agricultural systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: Preface; Part I. Farming Systems and Their Biological Components: 1. Agricultural systems; 2. Trophic chains; 3. Community concepts; 4. Genetic resources; 5. Development; Part II. Physical and Chemical Environments: 6. Aerial environment; 7. Soil resources; Part III. Production Processes: 8. Nitrogen processes; 9. Water relations; 10. Photosynthesis; 11. Respiration and partitioning; Part IV. Resource Management: 12. Soil management; 13. Strategies and tactics for rainfed agriculture; 14. Water management in irrigated agriculture; 15. Energy and labor; Part V. Farming, Then, Now and in the Future: 16. Evolution of wheat farming systems in southern Australia; 17. Technological change in high-yield agriculture; 18. The

future of agriculture; Species list; Conversions and constants useful in crop ecology; Index.

Sommario/riassunto

Food security and environmental conservation are two of the greatest challenges facing the world today. It is predicted that food production must increase by at least 70% before 2050 to support continued population growth, though the size of the world's agricultural area will remain essentially unchanged. This updated and thoroughly revised second edition provides in-depth coverage of the impact of environmental conditions and management on crops, resource requirements for productivity and effects on soil resources. The approach is explanatory and integrative, with a firm basis in environmental physics, soils, physiology and morphology. System concepts are explored in detail throughout the book, giving emphasis to quantitative approaches, management strategies and tactics employed by farmers, and associated environmental issues. Drawing on key examples and highlighting the role of science, technology and economic conditions in determining management strategies, this book is suitable for agriculturalists, ecologists and environmental scientists.
