

Introduction To Soil Science Course Outline

Traditionally, soil science, atmospheric science, hydrology, plant science and agriculture have been studied largely as separate subjects. These systems are clearly interlinked, however, and in recent years a great deal of interdisciplinary research has been undertaken to better understand the interactions. This textbook was developed from a course that the authors have been teaching for many years on atmosphere-vegetation-soil interactions at one of the leading international research institutes in environmental science and agriculture. The book describes the atmosphere-vegetation-soil continuum from the perspective of several interrelated disciplines, integrated into one textbook. The text is interspersed with many student exercises and problems, with solutions included. It will be ideal for intermediate to advanced students in meteorology, hydrology, soil science, environmental sciences and biology who are studying the atmosphere-vegetation-soil continuum, as well as researchers and professionals interested in the observation and modelling of atmosphere-vegetation-soil interactions.

Designed for undergraduate and graduate students, this book covers important soil physical properties, critical physical processes involving energy and mass transport, movement and retention of water and solutes through soil profile, soil temperature regimes and aeration, and plant-water relations. It includes new concepts and numerical examples for

Essential Soil Science A Clear and Concise Introduction to Soil Science John Wiley & Sons

For introductory courses in soils. An accessible introduction to soil science fundamentals At the forefront of soil science for over a century, *Elements of the Nature and Properties of Soils* considers the role of soils as both a natural resource and an ecosystem, while highlighting interactions between soils and other components of natural and constructed ecosystems. With practical value for meeting today's environmental challenges, the text asserts that balancing economic growth with sustainable economies requires a deep understanding of soils. The 4th edition has been abridged to focus on fundamentals, while providing new or updated discussions on topics such as soils and human health, organic farming, and soil food-web ecology.

This book offers an introduction to the soils of Aotearoa New Zealand, structured according to the New Zealand soil classification system. Starting with an overview of the importance and distribution of New Zealand soils, it subsequently provides essential information on each of the 15 New Zealand soil orders in separate chapters. Each chapter, illustrated with diagrams and photographs in colour, includes a summary of the main features of the soils in the order, their genesis and relationships with landscapes, their key properties including examples of physical and chemical characteristics, and their classification, use, and management. The book then features a chapter on soils in the Ross Sea region of Antarctica and concludes by considering New Zealand soils in a global context, soil-formation pathways, and methods used in New Zealand to evaluate soils and assist in land-management decisions. Information about how to access detailed information via links to the Manaaki Whenua Landcare Research website is also included.

For Introduction to Soils or Fundamentals of Soil Science courses. Also for courses in Soil Fertility, Forest Soils, Soil Management, Land Resources, Earth Science, and Soil Geography. Developed for Introduction to Soils or Soil Science courses, *The Nature and Properties of Soils*, 14e can be used in courses such as Soil Fertility, Land Resources, Earth Science and Soil Geography. Now in its 14th edition, this text is designed to help make students study of soils a fascinating and intellectually satisfying experience. Written for both majors and non-majors, this text highlights the many interactions between the soil and other components of forest, range, agricultural, wetland and constructed ecosystems.

The first process-based textbook on how soils form and function in biogeochemical cycles, offering a self-contained and integrated overview of the field as it now stands for advanced undergraduate and graduate students in soil science, environmental science, and the wider Earth sciences. The jargon-free approach quickly familiarises students with the field's theoretical foundations before moving on to analyse chemical and other numerical data, building the necessary skills to develop questions and strategies for original research by the end of a single semester course. The field-based framework equips students with the essential tools for accessing and interpreting the vast USDA soil dataset, allowing them to establish a working knowledge of the most important modern developments in soil research. Complete with numerous end-of-chapter questions, figures and examples, students will find this textbook a multidisciplinary toolkit invaluable to their future careers.

An abridged, student-oriented edition of Hillel's earlier published *Environmental Soil Physics*, *Introduction to Environmental Soil Physics* is a more succinct elucidation of the physical principles and processes governing the behavior of soil and the vital role it plays in both natural and managed ecosystems. The textbook is self-contained and self-explanatory, with numerous illustrations and sample problems. Based on sound fundamental theory, the textbook leads to a practical consideration of soil as a living system in nature and illustrates the influences of human activity upon soil structure and function. Students, as well as other readers, will better understand the importance of soils and the pivotal position they occupy with respect to careful and knowledgeable conservation. Written in an engaging and clear style, posing and resolving issues relevant to the terrestrial environment Explores the gamut of the interactions among the phases in the soil and the dynamic interconnection of the soil with the subterranean and atmospheric domains Reveals the salient ideas, approaches, and methods of environmental soil physics Includes numerous illustrative exercises, which are explicitly solved Designed to serve for classroom and laboratory instruction, for self-study, and for reference Oriented toward practical problems in ecology, field-scale hydrology, agronomy, and civil

engineering Differs from earlier texts in its wider scope and holistic environmental conception

This book opens readers' eyes to the fascinating and important world of soils, and the principles that can be used to minimize the degradation and destruction of one of our most important natural resources. KEY TOPICS Concentrating on essentials, this edition is a more concise version of its parent book, *The Nature and Properties of Soils*, maintaining its high standards of rigor and readability, and its priority of explaining this science in a manner relevant to many fields of study. It provides a fundamental knowledge that is a prerequisite to meeting the many natural-resource challenges awaiting humanity in the 21st century. For individuals who study the science of soil, and those who make a profession of it.

A concise, inexpensive treatment! *Soil Science Simplified, 4/E* was written to acquaint students with the basic concepts and scientific principles of soils without the burden of an extensive study. This useful, well-priced handbook includes discussions of soil classification, soil morphology, and soil and the environment. In addition, a chapter on soil surveys helps readers understand soil resources and apply the information presented in soil surveys to managing the soil environment. Outstanding features: 1) provides essential coverage of factors of soil formation; 2) outlines the most current principles of soil taxonomy; 3) provides an assortment of helpful tables, maps, and line drawings; 4) includes an expanded glossary.

This book was born as an international tribute to Fiorenzo C. Ugolini, an outstanding soil scientist, now retired from university teaching and research. It is a synthesis of the knowledge of soils, their genesis, functions and management, and includes contributions from leading soil scientists. It provides the basic concepts as well as data and practical examples from across the discipline. The book also discusses the increasingly important role of soils in enabling the preservation of life and contains a rare attempt to cross-harmonize the Soil Groups of the World Reference Base of Soil Resources with the Orders of the Soil Taxonomy. It also considers the possible existence of extraterrestrial soils based on the findings from the last space missions. This volume will be a valuable resource for researchers and students of soil science, soil conservation, geography and landscape ecology.

This introduction to basic soil science theory places the study of familiar topics in the context of New Zealand--a country especially dependent on the proper use and maintenance of its soil resources. The text covers all essential areas: pedology, soil chemistry and fertility, soil physics, and land use management. Many specific examples are given from the rich heritage of New Zealand agriculture and horticulture. Throughout, soil science theory is linked with practical management and fertilizer recommendations. While the main emphasis is on soil conditions affecting plant growth, other subjects, such as the distribution of soil varieties and their influence on environmental quality, are also discussed. The book would make useful supplementary reading for students in soil science courses.

Principles and Practice of Soil Science, Fourth Edition provides a current and comprehensive introduction to soil science for students in the fields of environmental and agricultural science, ecology, soil and land management, natural resource management and environmental engineering. Covers all aspects of soil science including soil habitat, processes in the soil environment and soil management. Emphasizes the applications of soil science to the solution of practical problems in soil and land management. Highlights real world examples drawn from the author's international experience in the field. Includes an expanded colour section of soil profiles and other features, and greater coverage of international soil classification. Features new problem sets and questions at the end of each chapter, designed to reinforce important principles. An answer key is provided at the end of the text. Artwork from the book is available to instructors online at www.blackwellpublishing.com/white

This book focuses on online pedagogy and the challenges and opportunities incumbent in the transformation of a face-to-face college course. It is intended as a resource and support for new online teachers – a source of ideas and strategies from a variety of disciplinary perspectives as well as pedagogical perspectives – and for those experienced in the online environment. The book meets the needs of faculty new to online teaching by providing them a wide variety of perspectives on the online transition – e.g. pedagogical, multidisciplinary, class size and level – by faculty with varying degrees of previous experience who have recently made the transition from face-to-face to online. Their advice and recollections offer a fresh, contemporary perspective on the subject. For administrators and faculty experienced with online instruction, the collection works as a resource for ideas intended to sustain the vibrancy and efficacy of the online environment. *Taking Your Course Online* includes the experiences of a cohort of faculty that responded to a University - wide call for faculty interested in developing online courses for summer session. This group participated in a series of workshops that addressed various aspects of developing online courses and online pedagogy. All of the authors taught their new online course over a subsequent 10-week summer session, and many of them have done so subsequently as well. Their experiences have great currency in the ever-changing world of online teaching. Because the collection represents the work of teachers exposed to best practices and many discussions concerning rigor, assessment, and accountability, it provides support for the viability of online teaching/learning in an environment frequently plagued by doubts about its effectiveness. Practitioners using this book will learn how to turn their face-to-face course into an online course successfully, understand best practices for transitioning courses/online teaching, minimize errors and avoid pitfalls in the transition process, and maximize learning. Faculty development professionals can use this book as a resource to teach faculty from a wide range of disciplines how to transition from the actual to the virtual classroom. Administrators such as deans and program chairs will gain useful insights into ways to think about taking entire programs online, as well as how to guide faculty in their development of pedagogical skills pertinent to online learning.

The emergence of nanotechnology and the development of new nanodevices and nanomaterials have opened up exciting opportunities for novel applications in agriculture and biotechnology. Nanotechnology has the potential to modernize agricultural research and practice, but although it has gained momentum in the agriculture sector over last decade, there are still knowledge gaps between scientific communities. This book presents a comprehensive overview of current developments in nanotechnology-based sustainable agriculture. Focusing on various aspects of nanotechnology in different sectors of agriculture, such as crop production, soil fertility management and crop improvement, it offers insights into the current trends and future prospects of nanotechnology, along with the benefits and risks and their impact on agricultural ecosystems. It also highlights the use of nanotechnology to reduce agrochemical usage, to increase nutrient uptake efficiency and to improve water and nutrient management, and the use of nano-biosensors to manage plant diseases. The book is a valuable reference resource for scientists, policymakers, students and researchers who are engaged in developing strategies to cope with current agricultural challenges.

How does soil, as an ecological element, shape culture? With the sixteenth-century shift in England from an agrarian economy to a trade economy, what changes do we see in representations of soil as reflected in the language and stories during that time? This collection brings focused scholarly attention to conceptions of soil in the early modern period, both as a symbol and as a feature of the physical world, aiming to correct faulty assumptions that cloud our understanding of early modern ecological thought: that natural resources were then poorly understood and recklessly managed, and that cultural practices developed in an adversarial relationship with natural processes. Moreover, these essays elucidate the links between humans and the lands they inhabit, both then and now.

Soils of South Africa is the first book in seventy years that provides a comprehensive account of South African soils. The book arranges more than seventy soil forms into fourteen groups and then provides, for each group: • maps showing their distribution and abundance throughout South Africa • descriptions of morphological, chemical and physical properties • a detailed account of classification and its correlation with international systems • a discussion of soil genesis which includes a review of relevant research papers • appraisal of soil quality from a land use perspective as well as for its ecological significance • illustrative examples of soil profiles with analytical data and accompanying interpretations. There is also a fascinating account of the special relationship that exists between South African animals and soil environments. *Soils of South Africa* should interest students and researchers in the earth, environmental and biological sciences, as well as environmental practitioners, farmers, foresters and civil engineers.

Masterpiece offers a detailed discussion of the nature of the earth's terrestrial environment, and a method of subdividing and studying it. 1941 edition.

This book presents the basic concepts of quantitative soil science and, within this framework, it seeks to construct a new body of knowledge. There is a growing need for quantitative approach in soil science, which arises from a general demand for improved economic production and environmental management. Pedometrics can be defined as the development and application of statistical and mathematical methods applicable to data analysis problems in soil science. This book shows how pedometrics can address key soil-related questions from a quantitative point of view. It addresses four main areas which are akin to the problems of conventional pedology: (i) Understanding the pattern of soil distribution in character space – soil classification, (ii) Understanding soil spatial and temporal variation, (iii) Evaluating the utility and quality of soil and ultimately, (iv) Understanding the genesis of soil. This is the first book that address these problems in a coherent quantitative approach.

Soil is one of the many natural resources present in abundance and variety. Soil science deals with the structure, composition, mapping and classification of soils all over the globe. The environmentalists and soil scientists are trying hard to preserve the quality of soils and arable lands. This book provides an extensive analysis on a wide array of topics such as nutrient management, water management, wetlands, sensitive and unstable soils, manure, contamination and soil conservation, etc. This book is compiled in such a manner, that it will provide in-depth knowledge about the theory and practice of soil science. A number of latest researches have been included to keep the readers up-to-date with the global concepts in this area of study. It will serve as a reference guide for soil scientists, geologists, environmentalists, ecologists, researchers, professionals and students involved with the field of soil science at various levels. The easy way to score high in Environmental Science Environmental science is a fascinating subject, but some students have a hard time grasping the interrelationships of the natural world and the role that humans play within the environment. Presented in a straightforward format, *Environmental Science For Dummies* gives you plain-English, easy-to-understand explanations of the concepts and material you'll encounter in your introductory-level course. Here, you get discussions of the earth's natural resources and the problems that arise when resources like air, water, and soil are contaminated by manmade pollutants. Sustainability is also examined, including the latest advancements in recycling and energy production technology. *Environmental Science For Dummies* is the most accessible book on the market for anyone who needs to get a handle on the topic, whether you're looking to supplement classroom learning or simply interested in learning more about our environment and the problems we face. Presents straightforward information on complex concepts Tracks to a typical introductory level Environmental Science course Serves as an excellent supplement to classroom learning If you're enrolled in an introductory Environmental Science course or studying for the AP Environmental Science exam, this hands-on, friendly guide has you covered.

Developed for Introduction to Soils or Soil Science courses, *The Nature and Properties of Soils*, Fifteenth Edition, can be used in courses such as Soil Fertility, Land Resources, Earth Science and Soil Geography. Help readers learn about soils and their connections to the ecosystem *The Nature and Properties of Soils* is designed to engage readers with the latest in the world of soils. This hallmark text introduces the exciting world of soils through clear writing, strong pedagogy, and an ecological approach that effectively explains the fundamentals of soil science. Worked calculations, vignettes, and current real-world applications prepare readers to understand concepts, solve problems, and think critically. Written for both majors and non-majors, this text highlights the many interactions between the soil and other components of forest, range, agricultural, wetland and constructed ecosystems. Now in full-color, the Fifteenth Edition includes hundreds of compelling photos, figures, and diagrams to bring the exciting world of soils to life. Extensively revised, new and updated content appears in every chapter. Examples include: coverage of the pedosphere concept; new insights into humus and soil carbon accumulation; subaqueous soils, soil effects on human health; principles and practice of organic farming; urban and human engineered soils; new understandings of the nitrogen cycle; water-saving irrigation techniques; hydraulic redistribution, soil food-web ecology; disease suppressive soils; soil microbial genomics; soil interactions with global climate change; digital soil maps; and many others.

Designed to supplement regular text in any introductory soils course, this handbook has been revised and updated to include new material addressing specific environmental concerns related to crop production.

Many people need a better understanding of the formation, classification, properties and fertility of soils - specifically Australian soils. Soil science, once restricted to schools of agricultural science and horticulture, now reaches out to secondary and tertiary students of ecology, geography and environmental science, to people concerned with natural resource management, to farmers - even to the home gardener. This comprehensive, interesting and readable book is not just another textbook. It is an institution. First published in 1948, Professor Leeper's book became, in the course of four editions, the bible in its field. Inevitably it dated - but nothing of comparable quality replaced it. Dr Nick Uren has updated the bible. His revision includes

substantive work on the theoretical underpinnings of major soil properties, conversion to standardized units, new and revised illustrations and tables. Most importantly, the book now better encompasses the whole of Australia. As each country has its own soils and usually its own scheme of soil classification, the textbooks of other countries have limited usefulness here. Now, again, we have our own. Its staying qualities are proven. As an introduction to soils, there is simply nothing to match it.

Despite the connections between soils and human health, there has not been a great amount of attention focused on this area when compared to many other fields of scientific and medical study. *Soils and Human Health* brings together authors from diverse fields with an interest in soils and human health, including soil science, geology, geography, biology, and anthropology to investigate this issue from a number of perspectives. The book includes a soil science primer chapter for readers from other fields, and discusses the ways the soil science community can contribute to improving our understanding of soils and human health. Features Discusses ways the soil science community can contribute to the improvement of soil health Approaches human health from a soils-focused perspective, covering the influence of soil conservation and contact with soil on human health Illustrates topics via case studies including arsenic in groundwater in Bangladesh; the use of Agent Orange in Vietnam; heavy metal contamination in Shipham, United Kingdom and Omaha, Nebraska, USA; and electronic waste recycling in China. In a scientific world where the trend has often been ever-increasing specialization and increasingly difficult communication between fields and subfields, the interdisciplinary nature of soils and human health studies presents a significant challenge going forward. Fields with an interest in soils and human health need to have increased cross-disciplinary communication and cooperation. This book is a step in the direction of accessibility and innovation, elucidating the state of knowledge in the meeting of soil and health sciences, and identifying places where more work is needed.

A basic and applied textbook, ideal for students.

Aflatoxin contamination represents a serious threat to a healthy food supply. Resulting from mold on corn, peanuts, and other grains and grain products, aflatoxins are extremely toxic. Understanding the nature of fungi infection and the factors that favor aflatoxin formation is important to grain producers, dealers, and other professionals who control grain from the field to the site of consumption to prevent serious loss of large quantities of grain or grain products. Producers of poultry, cattle, sheep, pigs, and even pet food need to be aware of the threat of aflatoxin. Participants in the grain industry who grow, store, or process corn and other grains subject to potential infection by aflatoxin should be aware of the risks of fungal infection and aflatoxin contamination, and proper management strategies. The authors focus on the binding of aflatoxin in animal feeds by employing calcium smectite. Readers will be especially glad to know that aflatoxin can often be controlled with a natural mineral material to bind aflatoxin in animal feeds at a modest cost.--Back cover.

Contemporary soil science and conservation methods of effective forestry Forests and the soils that serve as their foundation cover almost a third of the world's land area. Soils influenced by forest cover have different properties than soils cultivated for agricultural use. *Ecology and Management of Forest Soils* provides a clear and comprehensive overview of the composition, structure, processes, and management of the largest terrestrial ecosystem. From composition and biogeochemistry to dynamics and management, this essential text enables readers to understand the vital components of sustainable, long-term forest soil fertility. The interaction of trees, animals, microbes, and vegetation alter the biology and chemistry of forest soils—these dynamics are also subject to human management, requiring conservationists to be conversant in the philosophy and methods of soil science. Now in its fifth edition, this classic text includes new coverage of uptake of organic nitrogen in forests, ¹⁵N retention studies, the effects of N additions on C accumulation, evidence-based examples of the dynamics of soils, and more. Extensive updates and revisions to topics such as spatial implications of megafires, long-term organic matter accumulation, soil characterization, and molecular soil measurement techniques reflect contemporary research and practices in the field. This informative overview of forest soils integrates clear and accurate descriptions of central concepts and logically organized chapters to provide readers with foundational knowledge of major soil features, processes, measurement techniques, and management methods. This authoritative survey of the management and ecology of forest soils: Offers full-color photographs and illustrations, real-world examples and case studies, and clear overviews to each topic Presents up-to-date and accessible coverage of contemporary forest science literature and research Addresses topical issues relevant to areas such as ecology, forest management, conservation, and government policy Provides a comprehensive, global perspective on forest soils, from tropical to temperate to boreal Presents balanced coverage of soil science principles and their practical application to forest management *Ecology and Management of Forest Soils* offers students in areas of soil science and forestry, natural resource and environmental management, ecology, agronomy, and conservation an invaluable overview of the field, while providing forestry professionals an efficient and current work of reference.

This widely acclaimed book analyzes the political effects of scientific research as exemplified by one field, economic botany, during one epoch, the nineteenth century, when Great Britain was the world's most powerful nation. Lucile Brockway examines how the British botanic garden network developed and transferred economically important plants to different parts of the world to promote the prosperity of the Empire. In this classic work, available once again after many years out of print, Brockway examines in detail three cases in which British scientists transferred important crop plants--cinchona (a source of quinine), rubber and sisal--to new continents. Weaving together botanical, historical, economic, political, and ethnographic findings, the author illuminates the remarkable social role of botany and the entwined relation between science and politics in an imperial era.

This textbook is aimed at the majority of students, who need to quickly acquire a concise overview of soil science. Many current soil science textbooks still cater for a traditional

student market where students embark on three years study in a narrow discipline. The growth in modular degree schemes has meant that soil science is now often taught as self-standing unit as part of broad based degree program. Students pursuing this type of course are increasingly reluctant to purchase expensive textbooks that are too detailed and often assume a scientific background. For those opting to specialise in soil science there are a variety of good textbooks to choose from. This short informative guide, will be particularly useful for students who do not possess a traditional scientific background, such as those studying geography, environment science, ecology and agriculture. Only textbook to cater for introductory courses in soil science. Provides an affordable concise overview of soil science. Learning exercises and chapter summaries enhance usability. Annotated suggestions for further reading. Based on proven and successful modular course structure. Emphasis on readability and interactive learning. No scientific background assumed.

The importance of soil; Soil origin and development; Physical properties of soil; Soil water; Water conservation; Irrigation and drainage; Life in the soil; Organic matter; Soil fertility; Soil pH and salinity; Plant nutrition; Soil sampling and testing; Fertilizers; Organic amendments; Tillage and cropping systems; Horticultural uses of soil; Soil classification and survey; Soil Conservation; Urban soil; Government agencies and programs; Some basic chemistry; Sedimentation test of soil texture; Soil orders of the United States; Soil horizon symbol suffixes; Land evaluation.

Principles and Practice of Soil Science, Fourth Edition provides a current and comprehensive introduction to soil science for students in the fields of environmental and agricultural science, ecology, soil and land management, natural resource management and environmental engineering. Covers all aspects of soil science including soil habitat, processes in the soil environment and soil management. Emphasizes the applications of soil science to the solution of practical problems in soil and land management. Highlights real world examples drawn from the author's international experience in the field. Includes an expanded colour section of soil profiles and other features, and greater coverage of international soil classification. Features new problem sets and questions at the end of each chapter, designed to reinforce important principles. An answer key is provided at the end of the text. Artwork from the book is available to instructors online at www.blackwellpublishing.com/white

Morphology of soils; Soil micromorphology; Soil composition and characterization; Weathering and soil formation; Pedogenic processes: internal, soil-building processes; Soil environment: External factors of soil formation; Parent material: initial material of the solum; Relief and landscape factors of the soil and its environment; Contributions of climate to the total soil environment; Organisms: biological portion of the soil and its environment; Time as a factor of soil formation; Principles and historical development of soil classification; Modern soil classification systems; Entisols: recently formed soils: Vertisols: shrinking and swelling dark clay soils; Inceptisols: embryonic soils with few diagnostic features; Aridisols: soils of arid regions; Mollisols: grassland soils of steppes and prairies; Spodosols: soils with subsoil, accumulations of sesquioxide and humus; Alfisols: high base status soils; Ultisols: low base status forest soils; Oxisols: sesquioxide - rich, highly weathered soils of the intertropical regions; Histosols: organic soils.

Get down to the individual microbe, enzyme, and ion & learn to partner with your soil micro to macro for incredible plants, yields, nutrition, and increasingly better soil every year! This is the book for you if you are looking for clear recipes, visual science, the chemistry, the biology, and the bridges connecting them all. If you have ever wondered what is really going on in the soil and are searching for solutions, this is the book for you.

Plant & Soil Science Fundamentals and Applications combines the basic knowledge of plant and soil science, in an easy to read and teach format, and provides practical real world application for information learned. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version. Build healthy soil and grow better plants Robert Pavlis, a gardener for over four decades, debunks common soil myths, explores the rhizosphere, and provides a personalized soil fertility improvement program in this three-part popular science guidebook. Healthy soil means thriving plants. Yet untangling the soil food web and optimizing your soil health is beyond most gardeners, many of whom lack an in-depth knowledge of the soil ecosystem. Soil Science for Gardeners is an accessible, science-based guide to understanding soil fertility and, in particular, the rhizosphere – the thin layer of liquid and soil surrounding plant roots, so vital to plant health. Coverage includes: Soil biology and chemistry and how plants and soil interact Common soil health problems, including analyzing soil's fertility and plant nutrients The creation of a personalized plan for improving your soil fertility, including setting priorities and goals in a cost-effective, realistic time frame. Creating the optimal conditions for nature to do the heavy lifting of building soil fertility Written for the home gardener, market gardener, and micro-farmer, Soil Science for Gardeners is packed with information to help you grow thriving plants.

This book is a concise, yet comprehensive modern introduction to soil science and describes the development of soils, their characteristics and their material composition as well as their functions in terrestrial and aquatic environments. Soil functions include the delivery of goods and services for the human society, such as food, clean water, and the maintenance of biodiversity. The book is profusely illustrated with many coloured figures and tables to accompany the text and ease its understanding. Particularly the chapter on soil classification, based on the World Reference Base for Soil Resources (WRB), features numerous colour pictures of typical soil profiles to facilitate understanding the characteristics of particular soil types. Chapters on soil protection and remediation and soil monitoring and the history of soil sciences conclude the book together with a very comprehensive alphabetical index, allowing for a quick and easy orientation about the most important terms in soil sciences. The book addresses all those, who want to orient themselves about soils, their functions, their importance in terrestrial and aquatic environments and their contribution to the actual and future development of the human society, such as teachers, practitioners and students in the fields of agriculture, forestry, gardening, terrestrial and aquatic ecology and environmental engineering, and of course,

beginning students of soil science. For classroom use, we offer classroom sets of 10 copies and 20 copies which you may order through your bookstore or directly online by following the respective link.

Completely revised and updated, incorporating almost a decade's worth of developments in this field, Environmental Soil Science, Third Edition, explores the entire reach of the subject, beginning with soil properties and reactions and moving on to their relationship to environmental properties and reactions. Keeping the organization and writing sty

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