Record Nr. UNINA9910437858003321 Autore Martin Konrad **Titolo** Agroecology / / by Konrad Martin, Joachim Sauerborn Dordrecht:,: Springer Netherlands:,: Imprint: Springer,, 2013 Pubbl/distr/stampa **ISBN** 94-007-5917-7 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (338 p.) 577.55 Disciplina Soggetti Agriculture **Ecology Ecosystems** Landscape ecology Geography Geobiology **Ecology** Landscape Ecology Geography, general Biogeosciences Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto 1. Introduction -- 2. Origin and development of agriculture -- 3. Patterns and processes in ecosystems -- 4. Crops and their environment -- 5. Management of unwanted organisms -- 6. Production and management of livestock resources -- 7. Climate zones and land use -- 8. Agroecological aspects of global change. Sommario/riassunto This book represents an interdisciplinary approach to the relevant aspects of agricultural production related to the interactions between natural processes, human activities and the environment. It provides condensed and comprehensive knowledge on the functions of various agroecosystems at the field, landscape and global scale. Understanding and integrating complex ecological processes into field production, land management and food systems is essential in order to deal with

the challenges of modern crop and livestock production. These are characterized by the need for food security for the growing human

population on the one hand, and the necessity to combat the detrimental effects of food production on the environment on the other. The book provides the scientific basis required by students and scientists involved in the theoretical and practical development of sustainable agroecosystems and contributes to a range of disciplines including Agriculture, Biology, Geography, Landscape Ecology, Organic Farming, Biological Control, and Global Change Ecology. Specific chapters include: the beginnings and progress of agriculture; abiotic processes and species interactions in agroecosystems; ecology of agricultural soils, weeds, pests and diseases; management and control options; livestock production systems, agroecosystems of the different ecozones of the world; environmental problems including land degradation and effects of land use on biodiversity and ecological cycles; global aspects related to the future of human food production, global climate change and the increasing world population.